



**HL7 CDA® Release 2 Implementation Guide: Reporting to
Public Health Cancer Registries from Ambulatory
Healthcare Providers, Release 1;
DSTU Release 1.1 - US Realm
Draft Standard for Trial Use**

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Logical Observation Identifiers Names & Codes (LOINC)	Regenstrief Institute
International Classification of Diseases (ICD) codes	World Health Organization (WHO)

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2 DOCUMENT

2.1 Cancer Event Report Document (V1.1) - Published

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29
(open)]

Table 1: Cancer Event Report Document (V1.1) Contexts

Contained By:	Contains:
	Assessment Section Cancer Diagnosis Section (entries required) (V1.1) Family History Section (V2) Medications Administered Section (V2) - Cancer IG Specific Constraints Medications Section (entries required) (V2) - Cancer IG Specific Constraints Payers Section (V2) Plan of Treatment Section (V2) - Cancer IG Specific Constraints Problem Section (entries required) (V2) - Cancer IG Specific Constraints Procedures Section (entries required) (V2) - Cancer IG Specific Constraints Results Section (entries required) (V2) Social History Section (V2) - Cancer IG Specific Constraints (V1.1) US Realm Address (AD.US.FIELDDED) US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints US Realm Person Name (PN.US.FIELDDED) Vital Signs Section (entries required) (V2)

The Ambulatory Healthcare Provider Cancer Event Report represents a core data set of relevant administrative, demographic, and clinical information about a patient and the patient's cancer diagnosis and treatment that has been recorded in the patient's electronic health record.

It provides a mechanism for healthcare practitioners to electronically report their cancer cases to the public health central cancer registry using a standardized structure.

Central cancer registries consolidate the information from these Cancer Event Reports with data from other reporting sources. Public health central cancer registry surveillance data are used for describing the occurrence of cancer in a given population, development of comprehensive cancer control programs, healthcare planning and interventions and research.

The Cancer IG specific constraints for the US Realm Header further tighten some conformance verbs, such as birthplace of the patient and document set ID and version number. It also adds new elements including: patient's social security number; usable period for patient's address;

patient deceased indicator and deceased time; and physician who referred patient to the reporting healthcare provider.

This document is a **Part 2** of the "**HL7 Implementation Guide for CDA® Release 2: Reporting to Public Health Cancer Registries from Ambulatory Healthcare Providers, Release 1**" Implementation Guide.

The **Part 2** of the Implementation Guide describes the structure and content requirements for the Cancer Event Report such as document identification, header information, sections, entries and codes systems/value sets.

Document Template ID: urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-09

General Description: The Cancer Event Report contains a record of a patient's encounter for diagnosis and/or treatment of cancer.

Document Code: 72134-0 (LOINC code for "Cancer Event Report")

About id, setId, version

1. CDA requires a ClinicalDocument/id element representing a unique identifier for the document. The id may be represented by either @root or @root plus@extension, so long as the resulting id is globally unique. CDA provides id, setId, versionNumber, and relatedDocument elements to support succession management (document versioning). The id element identifies the CDA document instance (the electronic file). It is independent of the setId and versionNumber elements.
2. Since Cancer Event Reports are sometimes updated, this IG requires setId and versionNumber to ensure that succession management can be easily performed.
3. The setId element identifies the set of documents in a version tree and is consistent across all versions; The versionNumber element stores the version number as an integer (the first version is 1, the second is 2, etc.). The vendor software is responsible for generating the necessary values and for ensuring uniqueness.
4. In a replacement document, the relatedDocument element stores the id of the parent document and the typeCode attribute stores the type of document relationship. CDA supports several document relationship typeCodes. If present in a Cancer Event Report, the value of a document relationship typeCode must be RPLC (replace).

COMPONENTS OF CANCER EVENT REPORT DOCUMENT:

The table below list components of Cancer Event Report Document such as the header and all sections.

Conformance	Section Name	Template Identifier
SHALL [1..1]	Header Section	urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29
SHALL [1..1]	Cancer Diagnosis Section (entries required)	urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05
SHALL [1..1]	Assessment Section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.8:2014-06-09
SHALL [1..1]	Family History Section (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2014-06-09
SHALL [1..1]	Medications Administered	urn:hl7ii:2.16.840.1.113883.10.13.12:2014-08-08

Conformance	Section Name	Template Identifier
	Section (V2) - Cancer IG Specific Constraints	
SHALL [1..1]	Medications Section (entries required) (V2) - Cancer IG Specific Constraints	urn:hl7ii:2.16.840.1.113883.10.13.13:2014-08-08
SHALL [1..1]	Payers Section (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09
SHALL [1..1]	Plan of Treatment Section (V2) - Cancer IG Specific Constraints	urn:hl7ii:2.16.840.1.113883.10.13.9:2014-08-08
SHALL [1..1]	Problem Section (entries required) (V2) - Cancer IG Specific Constraints	urn:hl7ii:2.16.840.1.113883.10.13.21:2014-08-08
SHALL [1..1]	Procedures Section (entries required) (V2) - Cancer IG Specific Constraints	urn:hl7ii:2.16.840.1.113883.10.13.10:2014-08-08
SHALL [1..1]	Results Section (entries required) (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2014-06-09
SHALL [1..1]	Social History Section (V2) - Cancer IG Specific Constraints	urn:hl7ii:2.16.840.1.113883.10.13.11:2015-01-29
SHALL [1..1]	Vital Signs Section (entries required) (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1.2:2014-06-09

Table 2: Cancer Event Report Document (V1.1) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29)					
templateId	1..1	SHALL		1169-33054	
@root	1..1	SHALL		1169-33055	2.16.840.1.113883.10.13.1
@extension	1..1	SHALL		1169-33946	2015-09-29
id	1..1	SHALL		1169-33027	
code	1..1	SHALL		1169-32656	
@nullFlavor	0..0	SHALL NOT		1169-33042	
@code	1..1	SHALL		1169-32657	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 72134-0
title	1..1	SHALL		1169-0	
effectiveTime	1..1	SHALL		1169-33025	
@nullFlavor	0..0	SHALL NOT		1169-33026	
setId	1..1	SHALL		1169-33577	
versionNumber	1..1	SHALL		1169-33578	
recordTarget	1..*	SHALL		1169-220	
patientRole	1..1	SHALL		1169-221	
id	1..1	SHALL		1169-33542	
@root	1..1	SHALL		1169-33543	2.16.840.1.113883.4.1
id	1..*	SHALL		1169-33544	
addr	1..*	SHALL		1169-32655	US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)
patient	1..1	SHALL		1169-222	
name	1..*	SHALL		1169-33034	US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints (identifier:

					urn:hl7ii:2.16.840.1.113883.10.1.3.18:2014-08-08
@nullFlavor	0..0	SHALL NOT		1169-33035	
name	0..1	SHOULD		1169-33880	
family	1..1	SHALL		1169-33881	
@qualifier	1..1	SHALL		1169-33882	urn:oid:2.16.840.1.113883.5.43 (EntityNamePartQualifier) = BR
administrativeGenderCode	1..1	SHALL		1169-33037	
@nullFlavor	0..0	SHALL NOT		1169-33038	
birthTime	1..1	SHALL		1169-33039	
@nullFlavor	0..0	SHALL NOT		1169-33040	
maritalStatusCode	1..1	SHALL		1169-33243	urn:oid:2.16.840.1.113883.1.11.1.2212 (Marital Status)
sdct:raceCode	1..*	SHALL		1169-33605	urn:oid:2.16.840.1.113883.1.11.1.4914 (Race)
birthplace	1..1	SHALL		1169-223	
place	1..1	SHALL		1169-225	
addr	1..1	SHALL		1169-226	
country	1..1	SHALL		1169-227	
@nullFlavor	0..1	MAY		1169-34363	
state	1..1	SHALL		1169-228	
@nullFlavor	0..1	MAY		1169-34364	
author	1..1	SHALL		1169-33229	
assignedAuthor	1..1	SHALL		1169-33230	
addr	1..*	SHALL		1169-33231	US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.1.3.17:2014-08-08)
assignedPerson	1..1	SHALL		1169-33233	
author	1..1	SHALL		1169-	

				33686	
assignedAuthor	1..1	SHALL		1169-33687	
addr	1..*	SHALL		1169-33688	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
assignedAuthoringDevice	1..1	SHALL		1169-33690	
manufacturerModelName	0..1	SHOULD		1169-33725	
softwareName	1..1	SHALL		1169-33726	
custodian	1..1	SHALL		1169-33234	
assignedCustodian	1..1	SHALL		1169-33235	
representedCustodianOrganization	1..1	SHALL		1169-33236	
addr	1..1	SHALL		1169-33237	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
documentationOf	0..*	SHOULD		1169-33905	
serviceEvent	1..1	SHALL		1169-33906	
performer	0..*	SHOULD		1169-33907	
assignedEntity	1..1	SHALL		1169-33908	
id	1..*	SHALL		1169-33909	
@root	0..1	SHOULD		1169-33912	2.16.840.1.113883.4.6
id	0..*	SHOULD		1169-33913	
addr	0..*	SHOULD		1169-33914	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	0..*	SHOULD		1169-33910	
assignedPerson	0..1	SHOULD		1169-33911	
name	0..1	SHOULD		1169-33916	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)

relatedDocument	0..*	MAY		1169-33602	
@typeCode	1..1	SHALL		1169-33604	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RPLC
componentOf	1..1	SHALL		1169-210	
encompassingEncounter	1..1	SHALL		1169-211	
encounterParticipant	1..1	SHALL		1169-212	
@typeCode	1..1	SHALL		1169-217	REF
assignedEntity	1..1	SHALL		1169-214	
id	1..*	SHALL		1169-218	
id	0..*	SHOULD		1169-33918	
addr	0..1	SHOULD		1169-33919	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	0..*	SHOULD		1169-33917	
assignedPerson	0..1	SHALL		1169-215	
name	1..1	SHALL		1169-216	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
representedOrganization	1..1	SHALL		1169-33921	
id	1..*	SHALL		1169-33922	
@root	0..1	SHOULD		1169-34001	2.16.840.1.113883.4.6
@extension	0..1	SHOULD		1169-34002	
id	0..*	SHOULD		1169-33924	
name	1..*	SHALL		1169-33925	
addr	0..*	SHOULD		1169-33926	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
encounterParticipant	1..1	SHALL		1169-	

				34264	
assignedEntity	1..1	SHALL		1169-34373	
@nullFlavor	1..1	SHALL		1169-34375	urn:oid:2.16.840.1.113883.10.20.5.9.2 (NullValues_UNK_NA)
id	1..1	SHALL		1169-34374	
@nullFlavor	1..1	SHALL		1169-34376	NA
location	1..1	SHALL		1169-33894	
healthCareFacility	1..1	SHALL		1169-33895	
id	1..*	SHALL		1169-33896	
@root	1..1	SHALL		1169-33899	2.16.840.1.113883.4.6
id	0..*	SHOULD		1169-33901	
serviceProviderOrganization	1..1	SHALL		1169-33897	
name	0..*	MAY		1169-33984	
telecom	0..*	SHOULD		1169-33898	
addr	1..*	SHALL		1169-33904	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
component	1..1	SHALL		1169-32647	
structuredBody	1..1	SHALL		1169-32648	
component	1..1	SHALL		1169-32649	
@nullFlavor	0..0	SHALL NOT		1169-33043	
section	1..1	SHALL		1169-32650	Cancer Diagnosis Section (entries required) (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05)
@nullFlavor	0..0	SHALL NOT		1169-33044	
component	1..1	SHALL		1169-33701	
section	1..1	SHALL		1169-33702	Assessment Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8)

component	1..1	SHALL		1169-32720	
section	1..1	SHALL		1169-32721	Family History Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.15:2014-06-09)
component	1..1	SHALL		1169-32674	
section	1..1	SHALL		1169-32675	Medications Administered Section (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.1.3.12:2014-08-08)
component	1..1	SHALL		1169-32670	
section	1..1	SHALL		1169-32671	Medications Section (entries required) (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.1.3.13:2014-08-08)
component	1..1	SHALL		1169-32668	
section	1..1	SHALL		1169-32669	Payers Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.18:2014-06-09)
component	1..1	SHALL		1169-32660	
section	1..1	SHALL		1169-32661	Plan of Treatment Section (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.1.3.9:2014-08-08)
component	1..1	SHALL		1169-32658	
section	1..1	SHALL		1169-32659	Problem Section (entries required) (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.1.3.21:2014-08-08)
component	1..1	SHALL		1169-33045	
section	1..1	SHALL		1169-33046	Procedures Section (entries required) (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.1.3.10:2014-08-08)
component	1..1	SHALL		1169-33047	
section	1..1	SHALL		1169-33048	Results Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2

					0.22.2.3.1:2014-06-09
component	1..1	SHALL		1169-33049	
section	1..1	SHALL		1169-33050	Social History Section (V2) - Cancer IG Specific Constraints (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.11:2015-01-29)
component	1..1	SHALL		1169-33051	
section	1..1	SHALL		1169-33052	Vital Signs Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09)

1. Conforms to [US Realm Header \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-33054) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.1" (CONF:1169-33055).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-09-29" (CONF:1169-33946).
3. **SHALL** contain exactly one [1..1] **id** (CONF:1169-33027).
 - a. This id **SHALL** be a globally unique identifier for the document (CONF:1169-33545).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1169-32656).
 - a. This code **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33042).
 - b. This code **SHALL** contain exactly one [1..1] **@code**="72134-0" Cancer event report (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-32657).
5. **SHALL** contain exactly one [1..1] **title** (CONF:1169-0).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1169-33025).
 - a. This effectiveTime **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33026).
7. **SHALL** contain exactly one [1..1] **setId** (CONF:1169-33577).
8. **SHALL** contain exactly one [1..1] **versionNumber** (CONF:1169-33578).
9. **SHALL** contain at least one [1..*] **recordTarget** (CONF:1169-220).
 - a. Such recordTargets **SHALL** contain exactly one [1..1] **patientRole** (CONF:1169-221).
 - i. This patientRole **SHALL** contain exactly one [1..1] **id** (CONF:1169-33542) such that it
Note: This field SHALL be used for Social Security Number (SSN).
 1. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.4.1" (CONF:1169-33543).
Note: This root OID is assigning authority for Social Security Number (SSN).
 - ii. This patientRole **SHALL** contain at least one [1..*] **id** (CONF:1169-33544).
Note: This field SHALL be used for Medical Record Number (MRN).
 - iii. This patientRole **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\) \(V2\) - Cancer IG Specific Constraints](#)

(identifier: urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)
(CONF:1169-32655).

Note: SHALL provide ALL addresses for that patient over time. In other words, ALL historical and current addresses where patient has or is residing SHALL be provided. Note: The intent of this requirement is for the EHR system to have the capability to capture addresses over time when reported. Physicians are not expected to obtain an address history during the patient visit/encounter.

- iv. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:1169-222).
 - 1. This patient **SHALL** contain at least one [1..*] **US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints**
(identifier: urn:hl7ii:2.16.840.1.113883.10.13.18:2014-08-08) (CONF:1169-33034) such that it
 - a. **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33035).
 - 2. This patient **SHOULD** contain zero or one [0..1] **name** (CONF:1169-33880).
 - a. The name, if present, **SHALL** contain exactly one [1..1] **family** (CONF:1169-33881).
 - i. This family **SHALL** contain exactly one [1..1] **@qualifier="BR" birth** (CodeSystem: EntityNamePartQualifier urn:oid:2.16.840.1.113883.5.43) (CONF:1169-33882).
 - 3. This patient **SHALL** contain exactly one [1..1] **administrativeGenderCode** (CONF:1169-33037).
 - a. This administrativeGenderCode **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33038).
 - 4. This patient **SHALL** contain exactly one [1..1] **birthTime** (CONF:1169-33039).
 - a. This birthTime **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33040).
 - b. **SHALL** be precise to day (CONF:1169-33041).
 - 5. This patient **SHALL** contain exactly one [1..1] **maritalStatusCode**, which **SHALL** be selected from ValueSet **Marital Status** urn:oid:2.16.840.1.113883.1.11.12212 (CONF:1169-33243).
 - 6. This patient **SHALL** contain at least one [1..*] **sdtc:raceCode**, which **SHALL** be selected from ValueSet **Race** urn:oid:2.16.840.1.113883.1.11.14914 (CONF:1169-33605).
 - 7. This patient **SHALL** contain exactly one [1..1] **birthplace** (CONF:1169-223).
 - a. This birthplace **SHALL** contain exactly one [1..1] **place** (CONF:1169-225).
 - i. This place **SHALL** contain exactly one [1..1] **addr** (CONF:1169-226).

1. This addr **SHALL** contain exactly one [1..1] **country** (CONF:1169-227).
Note: Use nullFlavor when the patients birth country is not known.
 1. This country **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1169-34363).
2. This addr **SHALL** contain exactly one [1..1] **state** (CONF:1169-228).
Note: Use nullFlavor when the patients birth state is not known.
 1. This state **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1169-34364).
8. This patient **SHOULD** contain zero or one 0..1] **sdtc:deceasedInd**.
The prefix sdtc: **SHALL** be bound to the namespace “urn:hl7-org:sdtc”.
The use of the namespace provides a necessary extension to CDA R2 for the use of the deceasedInd element (CONF:1169-33183).
9. This patient **SHOULD** contain zero or one 0..1] **sdtc:deceasedTime**.
The prefix sdtc: **SHALL** be bound to the namespace “urn:hl7-org:sdtc”.
The use of the namespace provides a necessary extension to CDA R2 for the use of the deceasedTime element (CONF:1169-33184).
10. **SHALL** contain exactly one [1..1] **author** (CONF:1169-33229) such that it
 - a. **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:1169-33230).
 - i. This assignedAuthor **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\) \(V2\) - Cancer IG Specific Constraints](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08) (CONF:1169-33231).
 - ii. This assignedAuthor **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1169-33233).
Note: Author information needs to be provided in 2 separate instances of author participation for both person and device playing the role of author
11. **SHALL** contain exactly one [1..1] **author** (CONF:1169-33686) such that it
 - a. **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:1169-33687).
 - i. This assignedAuthor **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1169-33688).
 - ii. This assignedAuthor **SHALL** contain exactly one [1..1] **assignedAuthoringDevice** (CONF:1169-33690).
Note: Author information needs to be provided in 2 separate instances of author participation for both person and device playing the role of author
 1. This assignedAuthoringDevice **SHOULD** contain zero or one [0..1] **manufacturerModelName** (CONF:1169-33725).
 2. This assignedAuthoringDevice **SHALL** contain exactly one [1..1] **softwareName** (CONF:1169-33726).
12. **SHALL** contain exactly one [1..1] **custodian** (CONF:1169-33234).

- a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:1169-33235).
 - i. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:1169-33236).
 - 1. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **US Realm Address (AD.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1169-33237).
13. **SHOULD** contain zero or more [0..*] **documentationOf** (CONF:1169-33905).
- a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1169-33906).
 - i. This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:1169-33907) such that it
 - 1. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1169-33908).
 - a. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1169-33909) such that it
 - i. **SHOULD** contain zero or one [0..1] **@root="2.16.840.1.113883.4.6"** National Provider Identifier (CONF:1169-33912).
 - b. This assignedEntity **SHOULD** contain zero or more [0..*] **id** (CONF:1169-33913).

Note: This id is to be used to provide the Cancer Registry approved local identifier.
 - c. This assignedEntity **SHOULD** contain zero or more [0..*] **US Realm Address (AD.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1169-33914).
 - d. This assignedEntity **SHOULD** contain zero or more [0..*] **telecom** (CONF:1169-33910).
 - e. This assignedEntity **SHOULD** contain zero or one [0..1] **assignedPerson** (CONF:1169-33911).
 - i. The assignedPerson, if present, **SHOULD** contain zero or one [0..1] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1169-33916).
14. **MAY** contain zero or more [0..*] **relatedDocument** (CONF:1169-33602) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="RPLC"** replace (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1169-33604).
 - b. If versionNumber/@value is greater than 1, a relatedDocument element **SHALL** be present where the value of @typeCode **SHALL** be RPLC (replace) and the value of parentDocument/id **SHALL** be populated with the ClinicalDocument/id of the document being replaced. In all cases (regardless of the version number), values of APND and XFRM **SHALL NOT** be used for relatedDocument/@typeCode (CONF:1169-33603).

15. **SHALL** contain exactly one [1..1] **componentOf** (CONF:1169-210).
- a. This **componentOf** **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1169-211).

The **encompassingEncounter** **SHALL** Contain Either:

- i. This **encompassingEncounter** **SHALL** contain exactly one [1..1] **encounterParticipant** (CONF:1169-212) such that it
- Note: This element records the provider that referred the patient to the reporting facility. This element **SHALL** be provided in the header of the CDA document in the event the patient was referred to this ambulatory healthcare provider.
1. **SHALL** contain exactly one [1..1] **@typeCode="REF"** (CONF:1169-217).
 2. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1169-214).
 - a. This **assignedEntity** **SHALL** contain at least one [1..*] **id** (CONF:1169-218) such that it
 - i. If **assignedEntity/id** is a provider then this **id**, **SHALL** include one [1..1] **id** where **id/@root="2.16.840.1.113883.4.6"** National Provider Identifier (CONF:1169-219).
 - b. This **assignedEntity** **SHOULD** contain zero or more [0..*] **id** (CONF:1169-33918).

Note: This **id** is to be used to provide the Cancer Registry approved local identifier.
 - c. This **assignedEntity** **SHOULD** contain zero or one [0..1] **US Realm Address (AD.US.FIELDDED)** (identifier: **urn:oid:2.16.840.1.113883.10.20.22.5.2**) (CONF:1169-33919).
 - d. This **assignedEntity** **SHOULD** contain zero or more [0..*] **telecom** (CONF:1169-33917).
 - e. This **assignedEntity** **SHALL** contain zero or one [0..1] **assignedPerson** (CONF:1169-215).
 - i. The **assignedPerson**, if present, **SHALL** contain exactly one [1..1] **US Realm Person Name (PN.US.FIELDDED)** (identifier: **urn:oid:2.16.840.1.113883.10.20.22.5.1.1**) (CONF:1169-216).
 - f. This **assignedEntity** **SHALL** contain exactly one [1..1] **representedOrganization** (CONF:1169-33921).
 - i. This **representedOrganization** **SHALL** contain at least one [1..*] **id** (CONF:1169-33922) such that it
 1. **SHOULD** contain zero or one [0..1] **@root="2.16.840.1.113883.4.6"** National Provider Identifier (CONF:1169-34001).
 2. **SHOULD** contain zero or one [0..1] **@extension** (CONF:1169-34002).

- ii. This representedOrganization **SHOULD** contain zero or more [0..*] **id** (CONF:1169-33924).
Note: This id is to be used to provide the Cancer Registry approved local identifier. This id is to be used to provide the Cancer Registry approved local identifier.
- iii. This representedOrganization **SHALL** contain at least one [1..*] **name** (CONF:1169-33925).
- iv. This representedOrganization **SHOULD** contain zero or more [0..*] **US Realm Address (AD.US.FIELDDED)** (identifier:
urn:oid:2.16.840.1.113883.10.20.22.5.2)
(CONF:1169-33926).

Or encompassingEncounter SHALL Contain:

- ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **encounterParticipant** (CONF:1169-34264) such that it
Note: This element records the provider that referred the patient to the reporting facility. This element SHALL be provided in the header of the CDA document in the event the patient was referred to this ambulatory healthcare provider.
 - 1. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1169-34373).
 - a. This assignedEntity **SHALL** contain exactly one [1..1] **@nullFlavor**, which **SHALL** be selected from ValueSet **NullValues UNK NA**
urn:oid:2.16.840.1.113883.10.20.5.9.2 **DYNAMIC** (CONF:1169-34375).
 - b. This assignedEntity **SHALL** contain exactly one [1..1] **id** (CONF:1169-34374).
 - i. This id **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** Not applicable (CONF:1169-34376).
- iii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:1169-33894).
 - 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:1169-33895) such that it
 - a. **SHALL** contain at least one [1..*] **id** (CONF:1169-33896) such that it
 - i. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.4.6"** National Provider Identifier (CONF:1169-33899).
 - b. **SHOULD** contain zero or more [0..*] **id** (CONF:1169-33901).
Note: This id is to be used to provide the Cancer Registry approved local identifier for the healthcare facility

- c. **SHALL** contain exactly one [1..1] **serviceProviderOrganization** (CONF:1169-33897) such that it

Note: Used to provide contact information for the reporting facility identified in the healthCareFacility above.

- i. **MAY** contain zero or more [0..*] **name** (CONF:1169-33984).
- ii. **SHOULD** contain zero or more [0..*] **telecom** (CONF:1169-33898).
- iii. **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1169-33904).

16. **SHALL** contain exactly one [1..1] **component** (CONF:1169-32647).

- a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1169-32648).

- i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1169-32649) such that it

- 1. **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33043).
- 2. **SHALL** contain exactly one [1..1] **Cancer Diagnosis Section (entries required) (V1.1)** (identifier: urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05) (CONF:1169-32650).

- a. This section **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33044).

- ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1169-33701) such that it

- 1. **SHALL** contain exactly one [1..1] **Assessment Section** (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8) (CONF:1169-33702).

- iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1169-32720) such that it

- 1. **SHALL** contain exactly one [1..1] **Family History Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2014-06-09) (CONF:1169-32721).

- iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1169-32674) such that it

- 1. **SHALL** contain exactly one [1..1] **Medications Administered Section (V2) - Cancer IG Specific Constraints** (identifier: urn:hl7ii:2.16.840.1.113883.10.13.12:2014-08-08) (CONF:1169-32675).

- v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1169-32670) such that it

- 1. **SHALL** contain exactly one [1..1] **Medications Section (entries required) (V2) - Cancer IG Specific Constraints**

- (identifier: urn:hl7ii:2.16.840.1.113883.10.13.13:2014-08-08) (CONF:1169-32671).
- vi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1169-32668) such that it
 - 1. **SHALL** contain exactly one [1..1] [Payers Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09) (CONF:1169-32669).
 - vii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1169-32660) such that it
 - 1. **SHALL** contain exactly one [1..1] [Plan of Treatment Section \(V2\) - Cancer IG Specific Constraints](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.9:2014-08-08) (CONF:1169-32661).
 - viii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1169-32658) such that it
 - 1. **SHALL** contain exactly one [1..1] [Problem Section \(entries required\) \(V2\) - Cancer IG Specific Constraints](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.21:2014-08-08) (CONF:1169-32659).
 - ix. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1169-33045) such that it
 - 1. **SHALL** contain exactly one [1..1] [Procedures Section \(entries required\) \(V2\) - Cancer IG Specific Constraints](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.10:2014-08-08) (CONF:1169-33046).
 - x. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1169-33047) such that it
 - 1. **SHALL** contain exactly one [1..1] [Results Section \(entries required\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2014-06-09) (CONF:1169-33048).
 - xi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1169-33049) such that it
 - 1. **SHALL** contain exactly one [1..1] [Social History Section \(V2\) - Cancer IG Specific Constraints \(V1.1\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.11:2015-01-29) (CONF:1169-33050).
 - xii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1169-33051) such that it
 - 1. **SHALL** contain exactly one [1..1] [Vital Signs Section \(entries required\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09) (CONF:1169-33052).
 - xiii. This structuredBody **SHALL NOT** contain 0..0] any other component sections than those identified above (CONF:1169-33978).

Table 3: Marital Status

Value Set: Marital Status urn:oid:2.16.840.1.113883.1.11.12212			
Marital Status is the domestic partnership status of a person.			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
A	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Annulled
D	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Divorced
T	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Domestic partner
I	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Interlocutory
L	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Legally Separated
M	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Married
S	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Never Married
P	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Polygamous
W	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Widowed

Table 4: Race

Value Set: Race urn:oid:2.16.840.1.113883.1.11.14914			
Concepts in the race value set include the 5 minimum categories for race specified by OMB along with a more detailed set of race categories used by the Bureau of Census.			
Value Set Source: http://phinivads.cdc.gov/vads/ViewCodeSystemConcept.action?oid=2.16.840.1.113883.6.238&code=1000-9			
Code	Code System	Code System OID	Print Name
1002-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	American Indian or Alaska Native
2028-9	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Asian
2054-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Black or African American
2076-8	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Native Hawaiian or Other Pacific Islander
2106-3	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	White
1006-6	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Abenaki
1579-2	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Absentee Shawnee
1490-2	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Acoma
2126-1	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Afghanistani
1740-0	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Ahtna
...			

Table 5: NullValues_UNK_NA

Value Set: NullValues_UNK_NA urn:oid:2.16.840.1.113883.10.20.5.9.2			
Null values of unknown and not applicable.			
Code	Code System	Code System OID	Print Name
UNK	HL7NullFlavor	urn:oid:2.16.840.1.113883.5.1008	Unknown
NA	HL7NullFlavor	urn:oid:2.16.840.1.113883.5.1008	Not applicable

Figure 1: Provider Referred From Example

```
<componentOf>
  <encompassingEncounter>
    <effectiveTime value="20140722" />
    <responsibleParty> ... </responsibleParty>
    <encounterParticipant typeCode="REF">
      <assignedEntity>
        <id root="2.16.840.1.113883.4.6" extension="5555555555"></id>
        <id root="2.16.840.1.113883.19.5" extension="1234" />
        <addr use="WP">
          <streetAddressLine>1003 Healthcare Drive </streetAddressLine>
          <city>Ann Arbor</city>
          <state>MI</state>
          <postalCode>99999</postalCode>
          <country>US</country>
        </addr>
        <telecom value="tel:(555)555-1003" use="WP" />
        <telecom value="email:harold.hippocrates@HL7.com" use="WP" />
        <assignedPerson>
          <name>
            <first>Harold</first>
            <last>Hippocrates</last>
            <suffix>MD</suffix>
          </name>
        </assignedPerson>
        <representedOrganization classCode="ORG" determinerCode="INSTANCE">
          <id root="2.16.840.1.113883.4.6" extension="666666666666"></id>
          <id root="2.16.840.1.113883.19.5" extension="4321" />
          <name>Level Seven Healthcare, Inc.</name>
          <addr use="WP">
            <streetAddressLine>4444 Healthcare Drive </streetAddressLine>
            <city>Ann Arbor</city>
            <state>MI</state>
            <postalCode>99999</postalCode>
            <country>US</country>
          </addr>
        </representedOrganization>
      </assignedEntity>
    </encounterParticipant>
  </location>
  <healthCareFacility>
    <id root="2.16.840.1.113883.4.6" extension="111111111111"></id>
    <id root="2.16.840.1.113883.19.5" extension="4321234" />
    <serviceProviderOrganization>
      <name>Level Seven Healthcare, Inc.</name>
      <telecom value="tel:(555)555-1003" use="WP" />
      <addr use="WP">
        <streetAddressLine>4444 Healthcare Drive </streetAddressLine>
        <city>Ann Arbor</city>
        <state>MI</state>
        <postalCode>99999</postalCode>
        <country>US</country>
      </addr>
    </serviceProviderOrganization>
  </healthCareFacility>
</location>
```

```

    </encompassingEncounter>
  </componentOf>

```

Figure 2: Birthplace Example

```

<recordTarget>
  <patientRole>
    <patient>
      <birthplace>
        <place>
          <addr>
            <state>OR</state>
            <country>US</country>
          </addr>
        </place>
      </birthplace>
    </patient>
  </patientRole>
</recordTarget>

```

Figure 3: Unknown Birthplace Example

```

<recordTarget>
  <patientRole>
    <patient>
      <birthplace>
        <place>
          <addr>
            <state nullFlavor="UNK"/>
            <country nullFlavor="UNK"/>
          </addr>
        </place>
      </birthplace>
    </patient>
  </patientRole>
</recordTarget>

```

Figure 4: Unknown Provider Referred From Example

```

<componentOf>
  <encompassingEncounter>
    <effectiveTime value="20140722" />
    <responsibleParty> ... </responsibleParty>
    <encounterParticipant typeCode="REF">
      <assignedEntity @nullFlavor="UNK">
        <id @nullFlavor="NA"/>
      </assignedEntity>
    </encounterParticipant>
  </encompassingEncounter>
</componentOf>

```

2.2 US Realm Header (V2) - Published

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09 (open)]

Table 6: US Realm Header (V2) Contexts

Contained By:	Contains:
	US Realm Address (AD.US.FIELDDED) US Realm Date and Time (DTM.US.FIELDDED) US Realm Person Name (PN.US.FIELDDED)

This template defines constraints that represent common administrative and demographic concepts for US Realm CDA documents. Further specification, such as ClinicalDocument/code, are provided in document templates that conform to this template.

Table 7: US Realm Header (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09)					
realmCode	1..1	SHALL		1098-16791	US
typeId	1..1	SHALL		1098-5361	
@root	1..1	SHALL		1098-5250	2.16.840.1.113883.1.3
@extension	1..1	SHALL		1098-5251	POCD_HD000040
templateId	1..1	SHALL		1098-5252	
@root	1..1	SHALL		1098-10036	2.16.840.1.113883.10.20.22.1.1
@extension	1..1	SHALL		1098-32503	2014-06-09
id	1..1	SHALL		1098-5363	
code	1..1	SHALL		1098-5253	
title	1..1	SHALL		1098-5254	
effectiveTime	1..1	SHALL		1098-5256	US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)
confidentialityCode	1..1	SHALL		1098-5259	urn:oid:2.16.840.1.113883.1.11.1 6926 (HL7 BasicConfidentialityKind)
languageCode	1..1	SHALL		1098-5372	urn:oid:2.16.840.1.113883.1.11.1 1526 (Language)
setId	0..1	MAY		1098-5261	
versionNumber	0..1	MAY		1098-5264	
recordTarget	1..*	SHALL		1098-5266	
patientRole	1..1	SHALL		1098-5267	
id	1..*	SHALL		1098-5268	
addr	1..*	SHALL		1098-5271	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)

telecom	1..*	SHALL		1098-5280	
@use	0..1	SHOULD		1098-5375	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
patient	1..1	SHALL		1098-5283	
name	1..*	SHALL		1098-5284	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
administrativeGenderCode	1..1	SHALL		1098-6394	urn:oid:2.16.840.1.113883.1.11.1 (Administrative Gender (HL7 V3))
birthTime	1..1	SHALL		1098-5298	
maritalStatusCode	0..1	SHOULD		1098-5303	urn:oid:2.16.840.1.113883.1.11.1 2212 (Marital Status)
religiousAffiliationCode	0..1	MAY		1098-5317	urn:oid:2.16.840.1.113883.1.11.1 9185 (Religious Affiliation)
raceCode	1..1	SHALL		1098-5322	urn:oid:2.16.840.1.113883.3.207 4.1.1.3 (Race Category Excluding Nulls)
sdtc:raceCode	0..*	MAY		1098-7263	urn:oid:2.16.840.1.113883.1.11.1 4914 (Race)
ethnicGroupCode	1..1	SHALL		1098-5323	urn:oid:2.16.840.1.114222.4.11.8 37 (Ethnicity)
guardian	0..*	MAY		1098-5325	
code	0..1	SHOULD		1098-5326	urn:oid:2.16.840.1.113883.11.20.12.1 (Personal And Legal Relationship Role Type)
addr	0..*	SHOULD		1098-5359	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	0..*	SHOULD		1098-5382	
@use	0..1	SHOULD		1098-7993	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
guardianPerson	1..1	SHALL		1098-5385	
name	1..*	SHALL		1098-5386	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
birthplace	0..1	MAY		1098-5395	
place	1..1	SHALL		1098-	

				5396	
addr	1..1	SHALL		1098-5397	
country	0..1	SHOULD		1098-5404	urn:oid:2.16.840.1.113883.3.88.12.80.63 (Country)
postalCode	0..1	MAY		1098-5403	urn:oid:2.16.840.1.113883.3.88.12.80.2 (PostalCode)
languageCommunication	1..*	SHALL		1098-5406	
languageCode	1..1	SHALL		1098-5407	urn:oid:2.16.840.1.113883.11.20.9.64 (PatientLanguage)
modeCode	0..1	MAY		1098-5409	urn:oid:2.16.840.1.113883.1.11.12249 (LanguageAbilityMode)
proficiencyLevelCode	0..1	SHOULD		1098-9965	urn:oid:2.16.840.1.113883.1.11.12199 (LanguageAbilityProficiency)
preferenceInd	0..1	SHOULD		1098-5414	
providerOrganization	0..1	MAY		1098-5416	
id	1..*	SHALL		1098-5417	
@root	0..1	SHOULD		1098-16820	2.16.840.1.113883.4.6
name	1..*	SHALL		1098-5419	
telecom	1..*	SHALL		1098-5420	
@use	0..1	SHOULD		1098-7994	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
addr	1..*	SHALL		1098-5422	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
author	1..*	SHALL		1098-5444	
time	1..1	SHALL		1098-5445	US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)
assignedAuthor	1..1	SHALL		1098-5448	
id	1..*	SHALL		1098-5449	
id	0..1	SHOULD		1098-32882	
@nullFlavor	0..1	MAY		1098-32883	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK

@root	1..1	SHALL		1098-32884	2.16.840.1.113883.4.6
@extension	0..1	SHOULD		1098-32885	
code	0..1	SHOULD		1098-16787	
@code	1..1	SHALL		1098-16788	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1098-5452	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	1..*	SHALL		1098-5428	
@use	0..1	SHOULD		1098-7995	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	0..1	SHOULD		1098-5430	
name	1..*	SHALL		1098-16789	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
assignedAuthoringDevice	0..1	SHOULD		1098-16783	
manufacturerModelName	1..1	SHALL		1098-16784	
softwareName	1..1	SHALL		1098-16785	
dataEnterer	0..1	MAY		1098-5441	
assignedEntity	1..1	SHALL		1098-5442	
id	1..*	SHALL		1098-5443	
@root	0..1	SHOULD		1098-16821	2.16.840.1.113883.4.6
code	0..1	MAY		1098-32173	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1098-5460	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	1..*	SHALL		1098-5466	
@use	0..1	SHOULD		1098-7996	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm

					Header))
assignedPerson	1..1	SHALL		1098-5469	
name	1..*	SHALL		1098-5470	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
informant	0..*	MAY		1098-8001	
assignedEntity	1..1	SHALL		1098-8002	
id	1..*	SHALL		1098-9945	
code	0..1	MAY		1098-32174	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1098-8220	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
assignedPerson	1..1	SHALL		1098-8221	
name	1..*	SHALL		1098-8222	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
informant	0..*	MAY		1098-31355	
relatedEntity	1..1	SHALL		1098-31356	
custodian	1..1	SHALL		1098-5519	
assignedCustodian	1..1	SHALL		1098-5520	
representedCustodianOrganization	1..1	SHALL		1098-5521	
id	1..*	SHALL		1098-5522	
@root	0..1	SHOULD		1098-16822	2.16.840.1.113883.4.6
name	1..1	SHALL		1098-5524	
telecom	1..1	SHALL		1098-5525	
@use	0..1	SHOULD		1098-7998	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
addr	1..1	SHALL		1098-5559	US Realm Address (AD.US.FIELDDED) (identifier:

					urn:oid:2.16.840.1.113883.10.20.22.5.2
informationRecipient	0..*	MAY		1098-5565	
intendedRecipient	1..1	SHALL		1098-5566	
id	0..*	MAY		1098-32399	
informationRecipient	0..1	MAY		1098-5567	
name	1..*	SHALL		1098-5568	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
receivedOrganization	0..1	MAY		1098-5577	
name	1..1	SHALL		1098-5578	
legalAuthenticator	0..1	SHOULD		1098-5579	
time	1..1	SHALL		1098-5580	US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)
signatureCode	1..1	SHALL		1098-5583	
@code	1..1	SHALL		1098-5584	urn:oid:2.16.840.1.113883.5.89 (Participationsignature) = S
sdtc:signatureText	0..1	MAY		1098-30810	
assignedEntity	1..1	SHALL		1098-5585	
id	1..*	SHALL		1098-5586	
@root	0..1	MAY		1098-16823	2.16.840.1.113883.4.6
code	0..1	MAY		1098-17000	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1098-5589	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	1..*	SHALL		1098-5595	
@use	0..1	SHOULD		1098-7999	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	1..1	SHALL		1098-	

				5597	
name	1..*	SHALL		1098-5598	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
authenticator	0..*	MAY		1098-5607	
time	1..1	SHALL		1098-5608	US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)
signatureCode	1..1	SHALL		1098-5610	
@code	1..1	SHALL		1098-5611	urn:oid:2.16.840.1.113883.5.89 (Participationsignature) = S
sdtc:signatureText	0..1	MAY		1098-30811	
assignedEntity	1..1	SHALL		1098-5612	
id	1..*	SHALL		1098-5613	
@root	0..1	SHOULD		1098-16824	2.16.840.1.113883.4.6
code	0..1	MAY		1098-16825	
@code	0..1	MAY		1098-16826	urn:oid:2.16.840.1.114222.4.11.1.066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1098-5616	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	1..*	SHALL		1098-5622	
@use	0..1	SHOULD		1098-8000	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	1..1	SHALL		1098-5624	
name	1..*	SHALL		1098-5625	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
participant	0..*	MAY		1098-10003	
time	0..1	MAY		1098-10004	
inFulfillmentOf	0..*	MAY		1098-9952	

order	1..1	SHALL		1098-9953	
id	1..*	SHALL		1098-9954	
documentationOf	0..*	MAY		1098-14835	
serviceEvent	1..1	SHALL		1098-14836	
effectiveTime	1..1	SHALL		1098-14837	
low	1..1	SHALL		1098-14838	
performer	0..*	SHOULD		1098-14839	
@typeCode	1..1	SHALL		1098-14840	urn:oid:2.16.840.1.113883.1.11.19601 (x_ServiceEventPerformer)
functionCode	0..1	MAY		1098-16818	
@code	0..1	SHOULD		1098-32889	urn:oid:2.16.840.1.113883.1.11.10267 (ParticipationFunction)
assignedEntity	1..1	SHALL		1098-14841	
id	1..*	SHALL		1098-14846	
@root	0..1	SHOULD		1098-14847	2.16.840.1.113883.4.6
code	0..1	SHOULD		1098-14842	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
authorization	0..*	MAY		1098-16792	
consent	1..1	SHALL		1098-16793	
id	0..*	MAY		1098-16794	
code	0..1	MAY		1098-16795	
statusCode	1..1	SHALL		1098-16797	
@code	1..1	SHALL		1098-16798	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = completed
componentOf	0..1	MAY		1098-9955	
encompassingEncounter	1..1	SHALL		1098-9956	
id	1..*	SHALL		1098-9959	

effectiveTime	1..1	SHALL		1098-9958	

2.2.1 Properties

2.2.1.1 realmCode

1. **SHALL** contain exactly one [1..1] **realmCode**="US" (CONF:1098-16791).

Figure 5: US Realm Header (V2) Example

```
<ClinicalDocument>
  <realmCode code="US" />
  <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3" />
  <!-- CCD template -->
  <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2014-06-09" />
  <!-- Globally unique identifier for the document -->
  <id extension="TT988" root="2.16.840.1.113883.19.5.99999.1" />
  <code code="72134-0" displayName=" Cancer event report "
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <!-- Title of the document -->
  <title>Cancer Event Report</title>
  <effectiveTime value="201209151030-0800" />
  <confidentialityCode code="N" displayName="normal" codeSystem="2.16.840.1.113883.5.25"
codeSystemName="Confidentiality" />
  <languageCode code="en-US" />
  <setId extension="sTT988" root="2.16.840.1.113883.19.5.99999.19" />
  <!-- Version of the document -->
  <versionNumber value="1" />
  . . .
</ClinicalDocument>
```

2. **SHALL** contain exactly one [1..1] **typeId** (CONF:1098-5361).
 - a. This typeId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.1.3" (CONF:1098-5250).
 - b. This typeId **SHALL** contain exactly one [1..1] **@extension**="POCD_HD000040" (CONF:1098-5251).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-5252) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.1" (CONF:1098-10036).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32503).
4. **SHALL** contain exactly one [1..1] **id** (CONF:1098-5363).
 - a. This id **SHALL** be a globally unique identifier for the document (CONF:1098-9991).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-5253).
 - a. This code **SHALL** specify the particular kind of document (e.g., History and Physical, Discharge Summary, Progress Note) (CONF:1098-9992).

6. **SHALL** contain exactly one [1..1] **title** (CONF:1098-5254).
Note: The title can either be a locally defined name or the displayName corresponding to clinicalDocument/code
7. **SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1098-5256).
8. **SHALL** contain exactly one [1..1] **confidentialityCode**, which **SHOULD** be selected from ValueSet **HL7 BasicConfidentialityKind** urn:oid:2.16.840.1.113883.1.11.16926 **STATIC** 2010-04-21 (CONF:1098-5259).
9. **SHALL** contain exactly one [1..1] **languageCode**, which **SHALL** be selected from ValueSet **Language** urn:oid:2.16.840.1.113883.1.11.11526 **DYNAMIC** (CONF:1098-5372).
10. **MAY** contain zero or one [0..1] **setId** (CONF:1098-5261).
 - a. If setId is present versionNumber **SHALL** be present (CONF:1098-6380).
11. **MAY** contain zero or one [0..1] **versionNumber** (CONF:1098-5264).
 - a. If versionNumber is present setId **SHALL** be present (CONF:1098-6387).

2.2.1.2 recordTarget

The recordTarget records the administrative and demographic data of the patient whose health information is described by the clinical document; each recordTarget must contain at least one patientRole element

12. **SHALL** contain at least one [1..*] **recordTarget** (CONF:1098-5266).
 - a. Such recordTargets **SHALL** contain exactly one [1..1] **patientRole** (CONF:1098-5267).
 - i. This patientRole **SHALL** contain at least one [1..*] **id** (CONF:1098-5268).
 - ii. This patientRole **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5271).
 - iii. This patientRole **SHALL** contain at least one [1..*] **telecom** (CONF:1098-5280).
 1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **Telecom Use (US Realm Header)** urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-5375).
 - iv. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:1098-5283).
 1. This patient **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-5284).
 2. This patient **SHALL** contain exactly one [1..1] **administrativeGenderCode**, which **SHALL** be selected from ValueSet **Administrative Gender (HL7 V3)** urn:oid:2.16.840.1.113883.1.11.1 **DYNAMIC** (CONF:1098-6394).
 3. This patient **SHALL** contain exactly one [1..1] **birthTime** (CONF:1098-5298).

- a. **SHALL** be precise to year (CONF:1098-5299).
- b. **SHOULD** be precise to day (CONF:1098-5300).

For cases where information about newborn's time of birth needs to be captured.

- c. **MAY** be precise to the minute (CONF:1098-32418).
4. This patient **SHOULD** contain zero or one [0..1] **maritalStatusCode**, which **SHALL** be selected from ValueSet [Marital Status](#)
urn:oid:2.16.840.1.113883.1.11.12212 **DYNAMIC** (CONF:1098-5303).
 5. This patient **MAY** contain zero or one [0..1] **religiousAffiliationCode**, which **SHALL** be selected from ValueSet [Religious Affiliation](#)
urn:oid:2.16.840.1.113883.1.11.19185 **DYNAMIC** (CONF:1098-5317).
 6. This patient **SHALL** contain exactly one [1..1] **raceCode**, which **SHALL** be selected from ValueSet [Race Category Excluding Nulls](#)
urn:oid:2.16.840.1.113883.3.2074.1.1.3 **DYNAMIC** (CONF:1098-5322).
 7. This patient **MAY** contain zero or more [0..*] **sdtc:raceCode**, which **SHALL** be selected from ValueSet [Race](#)
urn:oid:2.16.840.1.113883.1.11.14914 **DYNAMIC** (CONF:1098-7263).
Note: The sdtc:raceCode is only used to record additional values when the patient has indicated multiple races or additional race detail beyond the five categories required for Meaningful Use Stage 2. The prefix sdtc: SHALL be bound to the namespace “urn:hl7-org:sdtc”. The use of the namespace provides a necessary extension to CDA R2 for the use of the additional raceCode elements.
 - a. If sdtc:raceCode is present, then the patient **SHALL** contain [1..1] raceCode (CONF:1098-31347).
 8. This patient **SHALL** contain exactly one [1..1] **ethnicGroupCode**, which **SHALL** be selected from ValueSet [Ethnicity](#)
urn:oid:2.16.840.1.114222.4.11.837 **DYNAMIC** (CONF:1098-5323).
 9. This patient **MAY** contain zero or more [0..*] **guardian** (CONF:1098-5325).
 - a. The guardian, if present, **SHOULD** contain zero or one [0..1] **code**, which **SHALL** be selected from ValueSet [Personal And Legal Relationship Role Type](#)
urn:oid:2.16.840.1.113883.11.20.12.1 **DYNAMIC** (CONF:1098-5326).
 - b. The guardian, if present, **SHOULD** contain zero or more [0..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5359).

- c. The guardian, if present, **SHOULD** contain zero or more [0..*] **telecom** (CONF:1098-5382).
 - i. The telecom, if present, **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [Telecom Use \(US Realm Header\)](#)
urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-7993).
 - d. The guardian, if present, **SHALL** contain exactly one [1..1] **guardianPerson** (CONF:1098-5385).
 - i. This guardianPerson **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#)
(identifier:
urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
(CONF:1098-5386).
10. This patient **MAY** contain zero or one [0..1] **birthplace** (CONF:1098-5395).
- a. The birthplace, if present, **SHALL** contain exactly one [1..1] **place** (CONF:1098-5396).
 - i. This place **SHALL** contain exactly one [1..1] **addr** (CONF:1098-5397).
 - 1. This addr **SHOULD** contain zero or one [0..1] **country**, which **SHALL** be selected from ValueSet [Country](#)
urn:oid:2.16.840.1.113883.3.88.12.80.63 **DYNAMIC** (CONF:1098-5404).
 - 2. This addr **MAY** contain zero or one [0..1] **postalCode**, which **SHALL** be selected from ValueSet [PostalCode](#)
urn:oid:2.16.840.1.113883.3.88.12.80.2 **DYNAMIC** (CONF:1098-5403).
 - 3. If country is US, this addr **SHOULD** contain zero to one [0..1] **state**, which **SHALL** be selected from ValueSet [StateValueSet](#)
2.16.840.1.113883.3.88.12.80.1 **DYNAMIC** (CONF:1098-5402).
11. This patient **SHALL** contain at least one [1..*] **languageCommunication** (CONF:1098-5406).
- a. Such languageCommunications **SHALL** contain exactly one [1..1] **languageCode**, which **SHALL** be selected from ValueSet [PatientLanguage](#)
urn:oid:2.16.840.1.113883.11.20.9.64 **DYNAMIC** (CONF:1098-5407).
 - b. Such languageCommunications **MAY** contain zero or one [0..1] **modeCode**, which **SHALL** be selected from ValueSet [LanguageAbilityMode](#)
urn:oid:2.16.840.1.113883.1.11.12249 **DYNAMIC** (CONF:1098-5409).

- c. Such languageCommunications **SHOULD** contain zero or one [0..1] **proficiencyLevelCode**, which **SHALL** be selected from ValueSet LanguageAbilityProficiency urn:oid:2.16.840.1.113883.1.11.12199 **DYNAMIC** (CONF:1098-9965).
 - d. Such languageCommunications **SHOULD** contain zero or one [0..1] **preferenceInd** (CONF:1098-5414).
- v. This patientRole **MAY** contain zero or one [0..1] **providerOrganization** (CONF:1098-5416).
 - 1. The providerOrganization, if present, **SHALL** contain at least one [1..*] **id** (CONF:1098-5417).
 - a. Such ids **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-16820).
 - 2. The providerOrganization, if present, **SHALL** contain at least one [1..*] **name** (CONF:1098-5419).
 - 3. The providerOrganization, if present, **SHALL** contain at least one [1..*] **telecom** (CONF:1098-5420).
 - a. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet Telecom Use (US Realm Header) urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-7994).
 - 4. The providerOrganization, if present, **SHALL** contain at least one [1..*] US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5422).

Figure 6: recordTarget Example

```
<recordTarget>
  <patientRole>
    <id extension="444-22-2222" root="2.16.840.1.113883.4.1" />
    <!-- Example Social Security Number using the actual SSN OID. -->
    <addr use="HP">
      <!-- HP is "primary home" from codeSystem 2.16.840.1.113883.5.1119 -->
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Beaverton</city>
      <state>OR</state>
      <postalCode>97867</postalCode>
      <country>US</country>
      <!-- US is "United States" from ISO 3166-1 Country Codes: 1.0.3166.1 -->
    </addr>
    <telecom value="tel:+1(555)555-2003" use="HP" />
    <!-- HP is "primary home" from HL7 AddressUse 2.16.840.1.113883.5.1119 -->
  </patient>
  <!-- The first name element represents what the patient is known as -->
  <name use="I">
    <given>Evelyn</given>
    <given qualifier="IN">E</given>
    <family qualifier="SP">Everyman</family>
    <suffix qualifier="AC">J.D.</suffix>
  </name>
  <name use="P">
    <!-- The "P" is Other/Pseudonym/Alias -->
    <given>Jane</given>
    <family>Doe</family>
  </name>
  <name>
    <given>Evelyn</given>
    <!-- The "BR" is "Birth" from
         HL7 Code System EntityNamePartQualifier 2.16.840.1.113883.5.43 -->
    <family qualifier="BR">Everywoman</family>
  </name>
  <administrativeGenderCode code="F" displayName="Female"
    codeSystem="2.16.840.1.113883.5.1" codeSystemName="AdministrativeGender"/>
  <!-- Date of birth need only be precise to the day -->
  <birthTime value="19750501"/>
  <maritalStatusCode code="M" displayName="Married"
    codeSystem="2.16.840.1.113883.5.2"
    codeSystemName="MaritalStatusCode"/>
  <religiousAffiliationCode code="1013"
    displayName="Christian (non-Catholic, non-specific)"
    codeSystem="2.16.840.1.113883.5.1076"
    codeSystemName="HL7 Religious Affiliation"/>
  <raceCode code="2106-3" displayName="White"
    codeSystem="2.16.840.1.113883.6.238"
    codeSystemName="Race & Ethnicity - CDC"/>
  <!-- The raceCode extension is only used if raceCode is valued -->
  <sdtc:raceCode code="2076-8" displayName="Hawaiian or Other Pacific Islander"
    codeSystem="2.16.840.1.113883.6.238"
    codeSystemName="Race & Ethnicity - CDC"/>
  <ethnicGroupCode code="2186-5" displayName="Not Hispanic or Latino"
    codeSystem="2.16.840.1.113883.6.238"
    codeSystemName="Race & Ethnicity - CDC"/>
```

```

    <guardian>
      <code code="POWATT" displayName="Power of Attorney"
        codeSystem="2.16.840.1.113883.1.11.19830"
        codeSystemName="ResponsibleParty"/>
      <addr use="HP">
        <streetAddressLine>2222 Home Street</streetAddressLine>
        <city>Beaverton</city>
        <state>OR</state>
        <postalCode>97867</postalCode>
        <country>US</country>
      </addr>
      <telecom value="tel:+1(555)555-2008" use="MC"/>
      <guardianPerson>
        <name>
          <given>Boris</given>
          <given qualifier="CL">Bo</given>
          <family>Betterhalf</family>
        </name>
      </guardianPerson>
    </guardian>
    <birthplace>
      <place>
        <addr>
          <state>OR</state>
          <country>US</country>
        </addr>
      </place>
    </birthplace>
    <languageCommunication>
      <languageCode code="eng"/>
      <!-- "eng" is ISO 639-2 alpha-3 code for "English" -->
      <modeCode code="ESP" displayName="Expressed spoken"
        codeSystem="2.16.840.1.113883.5.60"
        codeSystemName="LanguageAbilityMode"/>
      <proficiencyLevelCode code="G" displayName="Good"
        codeSystem="2.16.840.1.113883.5.61"
        codeSystemName="LanguageAbilityProficiency"/>
      <!-- Patient's preferred language -->
      <preferenceInd value="true"/>
    </languageCommunication>
  </patient>
  <providerOrganization>
    <id extension="219BX" root="1.1.1.1.1.1.1.2" />
    <name>The DoctorsTogether Physician Group</name>
    <telecom use="WP" value="tel: +(555)-555-5000" />
    <addr>
      <streetAddressLine>1007 Health Drive</streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
  </providerOrganization>
</patientRole>
</recordTarget>

```

2.2.1.3 author

The author element represents the creator of the clinical document. The author may be a device or a person.

13. **SHALL** contain at least one [1..*] **author** (CONF:1098-5444).

- a. Such authors **SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDDED)** (identifier:
urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1098-5445).
- b. Such authors **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:1098-5448).
 - i. This assignedAuthor **SHALL** contain at least one [1..*] **id** (CONF:1098-5449).

If this assignedAuthor is an assignedPerson

- ii. This assignedAuthor **SHOULD** contain zero or one [0..1] **id** (CONF:1098-32882) such that it

If id with @root="2.16.840.1.113883.4.6" National Provider Identifier is unknown then

1. **MAY** contain zero or one [0..1] **@nullFlavor="UNK"** Unknown (CodeSystem: HL7NullFlavor
urn:oid:2.16.840.1.113883.5.1008) (CONF:1098-32883).
2. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.4.6"** National Provider Identifier (CONF:1098-32884).
3. **SHOULD** contain zero or one [0..1] **@extension** (CONF:1098-32885).

Only if this assignedAuthor is an assignedPerson should the assignedAuthor contain a code.

- iii. This assignedAuthor **SHOULD** contain zero or one [0..1] **code** (CONF:1098-16787).
 1. The code, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHOULD** be selected from ValueSet **Healthcare Provider Taxonomy (HIPAA)** urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-16788).
- iv. This assignedAuthor **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDDED)** (identifier:
urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5452).
- v. This assignedAuthor **SHALL** contain at least one [1..*] **telecom** (CONF:1098-5428).
 1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **Telecom Use (US Realm Header)** urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-7995).
- vi. This assignedAuthor **SHOULD** contain zero or one [0..1] **assignedPerson** (CONF:1098-5430).
 1. The assignedPerson, if present, **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDDED)** (identifier:
urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-16789).
- vii. This assignedAuthor **SHOULD** contain zero or one [0..1] **assignedAuthoringDevice** (CONF:1098-16783).

1. The assignedAuthoringDevice, if present, **SHALL** contain exactly one [1..1] **manufacturerModelName** (CONF:1098-16784).
 2. The assignedAuthoringDevice, if present, **SHALL** contain exactly one [1..1] **softwareName** (CONF:1098-16785).
- viii. There **SHALL** be exactly one assignedAuthor/assignedPerson or exactly one assignedAuthor/assignedAuthoringDevice (CONF:1098-16790).

Figure 7: author Example

```
<author>
  <time value="201209151030-0800" />
  <assignedAuthor>
    <id extension="5555555555" root="2.16.840.1.113883.4.6" />
    <code code="163W00000X" displayName="Registered nurse"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
    <addr>
      <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1004" />
    <assignedPerson>
      <name>
        <given>Patricia</given>
        <given qualifier="CL">Patty</given>
        <family>Primary</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
  </assignedAuthor>
</author>
```

2.2.1.4 dataEnterer

The dataEnterer element represents the person who transferred the content, written or dictated, into the clinical document. To clarify, an author provides the content found within the header or body of a document, subject to their own interpretation; a dataEnterer adds an author's information to the electronic system.

14. **MAY** contain zero or one [0..1] **dataEnterer** (CONF:1098-5441).
 - a. The dataEnterer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-5442).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-5443).
 1. Such ids **SHOULD** contain zero or one [0..1]

@root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-16821).
 - ii. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-32173).

- iii. This assignedEntity **SHALL** contain at least one [1..*] US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5460).
- iv. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1098-5466).
 - 1. Such telecoms **SHOULD** contain zero or one [0..1] @use, which **SHALL** be selected from ValueSet Telecom Use (US Realm Header) (identifier: urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-7996).
- v. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1098-5469).
 - 1. This assignedPerson **SHALL** contain at least one [1..*] US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-5470).

Figure 8: dateEnterer Example

```

<dataEnterer>
  <assignedEntity>
    <id extension="333777777" root="2.16.840.1.113883.4.6" />
    <addr>
      <streetAddressLine>1007 Healthcare Drive</streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1050" />
    <assignedPerson>
      <name>
        <given>Ellen</given>
        <family>Enter</family>
      </name>
    </assignedPerson>
  </assignedEntity>
</dataEnterer>

```

2.2.1.5 informant

The informant element describes an information source for any content within the clinical document. This informant is constrained for use when the source of information is an assigned health care provider for the patient.

- 15. **MAY** contain zero or more [0..*] **informant** (CONF:1098-8001) such that it
 - a. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-8002).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-9945).
 - 1. If assignedEntity/id is a provider then this id, **SHOULD** include zero or one [0..1] id where id/@root = "2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-9946).

- ii. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-32174).
- iii. This assignedEntity **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-8220).
- iv. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1098-8221).
 - 1. This assignedPerson **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-8222).

Figure 9: Assigned Health Care Provider informant Example

```

<informant>
  <assignedEntity>
    <id extension="8888888888" root="1.1.1.1.1.1.1.3" />
    <addr>
      <streetAddressLine>1007 Healthcare Drive</streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1003" />
    <assignedPerson>
      <name>
        <given>Harold</given>
        <family>Hippocrates</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
    <representedOrganization>
      <name>The DoctorsApart Physician Group</name>
    </representedOrganization>
  </assignedEntity>
</informant>

```

2.2.1.6 informant

The informant element describes an information source (who is not a provider) for any content within the clinical document. This informant would be used when the source of information has a personal relationship with the patient or is the patient.

- 16. **MAY** contain zero or more [0..*] **informant** (CONF:1098-31355) such that it
 - a. **SHALL** contain exactly one [1..1] **relatedEntity** (CONF:1098-31356).

Figure 10: Personal Relation informant Example

```
<informant>
  <relatedEntity classCode="PRS">
    <!-- classCode "PRS" represents a person with personal relationship with the patient -->
    <code code="SPS" displayName="SPOUSE" codeSystem="2.16.840.1.113883.1.11.19563"
codeSystemName="Personal Relationship Role Type Value Set" />
    <relatedPerson>
      <name>
        <given>Boris</given>
        <given qualifier="CL">Bo</given>
        <family>Betterhalf</family>
      </name>
    </relatedPerson>
  </relatedEntity>
</informant>
```

2.2.1.7 custodian

The custodian element represents the organization that is in charge of maintaining and is entrusted with the care of the document.

There is only one custodian per CDA document. Allowing that a CDA document may not represent the original form of the authenticated document, the custodian represents the steward of the original source document. The custodian may be the document originator, a health information exchange, or other responsible party.

17. **SHALL** contain exactly one [1..1] **custodian** (CONF:1098-5519).
 - a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:1098-5520).
 - i. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:1098-5521).
 1. This representedCustodianOrganization **SHALL** contain at least one [1..*] **id** (CONF:1098-5522).
 - a. Such ids **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-16822).
 2. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **name** (CONF:1098-5524).
 3. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **telecom** (CONF:1098-5525).
 - a. This telecom **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [Telecom Use \(US Realm Header\)](#) urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-7998).
 4. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **US Realm Address (AD.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5559).

Figure 11: custodian Example

```
<custodian>
  <assignedCustodian>
    <representedCustodianOrganization>
      <id extension="321CX" root="1.1.1.1.1.1.1.1.3" />
      <name>Good Health HIE</name>
      <telecom use="WP" value="tel:+1(555)555-1009" />
      <addr use="WP">
        <streetAddressLine>1009 Healthcare Drive </streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
    </representedCustodianOrganization>
  </assignedCustodian>
</custodian>
```

2.2.1.8 informationRecipient

The informationRecipient element records the intended recipient of the information at the time the document was created. In cases where the intended recipient of the document is the patient's health chart, set the receivedOrganization to the scoping organization for that chart.

18. **MAY** contain zero or more [0..*] **informationRecipient** (CONF:1098-5565).

a. The informationRecipient, if present, **SHALL** contain exactly one [1..1] **intendedRecipient** (CONF:1098-5566).

i. This intendedRecipient **MAY** contain zero or more [0..*] **id** (CONF:1098-32399).

ii. This intendedRecipient **MAY** contain zero or one [0..1] **informationRecipient** (CONF:1098-5567).

1. The informationRecipient, if present, **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-5568).

iii. This intendedRecipient **MAY** contain zero or one [0..1] **receivedOrganization** (CONF:1098-5577).

1. The receivedOrganization, if present, **SHALL** contain exactly one [1..1] **name** (CONF:1098-5578).

Figure 12: informationRecipient Example

```
<informationRecipient>
  <intendedRecipient>
    <informationRecipient>
      <name>
        <given>Sara</given>
        <family>Specialize</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </informationRecipient>
    <receivedOrganization>
      <name>The DoctorsApart Physician Group</name>
    </receivedOrganization>
  </intendedRecipient>
</informationRecipient>
```

2.2.1.9 legalAuthenticator

The legalAuthenticator identifies the single person legally responsible for the document and must be present if the document has been legally authenticated. A clinical document that does not contain this element has not been legally authenticated.

The act of legal authentication requires a certain privilege be granted to the legal authenticator depending upon local policy. Based on local practice, clinical documents may be released before legal authentication.

All clinical documents have the potential for legal authentication, given the appropriate credentials.

Local policies MAY choose to delegate the function of legal authentication to a device or system that generates the clinical document. In these cases, the legal authenticator is a person accepting responsibility for the document, not the generating device or system.

Note that the legal authenticator, if present, must be a person.

19. **SHOULD** contain zero or one [0..1] **legalAuthenticator** (CONF:1098-5579).

- a. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1098-5580).
- b. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **signatureCode** (CONF:1098-5583).
 - i. This signatureCode **SHALL** contain exactly one [1..1] **@code="S"** (CodeSystem: Participationsignature urn:oid:2.16.840.1.113883.5.89 **STATIC**) (CONF:1098-5584).

2.2.1.10 sdtc:signatureText

The sdtc:signatureText extension provides a location in CDA for a textual or multimedia depiction of the signature by which the participant endorses and accepts responsibility for his or her participation in the Act as specified in the Participation.typeCode. Details of what goes in the field are described in the HL7 CDA Digital Signature Standard balloted in Fall of 2013.

- c. The legalAuthenticator, if present, **MAY** contain zero or one [0..1] **sdtc:signatureText** (CONF:1098-30810).
 Note: The signature can be represented either inline or by reference according to the ED data type. Typical cases for CDA are:
 1) Electronic signature: this attribute can represent virtually any electronic signature scheme.
 2) Digital signature: this attribute can represent digital signatures by reference to a signature data block that is constructed in accordance to a digital signature standard, such as XML-DSIG, PKCS#7, PGP, etc.

Figure 13: Digital signature Example

```
<sdtc:signatureText mediaType="text/xml"
representation="B64">omSJUEdmde9j44zmMiromSJUEdmde9j44zmMirdMDSsWdIJdksIJR3373jeu83
6edjzMMIjdMDSsWdIJdksIJR3373jeu83MNYD83jmMdomSJUEdmde9j44zmMir
... MNYD83jmMdomSJUEdmde9j44zmMir6edjzMMIjdMDSsWdIJdksIJR3373jeu83
4zmMir6edjzMMIjdMDSsWdIJdksIJR3373jeu83==</sdtc:signatureText>
```

- d. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-5585).
- i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-5586).
 1. Such ids **MAY** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-16823).
 - ii. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-17000).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5589).
 - iv. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1098-5595).
 1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [Telecom Use \(US Realm Header\)](#) urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-7999).
 - v. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1098-5597).
 1. This assignedPerson **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-5598).

Figure 14: legalAuthenticator Example

```
<legalAuthenticator>
  <time value="20120915223615-0800" />
  <signatureCode code="S" />
  <assignedEntity>
    <id extension="5555555555" root="2.16.840.1.113883.4.6" />
    <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
    <addr>
      <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1004" />
    <assignedPerson>
      <name>
        <given>Patricia</given>
        <given qualifier="CL">Patty</given>
        <family>Primary</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
  </assignedEntity>
</legalAuthenticator>
```

2.2.1.11 authenticator

The authenticator identifies a participant or participants who attest to the accuracy of the information in the document.

20. **MAY** contain zero or more [0..*] **authenticator** (CONF:1098-5607) such that it
- SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1098-5608).
 - SHALL** contain exactly one [1..1] **signatureCode** (CONF:1098-5610).
 - This signatureCode **SHALL** contain exactly one [1..1] **@code="S"** (CodeSystem: Participationsignature urn:oid:2.16.840.1.113883.5.89 **STATIC**) (CONF:1098-5611).

The sdtc:signatureText extension provides a location in CDA for a textual or multimedia depiction of the signature by which the participant endorses and accepts responsibility for his or her participation in the Act as specified in the Participation.typeCode. Details of what goes in the field are described in the HL7 CDA Digital Signature Standard balloted in Fall of 2013.

- MAY** contain zero or one [0..1] **sdtc:signatureText** (CONF:1098-30811).

Note: The signature can be represented either inline or by reference according to the ED data type. Typical cases for CDA are:

 - Electronic signature: this attribute can represent virtually any electronic signature scheme.
 - Digital signature: this attribute can represent digital signatures by reference to a

signature data block that is constructed in accordance to a digital signature standard, such as XML-DSIG, PKCS#7, PGP, etc.

- d. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-5612).
 - i. This **assignedEntity** **SHALL** contain at least one [1..*] **id** (CONF:1098-5613).
 - 1. Such **ids** **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-16824).
 - ii. This **assignedEntity** **MAY** contain zero or one [0..1] **code** (CONF:1098-16825).
 - 1. The code, if present, **MAY** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) urn:oid:2.16.840.1.114222.4.11.1066 **STATIC** (CONF:1098-16826).
 - iii. This **assignedEntity** **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5616).
 - iv. This **assignedEntity** **SHALL** contain at least one [1..*] **telecom** (CONF:1098-5622).
 - 1. Such **telecoms** **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [Telecom Use \(US Realm Header\)](#) urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-8000).
 - v. This **assignedEntity** **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1098-5624).
 - 1. This **assignedPerson** **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-5625).

Figure 15: authenticator Example

```
<authenticator>
  <time value="201209151030-0800" />
  <signatureCode code="S" />
  <assignedEntity>
    <id extension="5555555555" root="2.16.840.1.113883.4.6" />
    <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
    <addr>
      <streetAddressLine>1004 Healthcare Drive</streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1004" />
    <assignedPerson>
      <name>
        <given>Patricia</given>
        <given qualifier="CL">Patty</given>
        <family>Primary</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
  </assignedEntity>
</authenticator>
```

2.2.1.12 participant

The participant element identifies supporting entities, including parents, relatives, caregivers, insurance policyholders, guarantors, and others related in some way to the patient.

A supporting person or organization is an individual or an organization with a relationship to the patient. A supporting person who is playing multiple roles would be recorded in multiple participants (e.g., emergency contact and next-of-kin).

21. **MAY** contain zero or more [0..*] **participant** (CONF:1098-10003) such that it
- MAY** contain zero or one [0..1] **time** (CONF:1098-10004).
 - SHALL** contain associatedEntity/associatedPerson **AND/OR** associatedEntity/scopingOrganization (CONF:1098-10006).
 - When participant/@typeCode is **IND**, associatedEntity/@classCode **SHOULD** be selected from ValueSet 2.16.840.1.113883.11.20.9.33 INDRoleclassCodes **STATIC 2011-09-30** (CONF:1098-10007).

Figure 16: Supporting Person participant Example

```
<participant typeCode="IND">
  <!-- typeCode "IND" represents an individual -->
  <associatedEntity classCode="NOK">
    <!-- classCode "NOK" represents the patient's next of kin-->
    <addr use="HP">
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Beaverton</city>
      <state>OR</state>
      <postalCode>97867</postalCode>
      <country>US</country>
    </addr>
    <telecom value="tel:+1(555)555-2008" use="MC" />
    <associatedPerson>
      <name>
        <given>Boris</given>
        <given qualifier="CL">Bo</given>
        <family>Betterhalf</family>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
<!-- Entities playing multiple roles are recorded in multiple participants -->
<participant typeCode="IND">
  <associatedEntity classCode="ECON">
    <!-- classCode "ECON" represents an emergency contact -->
    <addr use="HP">
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Beaverton</city>
      <state>OR</state>
      <postalCode>97867</postalCode>
      <country>US</country>
    </addr>
    <telecom value="tel:+1(555)555-2008" use="MC" />
    <associatedPerson>
      <name>
        <given>Boris</given>
        <given qualifier="CL">Bo</given>
        <family>Betterhalf</family>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
```

2.2.1.13 inFulfillmentOf

The inFulfillmentOf element represents orders that are fulfilled by this document such as a radiologists' report of an x-ray.

22. **MAY** contain zero or more [0..*] inFulfillmentOf (CONF:1098-9952).

- a. The inFulfillmentOf, if present, **SHALL** contain exactly one [1..1] **order** (CONF:1098-9953).
 - i. This order **SHALL** contain at least one [1..*] **id** (CONF:1098-9954).

Figure 17: inFulfillmentOf Example

```
<inFulfillmentOf typeCode="FLFS">
  <order classCode="ACT" moodCode="RQO">
    <id root="2.16.840.1.113883.6.96" extension="1298989898" />
    <code code="388975008" displayName="Weight Reduction Consultation"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="CPT4" />
  </order>
</inFulfillmentOf>
```

2.2.1.14 documentationOf

23. **MAY** contain zero or more [0..*] **documentationOf** (CONF:1098-14835).

A serviceEvent represents the main act being documented, such as a colonoscopy or a cardiac stress study. In a provision of healthcare serviceEvent, the care providers, PCP, or other longitudinal providers, are recorded within the serviceEvent. If the document is about a single encounter, the providers associated can be recorded in the componentOf/encompassingEncounter template.

- a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1098-14836).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-14837).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1098-14838).

2.2.1.15 performer

The performer participant represents clinicians who actually and principally carry out the serviceEvent. In a transfer of care this represents the healthcare providers involved in the current or pertinent historical care of the patient. Preferably, the patient's key healthcare care team members would be listed, particularly their primary physician and any active consulting physicians, therapists, and counselors.

- ii. This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:1098-14839).
 1. The performer, if present, **SHALL** contain exactly one [1..1] **@typeCode**, which **SHALL** be selected from ValueSet [x ServiceEventPerformer](#) urn:oid:2.16.840.1.113883.1.11.19601 **STATIC** 2014-09-01 (CONF:1098-14840).
 2. The performer, if present, **MAY** contain zero or one [0..1] **functionCode** (CONF:1098-16818).
 - a. The functionCode, if present, **SHOULD** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet [ParticipationFunction](#) urn:oid:2.16.840.1.113883.1.11.10267 **STATIC** 2014-09-01 (CONF:1098-32889).

3. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-14841).
 - a. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-14846).
 - i. Such ids **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-14847).
 - b. This assignedEntity **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-14842).

Figure 18: performer Example

```
<performer typeCode="PRF">
  <functionCode code="PCP"
    displayName="Primary Care Provider"
    codeSystem="2.16.840.1.113883.5.88"
    codeSystemName="ParticipationFunction">
    <originalText>Primary Care Provider</originalText>
  </functionCode>
  <assignedEntity>
    <id extension="5555555555" root="2.16.840.1.113883.4.6" />
    <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
    <addr>
      <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1004" />
    <assignedPerson>
      <name>
        <given>Patricia</given>
        <given qualifier="CL">Patty</given>
        <family>Primary</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
    <representedOrganization>
      <id extension="219BX" root="1.1.1.1.1.1.1.2" />
      <name>The DoctorsTogether Physician Group</name>
      <telecom use="WP" value="tel: +(555)-555-5000" />
      <addr>
        <streetAddressLine>1004 Health Drive</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
    </representedOrganization>
  </assignedEntity>
</performer>
```

Figure 19: documentationOf Example

```
<documentationOf>
  <serviceEvent classCode="PCPR">
    <!-- The effectiveTime reflects the provision of care summarized in the document.
    In this scenario, the provision of care summarized is the lifetime for the patient -->
    <effectiveTime>
      <low value="19750501" />
      <!-- The low value represents when the summarized provision of care began.
      In this scenario, the patient's date of birth -->
      <high value="20120915" />
      <!-- The high value represents when the summarized provision of care being ended.
      In this scenario, when chart summary was created -->
    </effectiveTime>
    <performer typeCode="PRF">
      <functionCode code="PCP"
                    displayName="Primary Care Provider"
                    codeSystem="2.16.840.1.113883.5.88"
                    codeSystemName="ParticipationFunction">
        <originalText>Primary Care Provider</originalText>
      </functionCode>
      <assignedEntity>
        <id extension="5555555555" root="2.16.840.1.113883.4.6" />
        <code code="207QA0505X" displayName="Adult Medicine"
              codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
        <addr>
          <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-1004" />
        <assignedPerson>
          <name>
            <given>Patricia</given>
            <given qualifier="CL">Patty</given>
            <family>Primary</family>
            <suffix qualifier="AC">M.D.</suffix>
          </name>
        </assignedPerson>
        <representedOrganization>
          <id extension="219BX" root="1.1.1.1.1.1.1.1.2" />
          <name>The DoctorsTogether Physician Group</name>
          <telecom use="WP" value="tel: +(555)-555-5000" />
          <addr>
            <streetAddressLine>1004 Health Drive</streetAddressLine>
            <city>Portland</city>
            <state>OR</state>
            <postalCode>99123</postalCode>
            <country>US</country>
          </addr>
        </representedOrganization>
      </assignedEntity>
    </performer>
  </serviceEvent>
</documentationOf>
```

2.2.1.16 authorization

The authorization element represents information about the patient's consent.

The type of consent is conveyed in consent/code. Consents in the header have been finalized (consent/statusCode must equal Completed) and should be on file. This specification does not address how 'Privacy Consent' is represented, but does not preclude the inclusion of 'Privacy Consent'.

The authorization consent is used for referring to consents that are documented elsewhere in the EHR or medical record for a health condition and/or treatment that is described in the CDA document.

24. **MAY** contain zero or more [0..*] **authorization** (CONF:1098-16792) such that it
- a. **SHALL** contain exactly one [1..1] **consent** (CONF:1098-16793).
 - i. This consent **MAY** contain zero or more [0..*] **id** (CONF:1098-16794).
 - ii. This consent **MAY** contain zero or one [0..1] **code** (CONF:1098-16795).
Note: The type of consent (e.g., a consent to perform the related serviceEvent) is conveyed in consent/code.
 - iii. This consent **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-16797).
 1. This statusCode **SHALL** contain exactly one [1..1] **@code="completed" Completed (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6)** (CONF:1098-16798).

Figure 20: authorization Example

```
<authorization typeCode="AUTH">
  <consent classCode="CONS" moodCode="EVN">
    <id root="629deb70-5306-11df-9879-0800200c9a66" />
    <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="64293-4"
    displayName="Procedure consent" />
    <statusCode code="completed" />
  </consent>
</authorization>
```

2.2.1.17 componentOf

The encompassing encounter represents the setting of the clinical encounter during which the document act(s) or ServiceEvent(s) occurred.

In order to represent providers associated with a specific encounter, they are recorded within the encompassingEncounter as participants.

In a CCD, the encompassingEncounter may be used when documenting a specific encounter and its participants. All relevant encounters in a CCD may be listed in the encounters section.

25. **MAY** contain zero or one [0..1] **componentOf** (CONF:1098-9955).

- a. The componentOf, if present, **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1098-9956).
 - i. This encompassingEncounter **SHALL** contain at least one [1..*] **id** (CONF:1098-9959).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-9958).

Table 8: HL7 BasicConfidentialityKind

Value Set: HL7 BasicConfidentialityKind urn:oid:2.16.840.1.113883.1.11.16926 A value set of HL7 Code indication the level of confidentiality an act. Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
N	ConfidentialityCode	urn:oid:2.16.840.1.113883.5.25	normal
R	ConfidentialityCode	urn:oid:2.16.840.1.113883.5.25	restricted
V	ConfidentialityCode	urn:oid:2.16.840.1.113883.5.25	very restricted

Table 9: Language

Value Set: Language urn:oid:2.16.840.1.113883.1.11.11526 A value set of codes defined by Internet RFC 4646 (replacing RFC 3066). Please see ISO 639 language code set maintained by Library of Congress for enumeration of language codes. Value Set Source: http://www.loc.gov/standards/iso639-2/php/code_list.php			
Code	Code System	Code System OID	Print Name
aa	Language	urn:oid:2.16.840.1.113883.6.121	Afar
ab	Language	urn:oid:2.16.840.1.113883.6.121	Abkhazian
ace	Language	urn:oid:2.16.840.1.113883.6.121	Achinese
ach	Language	urn:oid:2.16.840.1.113883.6.121	Acoli
ada	Language	urn:oid:2.16.840.1.113883.6.121	Adangme
ady	Language	urn:oid:2.16.840.1.113883.6.121	Adyghe; Adygei
ae	Language	urn:oid:2.16.840.1.113883.6.121	Avestan
af	Language	urn:oid:2.16.840.1.113883.6.121	Afrikaans
afa	Language	urn:oid:2.16.840.1.113883.6.121	Afro-Asiatic (Other)
afh	Language	urn:oid:2.16.840.1.113883.6.121	Afrihili
...			

Table 10: Telecom Use (US Realm Header)

Value Set: Telecom Use (US Realm Header) urn:oid:2.16.840.1.113883.11.20.9.20 Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
HP	AddressUse	urn:oid:2.16.840.1.113883.5.1119	Primary home
HV	AddressUse	urn:oid:2.16.840.1.113883.5.1119	Vacation home
WP	AddressUse	urn:oid:2.16.840.1.113883.5.1119	Work place
MC	AddressUse	urn:oid:2.16.840.1.113883.5.1119	Mobile contact

Table 11: Administrative Gender (HL7 V3)

Value Set: Administrative Gender (HL7 V3) urn:oid:2.16.840.1.113883.1.11.1 Administrative Gender based upon HL7 V3 vocabulary. This value set contains only male, female and undifferentiated concepts. Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
F	AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Female
M	AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Male
UN	AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Undifferentiated

Table 12: Religious Affiliation

Value Set: Religious Affiliation urn:oid:2.16.840.1.113883.1.11.19185 A value set of codes that reflect spiritual faith affiliation. Value Set Source: http://www.hl7.org/v3ballotarchive_temp_16B8D83E-1C23-BA17-0CBFC625BE7BA72F/v3ballot/html/infrastructure/vocabulary/vocabulary.html#voc-sets			
Code	Code System	Code System OID	Print Name
1001	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Adventist
1002	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	African Religions
1003	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Afro-Caribbean Religions
1004	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Agnosticism
1005	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Anglican
1006	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Animism
1007	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Atheism
1008	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Babi & Baha'I faiths
1009	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Baptist
1010	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Bon
...			

Table 13: Race Category Excluding Nulls

Value Set: Race Category Excluding Nulls urn:oid:2.16.840.1.113883.3.2074.1.1.3			
Code	Code System	Code System OID	Print Name
1002-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	American Indian or Alaska Native
2028-9	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Asian
2054-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Black or African American
2076-8	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Native Hawaiian or Other Pacific Islander
2106-3	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	White

Table 14: Ethnicity

Value Set: Ethnicity urn:oid:2.16.840.1.114222.4.11.837			
Code System: Race & Ethnicity - CDC 2.16.840.1.113883.6.238			
Value Set Source: http://phinivads.cdc.gov/vads/ViewValueSet.action?id=35D34BBC-617F-DD11-B38D-00188B398520			
Code	Code System	Code System OID	Print Name
2135-2	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Hispanic or Latino
2186-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Not Hispanic or Latino

Table 15: Personal And Legal Relationship Role Type

Value Set: Personal And Legal Relationship Role Type urn:oid:2.16.840.1.113883.11.20.12.1			
A personal or legal relationship records the role of a person in relation to another person, or a person to himself or herself. This value set is to be used when recording relationships based on personal or family ties or through legal assignment of responsibility.			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
SELF	RoleCode	urn:oid:2.16.840.1.113883.5.111	self
MTH	RoleCode	urn:oid:2.16.840.1.113883.5.111	mother
FTH	RoleCode	urn:oid:2.16.840.1.113883.5.111	father
DAU	RoleCode	urn:oid:2.16.840.1.113883.5.111	natural daughter
SON	RoleCode	urn:oid:2.16.840.1.113883.5.111	natural son
DAUINLAW	RoleCode	urn:oid:2.16.840.1.113883.5.111	daughter in-law
SONINLAW	RoleCode	urn:oid:2.16.840.1.113883.5.111	son in-law
GUARD	RoleCode	urn:oid:2.16.840.1.113883.5.111	guardian
HPOWATT	RoleCode	urn:oid:2.16.840.1.113883.5.111	healthcare power of attorney
...			

Table 16: Country

Value Set: Country urn:oid:2.16.840.1.113883.3.88.12.80.63			
This identifies the codes for the representation of names of countries, territories and areas of geographical interest.			
Value Set Source: http://www.iso.org/iso/country_codes/iso_3166_code_lists.htm			
Code	Code System	Code System OID	Print Name
AW	Country	urn:oid:2.16.840.1.113883.3.88.12.80.63	Aruba
IL	Country	urn:oid:2.16.840.1.113883.3.88.12.80.63	Israel
...			

Table 17: PostalCode

Value Set: PostalCode urn:oid:2.16.840.1.113883.3.88.12.80.2			
A value set of postal (ZIP) Code of an address in the United States			
Value Set Source: http://ushik.ahrq.gov/ViewItemDetails?system=mdr&itemKey=86671000			
Code	Code System	Code System OID	Print Name
19009	USPostalCodes	urn:oid:2.16.840.1.113883.6.231	Bryn Athyn
92869-1736	USPostalCodes	urn:oid:2.16.840.1.113883.6.231	Orange, CA
32830-8413	USPostalCodes	urn:oid:2.16.840.1.113883.6.231	Lake Buena Vista, FL
...			

Table 18: PatientLanguage

Value Set: PatientLanguage urn:oid:2.16.840.1.113883.11.20.9.64			
This value set contains codes for the representation of language names as defined by the Library of Congress, the ISO 639-2 registration authority. This value set contains a subset of the ISO 639-2 alpha-3 code set, limited to those that have a corresponding ISO 639-1 alpha-2 code as required for representing a patient's language under Meaningful Use Stage 2.			
Value Set Source: http://www.loc.gov/standards/iso639-2/php/code_list.php			
Code	Code System	Code System OID	Print Name
aar	Language	urn:oid:2.16.840.1.113883.6.121	Afar
abk	Language	urn:oid:2.16.840.1.113883.6.121	Abkhazian
afr	Language	urn:oid:2.16.840.1.113883.6.121	Afrikaans
aka	Language	urn:oid:2.16.840.1.113883.6.121	Akan
sqi	Language	urn:oid:2.16.840.1.113883.6.121	Albanian
amh	Language	urn:oid:2.16.840.1.113883.6.121	Amharic
ara	Language	urn:oid:2.16.840.1.113883.6.121	Arabic
arg	Language	urn:oid:2.16.840.1.113883.6.121	Aragonese
hye	Language	urn:oid:2.16.840.1.113883.6.121	Armenian
asm	Language	urn:oid:2.16.840.1.113883.6.121	Assamese
...			

Table 19: LanguageAbilityMode

Value Set: LanguageAbilityMode urn:oid:2.16.840.1.113883.1.11.12249 This identifies the language ability of the individual. A value representing the method of expression of the language. Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
ESGN	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Expressed signed
ESP	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Expressed spoken
EWR	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Expressed written
RSGN	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Received signed
RSP	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Received spoken
RWR	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Received written

Table 20: LanguageAbilityProficiency

Value Set: LanguageAbilityProficiency urn:oid:2.16.840.1.113883.1.11.12199 Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
E	LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Excellent
F	LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Fair
G	LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Good
P	LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Poor

Table 21: Healthcare Provider Taxonomy (HIPAA)

Value Set: Healthcare Provider Taxonomy (HIPAA) urn:oid:2.16.840.1.114222.4.11.1066 The Health Care Provider Taxonomy value set is a collection of unique alphanumeric codes, ten characters in length. The code set is structured into three distinct Levels including Provider Type, Classification, and Area of Specialization. The Health Care Provider Taxonomy code set allows a single provider (individual, group, or institution) to identify their specialty category. Providers may have one or more than one value associated to them. When determining what value or values to associate with a provider, the user needs to review the requirements of the trading partner with which the value(s) are being used. Value Set Source: http://www.nucc.org/index.php?option=com_content&view=article&id=14&Itemid=125			
Code	Code System	Code System OID	Print Name
171100000X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Acupuncturist
363LA2100X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Nurse Practitioner - Acute Care
364SA2100X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Clinical Nurse Specialist - Acute Care
101YA0400X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Counselor - Addiction (Substance Use Disorder)
103TA0400X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Psychologist - Addiction (Substance Use Disorder)
163WA0400X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Registered Nurse - Addiction (Substance Use Disorder)
207LA0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Anesthesiology - Addiction Medicine
207QA0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Family Medicine - Addiction Medicine
207RA0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Internal Medicine - Addiction Medicine
2084A0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Psychiatry & Neurology - Addiction Medicine
...			

Table 22: INDRoleclassCodes

Value Set: INDRoleclassCodes urn:oid:2.16.840.1.113883.11.20.9.33			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
PRS	RoleClass	urn:oid:2.16.840.1.113883.5.110	personal relationship
NOK	RoleClass	urn:oid:2.16.840.1.113883.5.110	next of kin
CAREGIVER	RoleClass	urn:oid:2.16.840.1.113883.5.110	caregiver
AGNT	RoleClass	urn:oid:2.16.840.1.113883.5.110	agent
GUAR	RoleClass	urn:oid:2.16.840.1.113883.5.110	guarantor
ECON	RoleClass	urn:oid:2.16.840.1.113883.5.110	emergency contact

Table 23: x_ServiceEventPerformer

Value Set: x_ServiceEventPerformer urn:oid:2.16.840.1.113883.1.11.19601			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
PRF	HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90	performer
SPRF	HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90	secondary performer
PPRF	HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90	primary performer

Table 24: ParticipationFunction

Value Set: ParticipationFunction urn:oid:2.16.840.1.113883.1.11.10267			
This HL7-defined value set can be used to specify the exact function an actor had in a service in all necessary detail.			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.htm			
Code	Code System	Code System OID	Print Name
SNRS	participationFunction	urn:oid:2.16.840.1.113883.5.88	Scrub nurse
SASST	participationFunction	urn:oid:2.16.840.1.113883.5.88	Second assistant surgeon
...			

3 SECTION

3.1 Assessment Section - Published

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.8 (open)]

Table 25: Assessment Section Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	

The Assessment Section (also referred to as “impression” or “diagnoses” outside of the context of CDA) represents the clinician's conclusions and working assumptions that will guide treatment of the patient. The assessment may be a list of specific disease entities or a narrative block.

Table 26: Assessment Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8)					
templateId	1..1	SHALL		81-7711	
@root	1..1	SHALL		81-10382	2.16.840.1.113883.10.20.22.2.8
code	1..1	SHALL		81-14757	
@code	1..1	SHALL		81-14758	51848-0
@codeSystem	1..1	SHALL		81-26472	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-16774	
text	1..1	SHALL		81-7713	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7711) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.8" (CONF:81-10382).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-14757).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51848-0" Assessments (CONF:81-14758).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:81-26472).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-16774).

4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7713).

Figure 21: Assessment Section Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.8"/>
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" code="51848-0"
        displayName="ASSESSMENTS"/>
  <title>ASSESSMENTS</title>
  <text>
    ...
  </text>
</section>
```

3.2 Cancer Diagnosis Section (entries required) (V1.1) - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05 (open)]

Table 27: Cancer Diagnosis Section (entries required) (V1.1) Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	Cancer Diagnosis Concern Act (V1.1) Health Status Observation (V2)

Note: This template is modeled based on C-CDA R2 "Problem Section (entries required) (V2)" template.

This is the key section for the Ambulatory Healthcare Provider Cancer Event Report and, therefore, SHALL NOT be null. (In other words, the Cancer Diagnosis Section SHALL be provided and NO nullFlavor is allowed).

The Cancer Diagnosis Section is the most critical section in the Cancer Event Report. The information in this section includes: the date the cancer was first diagnosed; the anatomic location of the cancer; laterality (which of a paired organ contains the cancer; the histologic type (e.g., carcinoma, melanoma, leukemia); and the stage of the cancer at diagnosis. These data elements are necessary for public health central cancer registries to describe the occurrence of cancer in a given population and for research.

Table 28: Cancer Diagnosis Section (entries required) (V1.1) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05)					
templateId	1..1	SHALL		1169-254	
@root	1..1	SHALL		1169-258	2.16.840.1.113883.10.13.2
@extension	1..1	SHALL		1169-33947	2015-02-05
code	1..1	SHALL		1169-255	
@code	1..1	SHALL		1169-259	72135-7
@codeSystem	1..1	SHALL		1169-260	2.16.840.1.113883.6.1
title	1..1	SHALL		1169-261	
text	1..1	SHALL		1169-262	
entry	1..*	SHALL		1169-253	
@nullFlavor	0..0	SHALL NOT		1169-33244	
act	1..1	SHALL		1169-257	Cancer Diagnosis Concern Act (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.3:2015-02-05)
entry	0..1	MAY		1169-256	
observation	1..1	SHALL		1169-263	Health Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-254) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.2" (CONF:1169-258).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-02-05" (CONF:1169-33947).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1169-255).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="72135-7" Cancer diagnosis (CONF:1169-259).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1169-260).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1169-261).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1169-262).

5. **SHALL** contain at least one [1..*] **entry** (CONF:1169-253) such that it
 - a. **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33244).
 - b. **SHALL** contain exactly one [1..1] Cancer Diagnosis Concern Act (V1.1)
(identifier: urn:hl7ii:2.16.840.1.113883.10.13.3:2015-02-05)
(CONF:1169-257).
6. **MAY** contain zero or one [0..1] **entry** (CONF:1169-256) such that it
 - a. **SHALL** contain exactly one [1..1] Health Status Observation (V2)
(identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09)
(CONF:1169-263).

Figure 22: Cancer Diagnosis Section example

```

<section>
  <templateId root="2.16.840.1.113883.10.13.2" extension="2015-02-05"/>
  <code code="72135-7" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Cancer diagnosis"/>
  <title>Cancer Diagnosis</title>
  <text>
    <content ID="Diagnosis_1">Malignant neoplasm of breast</content>
    <table>
      <thead>
        <tr>
          <th>Diagnosis Date</th>
          <th>Primary Site</th>
          <th>Laterality</th>
          <th>Histology</th>
          <th>Behavior</th>
          <th>Diagnostic Confirmation</th>
          <th>Grade</th>
          <th>Stage</th>
        </tr>
      </thead>
      <tbody>
        <tr>
          <td>4/2/2012</td>
          <td ID="PrimarySite_1">Breast</td>
          <td ID="Laterality_1">Right</td>
          <td ID="Histology_1">Adenocarcinoma, NOS</td>
          <td ID="Behavior_1">Malignant, Primary</td>
          <td ID="Confirmation_1">Positive Histology</td>
          <td ID="Grade_1">2</td>
          <td ID="StageGroup_1">IIB</td>
        </tr>
      </tbody>
    </table>
  </text>
  <entry typeCode="DRIV">
    <act classCode="ACT" moodCode="EVN">
      <!-- ** Cancer Diagnosis concern act ** -->
      <templateId root="2.16.840.1.113883.10.13.3" extension="2015-02-05"/>
      <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7"/>
      <code code="CONC" codeSystem="2.16.840.1.113883.5.6"
codeSystemName="HL7ActClass" displayName="Concern"/>
      <!-- The statusCode represents the need to continue tracking the problem -->
      <!-- This is of ongoing concern to the provider -->
      <statusCode code="active"/>
      <effectiveTime>
        <!-- The low value represents when the problem was first recorded
in the patient's chart -->
        <!-- Concern was documented on July 6, 2013 -->
        <low value="20140730132515"/>
      </effectiveTime>
      <entryRelationship typeCode="SUBJ">
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.13.4" extension="2015-02-05"/>
          <id root="5e0584ad-b4b0-421f-85f9-2c2c83c510cc"/>

```

```

        <code code="29308-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Diagnosis"/>
        <text>
            <reference value="#Diagnosis_1"/>
        </text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="20120702"/>
            <high nullFlavor="NA"/>
        </effectiveTime>
        <value xsi:type="CD" code="8140" codeSystem="2.16.840.1.113883.6.43.1"
codeSystemName="ICD-O-3" displayName="Adenocarcinoma, NOS">
            <originalText>
                <reference value="#Histology_1"/>
            </originalText>
            <qualifier>
                <name code="31206-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Behavior ICD-O-3 Cancer"/>
                <value xsi:type="CD" code="3"
codeSystem="2.16.840.1.113883.3.520.3.14" codeSystemName="NAACCR Behavior Code"
displayName="Malignant, Primary" sdtc:valueSet="2.16.840.1.113883.3.520.4.14">
                    <originalText>
                        <reference value="#Behavior_1"/>
                    </originalText>
                </value>
            </qualifier>
            <qualifier>
                <name code="21858-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Grade Cancer"/>
                <value code="II" codeSystem="2.16.840.1.113883.3.520.3.15"
codeSystemName="NAACCR Grade" displayName="Grade II"
sdtc:valueSet="2.16.840.1.113883.3.520.4.15">
                    <originalText>
                        <reference value="#Grade_1"/>
                    </originalText>
                </value>
            </qualifier>
            <qualifier>
                <name code="21861-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Dx confirmed by Cancer"/>
                <value xsi:type="CD" code="1"
codeSystem="2.16.840.1.113883.3.520.3.3" codeSystemName="NAACCR Diagnostic Confirmation"
displayName="Positive Histology" sdtc:valueSet="2.16.840.1.113883.3.520.4.3">
                    <originalText>
                        <reference value="#Confirmation_1"/>
                    </originalText>
                </value>
            </qualifier>
        </value>
        <targetSiteCode code="181131000" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Entire breast"
sdtc:valueSet="2.16.840.1.113883.3.88.12.3221.8.9">
            <originalText>
                <reference value="#PrimarySite_1"/>
            </originalText>
        </qualifier>

```

```

        <name code="20228-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Anatomic part Laterality "/>
        <value code="24028007" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT" displayName="Right (qualifier value)"
sdtc:valueSet="2.16.840.1.113883.3.520.4.22">
            <originalText>
                <reference value="#Laterality_1"/>
            </originalText>
        </value>
    </qualifier>
</targetSiteCode>
<entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.5" extension="2015-
02-05"/>
        <id root="91473759-6678-48a2-a0d5-084c5ded5afc"/>
        <code code="75620-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="TNM clinical staging before treatment panel Cancer"/>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="20140801112102"/>
        </effectiveTime>
        <entryRelationship typeCode="COMP">
            <observation classCode="OBS" moodCode="EVN">
                <templateId root="2.16.840.1.113883.10.13.35"
extension="2015-02-05"/>
                <code code="21908-9" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Stage group.clinical"/>
                <statusCode code="completed"/>
                <value xsi:type="CD" code="IIB"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition"
sdtc:valueSet="2.16.840.1.113883.3.520.4.9">
                    <originalText>
                        <reference value="#ClinicalStageGroup_1"/>
                    </originalText>
                </value>
            </observation>
        </entryRelationship>
        <name code="21909-7"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Descriptor.clinical
Cancer Narrative"/>
        <value code="0"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" displayName="None"
sdtc:valueSet="2.16.840.1.113883.3.520.4.10">
            <originalText>
                <reference
value="#ClinicalNarrative_1"/>
            </originalText>
        </value>
    </observation>
</entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.36"
extension="2015-02-05"/>
        <code code="21905-5"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Primary
tumor.clinical [Class] Cancer"/>

```

```

                                <value xsi:type="CD" code="T2"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" displayName="Tumor &gt;
20 mm but &lt;= to 50 mm in greatest dimension"
sdtc:valueSet="2.16.840.1.113883.3.520.4.6">
                                <originalText>
                                    <reference
value="#ClinicalPrimaryTumor_1"/>
                                </originalText>
                                </value>
                                </observation>
</entryRelationship>
<entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.37"
extension="2015-02-05"/>
                                <code code="21906-3"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Regional lymph
nodes.clinical [Class] Cancer"/>
                                <value xsi:type="CD" code="N1"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" displayName="Metastases
to movable ipsilateral level I, II axillary lymph node(s)"
sdtc:valueSet="2.16.840.1.113883.3.520.4.7">
                                <originalText>
                                    <reference value="#ClinicalNode_1"/>
                                </originalText>
                                </value>
                                </observation>
</entryRelationship>
<entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.38"
extension="2015-02-05"/>
                                <code code="21907-1"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Distant
metastases.clinical [Class] Cancer"/>
                                <value xsi:type="CD" code="M0"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" displayName="No
clinical or radiographic evidence of distant metastases"
sdtc:valueSet="2.16.840.1.113883.3.520.4.8">
                                <originalText>
                                    <reference
value="#ClinicalMetasases_1"/>
                                </originalText>
                                </value>
                                </observation>
</entryRelationship>
<entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.39"
extension="2015-02-05"/>
                                <code code="21910-5"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Stager.clinical
Cancer "/>
                                <value xsi:type="CD" code="3"
codeSystem="2.16.840.1.113883.3.520.3.4" codeSystemName="NAACCR TNM Clinical Staged By "
displayName="Pathologist and managing physician"
sdtc:valueSet="2.16.840.1.113883.3.520.4.4">

```

```

                                <originalText>
                                    <reference
value="#ClinicalStagedBy_1"/>
                                </originalText>
                                </value>
                                </observation>
                                </entryRelationship>
                                </observation>
                                </entryRelationship>
                                </observation>
                                </entryRelationship>
                                <entryRelationship typeCode="SUBJ" inversionInd="true">
                                    <observation classCode="OBS" moodCode="EVN">
                                        <templateId root="2.16.840.1.113883.10.13.7" extension="2015-
02-06"/>
                                        <id root="6d064a91-fdae-4acf-9eb8-e1695cf301c9"/>
                                        <code code="75621-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="TNM pathologic staging after surgery panel"/>
                                        <statusCode code="completed"/>
                                        <effectiveTime>
                                            <low value="20140801112253"/>
                                        </effectiveTime>
                                        <entryRelationship typeCode="COMP">
                                            <observation classCode="OBS" moodCode="EVN">
                                                <templateId root="2.16.840.1.113883.10.13.40"
extension="2015-02-05"/>
                                                <code code="21902-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Stage group.pathology Cancer"/>
                                                <statusCode code="completed"/>
                                                <value xsi:type="CD" code="IIB"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition"
sdtc:valueSet="2.16.840.1.113883.3.520.4.20">
                                                    <originalText>
                                                        <reference value="#PathologicStageGroup_1"/>
                                                    </originalText>
                                                    <qualifier>
                                                        <name code="21903-0"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Descriptor.pathology
Cancer Narrative "/>
                                                    <value code="0"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition"
sdtc:valueSet="2.16.840.1.113883.3.520.4.21"/>
                                                    </qualifier>
                                                    </value>
                                                    <entryRelationship typeCode="COMP">
                                                        <observation classCode="OBS" moodCode="EVN">
                                                            <templateId root="2.16.840.1.113883.10.13.41"
extension="2015-02-05"/>
                                                            <code code="21899-0"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Primary
tumor.pathology Cancer"/>
                                                            <value xsi:type="CD" code="T2"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" displayName="Tumor >
20 mm but <= to 50 mm in greatest dimension"
sdtc:valueSet="2.16.840.1.113883.3.520.4.17"/>
                                                            </observation>
                                                        </entryRelationship>

```



```

        <entryRelationship typeCode="COMP">
            <observation classCode="OBS" moodCode="EVN">
                <templateId root="2.16.840.1.113883.10.13.42"
extension="2015-02-05"/>
                <code code="21900-6"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Regional lymph
nodes.pathology [Class] Cancer"/>
                <value xsi:type="CD" code="N1"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition"
displayName="Micrometastases; or metastases in 1 to 3 axillary lymph nodes; and/or in
internal mammary nodes with metastases detected by sentinel lymph node biopsy but not
clinically detected." sdtc:valueSet="2.16.840.1.113883.3.520.4.18"/>
            </observation>
        </entryRelationship>
        <entryRelationship typeCode="COMP">
            <observation classCode="OBS" moodCode="EVN">
                <templateId root="2.16.840.1.113883.10.13.43"
extension="2015-02-05"/>
                <code code="21901-4"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Distant
metastases.pathology [Class] Cancer"/>
                <value xsi:type="CD" code="MX"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition"
sdtc:valueSet="2.16.840.1.113883.3.520.4.19"/>
            </observation>
        </entryRelationship>
        <entryRelationship typeCode="COMP">
            <observation classCode="OBS" moodCode="EVN">
                <templateId root="2.16.840.1.113883.10.13.44"
extension="2015-02-05"/>
                <code code="21904-8"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Stager.pathology
Cancer"/>
                <value xsi:type="CD" code="3"
codeSystem="2.16.840.1.113883.3.520.3.17" codeSystemName="NAACCR TNM Pathologic Staged By"
displayName="Pathologist and managing physician"
sdtc:valueSet="2.16.840.1.113883.3.520.4.27"/>
            </observation>
        </entryRelationship>
        </observation>
    </entryRelationship>
    </observation>
    <entryRelationship typeCode="REFR">
        <observation classCode="OBS" moodCode="EVN">
            <id root="ab1791b0-5c71-11db-b0de-0800200c9a66"/>
            <code code="64572001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Condition"/>
        </observation>
    </entryRelationship>
</observation>
</entryRelationship>
</act>
</entry>
</section>

```

3.3 Family History Section (V2) - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2014-06-09
(open)]

Table 29: Family History Section (V2) Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	Family History Organizer (V2)

This section contains data defining the patient's genetic relatives in terms of possible or relevant health risk factors that have a potential impact on the patient's healthcare risk profile.

Table 30: Family History Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2014-06-09)					
templateId	1..1	SHALL		1098-7932	
@root	1..1	SHALL		1098-10388	2.16.840.1.113883.10.20.22.2.15
@extension	1..1	SHALL		1098-32607	2014-06-09
code	1..1	SHALL		1098-15469	
@code	1..1	SHALL		1098-15470	10157-6
@codeSystem	1..1	SHALL		1098-32481	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7934	
text	1..1	SHALL		1098-7935	
entry	0..*	MAY		1098-32430	
organizer	1..1	SHALL		1098-32431	Family History Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2014-06-09

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7932) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.15" (CONF:1098-10388).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32607).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15469).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10157-6" Family History (CONF:1098-15470).

- b. This code **SHALL** contain exactly one [1..1]
`@codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:1098-32481).`
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-7934).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7935).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-32430) such that it
 - a. **SHALL** contain exactly one [1..1] [Family History Organizer \(V2\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2014-06-09) (CONF:1098-32431).

Figure 23: Family History Section (V2) Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.15" extension="2014-06-09" />
  <!-- Family history section template -->
  <code code="10157-6" codeSystem="2.16.840.1.113883.6.1" />
  <title>Family history</title>
  <text>
    ...
  </text>
  <entry typeCode="DRIV">
    <organizer moodCode="EVN" classCode="CLUSTER">
      <templateId root="2.16.840.1.113883.10.20.22.4.45" />
      <!-- Family history organizer template -->
      ...
    </organizer>
  </entry>
</section>
```

3.4 Medications Administered Section (V2) - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09
(open)]

Table 31: Medications Administered Section (V2) Contexts

Contained By:	Contains:
	Medication Activity (V2)

The Medications Administered Section usually resides inside a Procedure Note describing a procedure. This section defines medications and fluids administered during the procedure, its related encounter, or other procedure related activity excluding anesthetic medications. Anesthesia medications should be documented as described in the Anesthesia Section
templateId 2.16.840.1.113883.10.20.22.2.25.

Table 32: Medications Administered Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09)					
templateId	1..1	SHALL		1098-8152	
@root	1..1	SHALL		1098-10405	2.16.840.1.113883.10.20.22.2.38
@extension	1..1	SHALL		1098-32525	2014-06-09
code	1..1	SHALL		1098-15383	
@code	1..1	SHALL		1098-15384	29549-3
@codeSystem	1..1	SHALL		1098-30829	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-8154	
text	1..1	SHALL		1098-8155	
entry	0..*	MAY		1098-8156	
substanceAdministration	1..1	SHALL		1098-15499	Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8152) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.38" (CONF:1098-10405).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32525).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15383).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29549-3" Medications Administered (CONF:1098-15384).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-30829).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-8154).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-8155).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8156).
 - a. The entry, if present, **SHALL** contain exactly one [1..1] [Medication Activity \(V2\) \(identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09\)](#) (CONF:1098-15499).

Figure 24: Medications Administered Section (V2) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.38" extension="2014-06-09" />
  <code code="29549-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="MEDICATIONS ADMINISTERED" />
  <title>MEDICATIONS ADMINISTERED</title>
  <text>
    <table border="1" width="100%">
      <thead>
        <tr>
          <th>Medication</th>
          <th>Directions</th>
          <th>Start Date</th>
          <th>Status</th>
          <th>Indications</th>
          <th>Fill Instructions</th>
        </tr>
      </thead>
      <tbody>
        <tr>
          <td>
            <content ID="MedAdministered_1">
              Proventil 0.09 MG/ACTUAT inhalant solution
            </content>
          </td>
          <td>0.09 MG/ACTUAT inhalant solution, 2 puffs QID PRN wheezing</td>
          <td>20070103</td>
          <td>Active</td>
          <td>Pneumonia (233604007 SNOMED CT)</td>
          <td>Generic Substitution Allowed</td>
        </tr>
      </tbody>
    </table>
  </text>
  <entry typeCode="DRIV">
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
      <!-- ** MEDICATION ACTIVITY V2 ** -->
      ...
    </substanceAdministration>
  </entry>
</section>

```

3.5 Medications Administered Section (V2) - Cancer IG Specific Constraints - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.13.12:2014-08-08 (open)]

Table 33: Medications Administered Section (V2) - Cancer IG Specific Constraints Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	Medication Activity (V2) - Cancer IG Specific Constraints

This template defines Cancer Event Report-specific constraints to the C-CDA R2.0 template "Medications Administered Section (V2)".

The Medication Administered Section captures medications given to the patient during the encounter, including cancer directed systemic therapies such as chemotherapy, hormone therapy, and immunotherapy. This information is used to evaluate cancer treatments and outcomes and access to care.

Table 34: Medications Administered Section (V2) - Cancer IG Specific Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.13.12:2014-08-08)					
templateId	1..1	SHALL		1126-33062	
@root	1..1	SHALL		1126-33063	2.16.840.1.113883.10.13.12
@extension	1..1	SHALL		1126-33948	2014-08-08
entry	1..*	SHALL		1126-32662	
substanceAdministration	1..1	SHALL		1126-32663	Medication Activity (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.13.14:2014-08-08)

1. Conforms to [Medications Administered Section \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33062) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.12" (CONF:1126-33063).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33948).
3. **SHALL** contain at least one [1..*] **entry** (CONF:1126-32662).
 - a. Such entries **SHALL** contain exactly one [1..1] [Medication Activity \(V2\) - Cancer IG Specific Constraints](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.14:2014-08-08) (CONF:1126-32663).

Figure 25: Medications Administered Section (V2) - Cancer IG Specific example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.38" extension="2014-06-09" />
  <templateId root="2.16.840.1.113883.10.13.12" extension="2014-08-08" />
  <code code="29549-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="MEDICATIONS ADMINISTERED" />
  <title>MEDICATIONS ADMINISTERED</title>
  <text>
    <table border="1" width="100%">
      <thead>
        <tr>
          <th>Medication</th>
          <th>Start Date</th>
          <th>Stop Date</th>
          <th>Dose</th>
        </tr>
      </thead>
      <tbody>
        <tr>
          <td ID="MedicationAdminName_1">Doxorubicin </td>
          <td>7/29/2012</td>
          <td>None</td>
          <td ID="MedicationAdminDose_1">2mg/mL</td>
        </tr>
      </tbody>
    </table>
  </text>
  <entry typeCode="DRIV">
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
      <templateId root="2.16.840.1.113883.10.13.14" extension="2014-08-08" />
      <id root="6c844c75-aa34-411c-b7bd-5e4a9f206e29" />
      <!-- ** Medication Activity (V2) - Cancer IG Specific Constraints ** -->
      ...

    </substanceAdministration>
  </entry>
</section>
```

3.6 Medications Section (entries required) (V2) - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09
(open)]

Table 35: Medications Section (entries required) (V2) Contexts

Contained By:	Contains:
	Medication Activity (V2)

The Medications Section contains a patient's current medications and pertinent medication history. At a minimum, the currently active medications are listed. An entire medication history

is an option. The section can describe a patient's prescription and dispense history and information about intended drug monitoring.

This section requires either an entry indicating the subject is not known to be on any medications or entries summarizing the subject's medications.

Table 36: Medications Section (entries required) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09)					
@nullFlavor	0..1	MAY		1098-32845	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1098-7568	
@root	1..1	SHALL		1098-10433	2.16.840.1.113883.10.20.22.2.1.1
@extension	1..1	SHALL		1098-32499	2014-06-09
code	1..1	SHALL		1098-15387	
@code	1..1	SHALL		1098-15388	10160-0
@codeSystem	1..1	SHALL		1098-30825	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7570	
text	1..1	SHALL		1098-7571	
entry	1..*	SHALL		1098-7572	
substanceAdministration	1..1	SHALL		1098-10077	Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09)

1. Conforms to Medications Section (entries optional) (V2) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1:2014-06-09).
2. **MAY** contain zero or one [0..1] @nullFlavor="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1098-32845).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-7568) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.1.1" (CONF:1098-10433).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32499).
4. **SHALL** contain exactly one [1..1] code (CONF:1098-15387).
 - a. This code **SHALL** contain exactly one [1..1] @code="10160-0" History of medication use (CONF:1098-15388).

- b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:1098-30825).
 5. **SHALL** contain exactly one [1..1] **title** (CONF:1098-7570).
 6. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7571).
- If section/@nullFlavor is not present:
7. **SHALL** contain at least one [1..*] **entry** (CONF:1098-7572) such that it
 - a. **SHALL** contain exactly one [1..1] Medication Activity (V2) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:1098-10077).

Figure 26: Medications Section (entries required) (V2) Example

```
<section>
  <!--**MEDICATION SECTION (coded entries required) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.2.1.1" extension="2014-06-09" />
  <!-- Medications Section (entries optional) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.1" extension="2014-06-09" />

  <code code="10160-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="HISTORY OF MEDICATION USE" />
  <title>MEDICATIONS</title>
  <text>
    Narrative Text
  </text>

  <entry>
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      <!--**MEDICATION ACTIVITY V2 ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
      ....
    </substanceAdministration>
  </entry>
</section>
```

3.7 Medications Section (entries required) (V2) - Cancer IG Specific Constraints - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.13.13:2014-08-08 (open)]

Table 37: Medications Section (entries required) (V2) - Cancer IG Specific Constraints Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	Medication Activity (V2) - Cancer IG Specific Constraints

This template defines Cancer Event Report-specific constraints to the C-CDA R2 template "Medications Section (V2)".

The Medications Section captures medications taken by a patient, including those used for cancer directed systemic therapy such as chemotherapy, hormone therapy, and immunotherapy. This information is used to evaluate cancer treatments and outcomes and access to care.

Table 38: Medications Section (entries required) (V2) - Cancer IG Specific Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.13.13:2014-08-08)					
templateId	1..1	SHALL		1126-33064	
@root	1..1	SHALL		1126-33065	2.16.840.1.113883.10.13.13
@extension	1..1	SHALL		1126-33949	2014-08-08
entry	1..*	SHALL		1126-32666	
substanceAdministration	1..1	SHALL		1126-32667	Medication Activity (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.13.14:2014-08-08)

1. Conforms to [Medications Section \(entries required\) \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33064) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.13" (CONF:1126-33065).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33949).
3. **SHALL** contain at least one [1..*] **entry** (CONF:1126-32666).
 - a. Such entries **SHALL** contain exactly one [1..1] [Medication Activity \(V2\) - Cancer IG Specific Constraints](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.14:2014-08-08) (CONF:1126-32667).

Figure 27: Medications Section (entries required) (V2) - Cancer IG Specific Constraints example

```
<section>
  <!--**MEDICATION SECTION (coded entries required) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.2.1.1" extension="2014-06-09" />
  <!-- Medications Section (entries optional) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.1" extension="2014-06-09" />
  <!-- Medications Section (entries required) (V2) - Cancer IG Specific Constraints -->
  <templateId root="2.16.840.1.113883.10.13.13" extension="2014-08-08" />
  <code code="10160-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="HISTORY OF MEDICATION USE" />
  <title>MEDICATIONS</title>
  <text> Narrative Text </text>
  <entry>
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      <!--**MEDICATION ACTIVITY V2 ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
      <!--Medication Activity (V2) - Cancer IG Specific Constraints -->
      <templateId root="2.16.840.1.113883.10.13.14" extension="2014-08-08" />
      ...
    </substanceAdministration>
  </entry>
</section>
```

3.8 Payers Section (V2) - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09
(open)]

Table 39: Payers Section (V2) Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	Coverage Activity (V2)

The Payers Section contains data on the patient's payers, whether "third party" insurance, self-pay, other payer or guarantor, or some combination of payers, and is used to define which entity is the responsible fiduciary for the financial aspects of a patient's care.

Each unique instance of a payer and all the pertinent data needed to contact, bill to, and collect from that payer should be included. Authorization information that can be used to define pertinent referral, authorization tracking number, procedure, therapy, intervention, device, or similar authorizations for the patient or provider, or both should be included. At a minimum, the patient's pertinent current payment sources should be listed.

The sources of payment are represented as a Coverage Activity, which identifies all of the insurance policies or government or other programs that cover some or all of the patient's healthcare expenses. The policies or programs are sequenced by preference. The Coverage Activity has a sequence number that represents the preference order. Each policy or program identifies the covered party with respect to the payer, so that the identifiers can be recorded.

Table 40: Payers Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09)					
templateId	1..1	SHALL		1098-7924	
@root	1..1	SHALL		1098-10434	2.16.840.1.113883.10.20.22.2.18
@extension	1..1	SHALL		1098-32597	2014-06-09
code	1..1	SHALL		1098-15395	
@code	1..1	SHALL		1098-15396	48768-6
@codeSystem	1..1	SHALL		1098-32149	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7926	
text	1..1	SHALL		1098-7927	
entry	0..*	SHOULD		1098-7959	
act	1..1	SHALL		1098-15501	Coverage Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7924) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.18" (CONF:1098-10434).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32597).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15395).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="48768-6" Payers (CONF:1098-15396).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-32149).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-7926).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7927).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1098-7959) such that it
 - a. **SHALL** contain exactly one [1..1] [Coverage Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2014-06-09) (CONF:1098-15501).

Figure 28: Payers Section (V2) Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.18" extension="2014-06-09" />
  <!-- ***** Payers section template ***** -->
  <code code="48768-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Payers" />
  <title>Insurance Providers</title>
  <text>
    . . .
  </text>
  <entry typeCode="DRIV">
    <act classCode="ACT" moodCode="DEF">
      <templateId root="2.16.840.1.113883.10.20.22.4.60" extension="2014-06-09" />
      <!-- **** Coverage entry template **** -->
      ...
    </act>
  </entry>
</section>
```

3.9 Plan of Treatment Section (V2) - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09
(open)]

Table 41: Plan of Treatment Section (V2) Contexts

Contained By:	Contains:
	Planned Encounter (V2) Planned Medication Activity (V2) Planned Procedure (V2)

This section, formerly known as "Plan of Care", contains data that define pending orders, interventions, encounters, services, and procedures for the patient. It is limited to prospective, unfulfilled, or incomplete orders and requests only. These are indicated by the @moodCode of the entries within this section. All active, incomplete, or pending orders, appointments, referrals, procedures, services, or any other pending event of clinical significance to the current care of the patient should be listed.

This section may also contain information about ongoing care of the patient, clinical reminders, patient's values, beliefs, preferences, care expectations, and overarching care goals.

Clinical reminders are placed here to provide prompts for disease prevention and management, patient safety, and healthcare quality improvements, including widely accepted performance measures.

Values may include the importance of quality of life over longevity. These values are taken into account when prioritizing all problems and their treatments.

Beliefs may include comfort with dying or the refusal of blood transfusions because of the patient's religious convictions.

Preferences may include liquid medicines over tablets, or treatment via secure email instead of in person.

Care expectations may range from being treated only by female clinicians, to expecting all calls to be returned within 24 hours.

Overarching goals described in this section are not tied to a specific condition, problem, health concern, or intervention. Examples of overarching goals could be to minimize pain or dependence on others, or to walk a daughter down the aisle for her marriage.

The plan may also indicate that patient education will be provided.

Table 42: Plan of Treatment Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09)					
templateId	1..1	SHALL		1098-7723	
@root	1..1	SHALL		1098-10435	2.16.840.1.113883.10.20.22.2.10
@extension	1..1	SHALL		1098-32501	2014-06-09
code	1..1	SHALL		1098-14749	
@code	1..1	SHALL		1098-14750	18776-5
@codeSystem	1..1	SHALL		1098-30813	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-16986	
text	1..1	SHALL		1098-7725	
entry	0..*	MAY		1098-7726	
observation	1..1	SHALL		1098-14751	Planned Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09)
entry	0..*	MAY		1098-8805	
encounter	1..1	SHALL		1098-30472	Planned Encounter (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09)
entry	0..*	MAY		1098-8807	
act	1..1	SHALL		1098-30473	Planned Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09)
entry	0..*	MAY		1098-8809	
procedure	1..1	SHALL		1098-30474	Planned Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09)
entry	0..*	MAY		1098-8811	
substanceAdministration	1..1	SHALL		1098-30475	Planned Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09)

					0.22.4.42:2014-06-09
entry	0..*	MAY		1098-8813	
supply	1..1	SHALL		1098-30476	Planned Supply (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09)
entry	0..*	MAY		1098-14695	
act	1..1	SHALL		1098-31397	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)
entry	0..*	MAY		1098-29621	
act	1..1	SHALL		1098-30868	Handoff Communication Participants (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.141)
entry	0..*	MAY		1098-31841	
act	1..1	SHALL		1098-31864	Nutrition Recommendation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.130)
entry	0..*	MAY		1098-32353	
substanceAdministration	1..1	SHALL		1098-32354	Planned Immunization Activity (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.120)
entry	0..*	MAY		1098-32887	
observation	1..1	SHALL		1098-32888	Goal Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7723) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.10" (CONF:1098-10435).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32501).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-14749).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="18776-5" Plan of Treatment (CONF:1098-14750).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-30813).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-16986).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7725).

5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-7726) such that it
 - a. **SHALL** contain exactly one [1..1] Planned Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09) (CONF:1098-14751).
6. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8805) such that it
 - a. **SHALL** contain exactly one [1..1] Planned Encounter (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09) (CONF:1098-30472).
7. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8807) such that it
 - a. **SHALL** contain exactly one [1..1] Planned Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09) (CONF:1098-30473).
8. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8809) such that it
 - a. **SHALL** contain exactly one [1..1] Planned Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09) (CONF:1098-30474).
9. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8811) such that it
 - a. **SHALL** contain exactly one [1..1] Planned Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09) (CONF:1098-30475).
10. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8813) such that it
 - a. **SHALL** contain exactly one [1..1] Planned Supply (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09) (CONF:1098-30476).
11. **MAY** contain zero or more [0..*] **entry** (CONF:1098-14695) such that it
 - a. **SHALL** contain exactly one [1..1] Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31397).
12. **MAY** contain zero or more [0..*] **entry** (CONF:1098-29621) such that it
 - a. **SHALL** contain exactly one [1..1] Handoff Communication Participants (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.141) (CONF:1098-30868).
13. **MAY** contain zero or more [0..*] **entry** (CONF:1098-31841) such that it
 - a. **SHALL** contain exactly one [1..1] Nutrition Recommendation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.130) (CONF:1098-31864).
14. **MAY** contain zero or more [0..*] **entry** (CONF:1098-32353) such that it
 - a. **SHALL** contain exactly one [1..1] Planned Immunization Activity (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.120) (CONF:1098-32354).
15. **MAY** contain zero or more [0..*] **entry** (CONF:1098-32887) such that it
 - a. **SHALL** contain exactly one [1..1] Goal Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121) (CONF:1098-32888).

Figure 29: Plan of Treatment Section (V2) Example

```
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.22.2.10" extension="2014-06-09" />
    <!-- **** Plan of Treatment Section V2 template **** -->
    <code code="18776-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Treatment plan" />
    <title>TREATMENT PLAN</title>
    <text>
      ...
    </text>
    <entry>
      <act classCode="ACT" moodCode="EVN">
        <!-- Handoff Communication template -->
        <templateId root="2.16.840.1.113883.10.20.22.4.141" />
        ...

      </act>
    </entry>
    <entry>
      <encounter moodCode="INT" classCode="ENC">
        <templateId root="2.16.840.1.113883.10.20.22.4.40" extension="2014-06-09"
/>
        <!-- Plan Activity Encounter V2 template -->
        ...

      </encounter>
    </entry>
  </section>
</component>
```

3.10 Plan of Treatment Section (V2) - Cancer IG Specific Constraints - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.13.9:2014-08-08 (open)]

Table 43: Plan of Treatment Section (V2) - Cancer IG Specific Constraints Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	Planned Encounter (V2) - Cancer IG Specific Constraints Planned Medication Activity (V2) Planned Procedure (V2)

This template defines Cancer Event Report-specific constraints to the C-CDA R2 template "Plan of Treatment Section (V2)". Conformance has been changed to "SHALL" for Planned Encounter (V2) - Cancer IG Specific Constraints, Planned Medication Activity (V2), and Planned Procedure (V2).

Table 44: Plan of Treatment Section (V2) - Cancer IG Specific Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.13.9:2014-08-08)					
templateId	1..1	SHALL		1126-33056	
@root	1..1	SHALL		1126-33057	2.16.840.1.113883.10.13.9
@extension	1..1	SHALL		1126-33950	2014-08-08
entry	1..*	SHALL		1126-32678	
encounter	1..1	SHALL		1126-32679	Planned Encounter (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.13.20:2014-08-08)
entry	1..*	SHALL		1126-33020	
substanceAdministration	1..1	SHALL		1126-33021	Planned Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09)
entry	1..*	SHALL		1126-33022	
procedure	1..1	SHALL		1126-33023	Planned Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09)

1. Conforms to [Plan of Treatment Section \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33056) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.9" (CONF:1126-33057).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33950).
3. **SHALL** contain at least one [1..*] **entry** (CONF:1126-32678) such that it
 - a. **SHALL** contain exactly one [1..1] [Planned Encounter \(V2\) - Cancer IG Specific Constraints](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.20:2014-08-08) (CONF:1126-32679).
4. **SHALL** contain at least one [1..*] **entry** (CONF:1126-33020) such that it
 - a. **SHALL** contain exactly one [1..1] [Planned Medication Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09) (CONF:1126-33021).
5. **SHALL** contain at least one [1..*] **entry** (CONF:1126-33022) such that it

- a. **SHALL** contain exactly one [1..1] [Planned Procedure \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09) (CONF:1126-33023).

Figure 30: Plan of Treatment Section (V2) - Cancer IG Specific Constraints example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.10" extension="2014-06-09" />
  <!-- **** Plan of Treatment section V2 template **** -->
  <templateId root="2.16.840.1.113883.10.13.9" extension="2014-08-08" />
  <!-- Plan of Treatment Section (V2) - Cancer IG Specific Constraints -->
  <code code="18776-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Treatment plan" />
  <title>TREATMENT PLAN</title>
  <text> ... </text>
  <entry>
    <encounter classCode="ENC" moodCode="INT">
      <!-- Planned Encounter (V2) - Cancer IG Specific Constraints -->
      <templateId root="2.16.840.1.113883.10.20.22.4.40" extension="2014-06-09" />
      <templateId root="2.16.840.1.113883.10.13.20" extension="2014-08-08" /> ...

    </encounter>
  </entry>
  <entry>
    <substanceAdministration classCode="SBADM" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.42" extension="2014-06-
09"></templateId>
      <!-- Planned Medication Activity (V2)--> ...

    </substanceAdministration>
  </entry>
  <entry>
    <procedure classCode="PROC" moodCode="RQO">
      <templateId root="2.16.840.1.113883.10.20.22.4.41.2" />
      <!-- **Planned Procedure V2 template ** --> ...

    </procedure>
  </entry>
</section>
```

3.11 Problem Section (entries required) (V2) - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2014-06-09
(open)]

Table 45: Problem Section (entries required) (V2) Contexts

Contained By:	Contains:
	Health Status Observation (V2) Problem Concern Act (V2)

This section lists and describes all relevant clinical problems at the time the document is generated. At a minimum, all pertinent current and historical problems should be listed. Overall health status may be represented in this section.

Table 46: Problem Section (entries required) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2014-06-09)					
@nullFlavor	0..1	MAY		1098-32864	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1098-9179	
@root	1..1	SHALL		1098-10441	2.16.840.1.113883.10.20.22.2.5.1
@extension	1..1	SHALL		1098-32510	2014-06-09
code	1..1	SHALL		1098-15409	
@code	1..1	SHALL		1098-15410	11450-4
@codeSystem	1..1	SHALL		1098-31142	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-9181	
text	1..1	SHALL		1098-9182	
entry	1..*	SHALL		1098-9183	
act	1..1	SHALL		1098-15506	Problem Concern Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2014-06-09)
entry	0..1	MAY		1098-30479	
observation	1..1	SHALL		1098-30480	Health Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09)

1. Conforms to Problem Section (entries optional) (V2) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2014-06-09).
2. **MAY** contain zero or one [0..1] @nullFlavor="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1098-32864).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-9179) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.5.1" (CONF:1098-10441).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32510).

4. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15409).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11450-4" Problem List (CONF:1098-15410).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-31142).
5. **SHALL** contain exactly one [1..1] **title** (CONF:1098-9181).
6. **SHALL** contain exactly one [1..1] **text** (CONF:1098-9182).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1098-9183) such that it
 - a. **SHALL** contain exactly one [1..1] Problem Concern Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2014-06-09) (CONF:1098-15506).
8. **MAY** contain zero or one [0..1] **entry** (CONF:1098-30479) such that it
 - a. **SHALL** contain exactly one [1..1] Health Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09) (CONF:1098-30480).

Figure 31: Problem Section (entries required) (V2) Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.5.1"
    extension="2014-06-09" />
  <code code="11450-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="PROBLEM LIST" />
  <title>PROBLEMS</title>
  <text>
    <list listType="ordered">
      <item>Pneumonia: Resolved in March 1998</item>
      <item>...</item>
    </list>
  </text>
  <entry typeCode="DRIV">
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.3" extension="2014-06-09" />
      <!-- Problem Concern Act template -->
      ...

    </act>
  </entry>
</section>
```

Figure 32: No Known Problems Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.5"
    extension="2014-06-09" />
  <!-- Problem Section with Coded Entries Optional -->
  <templateId root="2.16.840.1.113883.10.20.22.2.5.1"
    extension="2014-06-09" />
  <!-- Problem Section with Coded Entries Required -->
  <code code="11450-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Problem List" />
  <title>PROBLEMS</title>
  <text ID="Concern_1"> Problem Concern:<br /> Concern Tracker Start Date: 06/07/2013
16:05:06<br /> Concern Tracker End Date: <br /> Concern Status: Active<br />
    <content ID="problems1">No known <content
ID="problemType1">problems.</content></content>
  </text>
  <entry typeCode="DRIV">
    <!-- Problem Concern Act -->
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.3.2" />
      <id root="36e3e930-7b14-11db-9fe1-0800200c9a66" />
      <!-- C-CDA R1.1 supports 48765-2 or CONC. C-CDA R2 only supports CONC in the code
element -->
      <code code="CONC" codeSystem="2.16.840.1.113883.5.6" />
      <text>
        <reference value="#Concern_1" />
      </text>
      <statusCode code="active" />
      <!-- The concern is not active, in terms of there being an active condition to be
managed.-->
      <effectiveTime>
        <low value="20130607160506" />
        <!-- Time at which THIS "concern" began being tracked.-->
      </effectiveTime>
      <!-- status is active so high is not applicable. If high is present it should have
nullFlavor of NA-->
      <!-- Optional Author Element-->
      <author>
        <templateId root="2.16.840.1.113883.10.20.22.4.119" />
        <time value="20130607160506" />
        <assignedAuthor>
          <id extension="66666" root="2.16.840.1.113883.4.6" />
          <code code="207RC0000X" codeSystem="2.16.840.1.113883.6.101"
codeSystemName="NUCC" displayName="Cardiovascular Disease" />
          <addr>
            <streetAddressLine>6666 StreetName St.</streetAddressLine>
            <city>Silver Spring</city>
            <state>MD</state>
            <postalCode>20901</postalCode>
            <country>US</country>
          </addr>
          <telecom value="tel:+1(301)666-6666" use="WP" />
          <assignedPerson>
            <name>
              <given>Heartly</given>
              <family>Sixer</family>

```

```

        <suffix>MD</suffix>
    </name>
</assignedPerson>
</assignedAuthor>
</author>
<entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN" negationInd="true">
        <!-- Model of Meaning for No Problems -->
        <!-- This is more consistent with how we did no known allergies. -->
        <!-- The use of negationInd corresponds with the newer
Observation.ValueNegationInd -->
        <!-- The negationInd = true negates the value element. -->
        <!-- problem observation template -->
        <templateId root="2.16.840.1.113883.10.20.22.4.4.2" />
        <id root="4adc1021-7b14-11db-9fe1-0800200c9a67" />
        <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
        <text>
            <reference value="#problems1" />
        </text>
        <statusCode code="completed" />
        <effectiveTime>
            <low value="20130607160506" />
        </effectiveTime>
        <!-- The time when this was biologically relevant, i.e., true for the patient. --
>
        <!-- As a minimum time interval over which this is true, populate the
effectiveTime/low with the current time. -->
        <!-- It would be equally valid to have a longer range of time over which this
statement was represented as being true. -->
        <!-- As a maximum, you would never indicate an effectiveTime/high that was
greater than the current point in time. -->
        <!-- This idea assumes that the value element could come from the Problem value
set, or-->
        <!-- when negationInd was true, is could also come from the ProblemType value set
(and code would be ASSERTION). -->
        <value xsi:type="CD" code="55607006" displayName="Problem"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
            <originalText>
                <reference value="#problemType1" />
            </originalText>
        </value>
    </observation>
</entryRelationship>
</act>
</entry>
</section>

```


3.12 Problem Section (entries required) (V2) - Cancer IG Specific Constraints - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.13.21:2014-08-08 (closed)]

Table 47: Problem Section (entries required) (V2) - Cancer IG Specific Constraints Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	Problem Concern Act (V2) - Cancer IG Specific Constraints

This template defines Cancer Event Report-specific constraints to the C-CDA R2.0 Problem Section (entries required) (V2). This template defines Cancer Report-specific constraints to C-CDA R2.0 Problem Section (entries required) (V2). It requires a Problem Concern Act (V2) - Cancer IG Specific Constraints template to be used.

The Problem Section captures the patient's pre-existing and/or concurrent medical conditions, which influence treatment decisions and patient outcomes. Consideration of comorbid conditions is important when evaluating patient survival and other outcomes.

Table 48: Problem Section (entries required) (V2) - Cancer IG Specific Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.13.21:2014-08-08)					
templateId	1..1	SHALL		1126-33250	
@root	1..1	SHALL		1126-33251	2.16.840.1.113883.10.13.21
@extension	1..1	SHALL		1126-33951	2014-08-08
entry	1..*	SHALL		1126-33252	
act	1..1	SHALL		1126-33253	Problem Concern Act (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.13.22:2014-08-08)

1. Conforms to [Problem Section \(entries required\) \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33250) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.21" (CONF:1126-33251).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33951).
3. **SHALL** contain at least one [1..*] **entry** (CONF:1126-33252).

- a. Such entries **SHALL** contain exactly one [1..1] [Problem Concern Act \(V2\) - Cancer IG Specific Constraints](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.22:2014-08-08) (CONF:1126-33253).

Figure 33: Problem Section (entries required) (V2) - Cancer IG Specific Constraints example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.5" extension="2014-06-09" />
  <templateId root="2.16.840.1.113883.10.20.22.2.5.1" extension="2014-06-09"/>
  <templateId root="2.16.840.1.113883.10.13.21" extension="2014-08-08" />
  <code code="11450-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="PROBLEM LIST" />
  <title>PROBLEMS</title>
  <text> ... </text>
  <entry typeCode="DRIV">
    <act classCode="ACT" moodCode="EVN">
      <!-- ** Problem concern act ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.3" extension="2014-06-09" />
      <!-- Problem Concern Act (V2) - Cancer IG Specific Constraints -->
      <templateId root="2.16.840.1.113883.10.13.22" extension="2014-08-08" /> ...
    </act>
  </entry>
</section>
```

3.13 Procedures Section (entries required) (V2) - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.7.1:2014-06-09 (open)]

Table 49: Procedures Section (entries required) (V2) Contexts

Contained By:	Contains:
	Procedure Activity Procedure (V2)

This section describes all interventional, surgical, diagnostic, or therapeutic procedures or treatments pertinent to the patient historically at the time the document is generated. The section should include notable procedures, but can contain all procedures for the period of time being summarized. The common notion of "procedure" is broader than that specified by the HL7 Version 3 Reference Information Model (RIM), therefore this section contains procedure templates represented with three RIM classes: Act, Observation, and Procedure. Procedure act is for procedures that alter the physical condition of a patient (e.g., splenectomy). Observation act is for procedures that result in new information about a patient but do not cause physical alteration (e.g., EEG). Act is for all other types of procedures (e.g., dressing change).

Table 50: Procedures Section (entries required) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7.1:2014-06-09)					
@nullFlavor	0..1	MAY		1098-32876	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1098-7891	
@root	1..1	SHALL		1098-10447	2.16.840.1.113883.10.20.22.2.7.1
@extension	1..1	SHALL		1098-32533	2014-06-09
code	1..1	SHALL		1098-15425	
@code	1..1	SHALL		1098-15426	47519-4
@codeSystem	1..1	SHALL		1098-31138	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7893	
text	1..1	SHALL		1098-7894	
entry	1..*	SHALL		1098-7895	
act	0..1	MAY		1098-32877	Procedure Activity Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09)
observation	0..1	MAY		1098-32878	Procedure Activity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09)
procedure	0..1	MAY		1098-15512	Procedure Activity Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09)

1. Conforms to Procedures Section (entries optional) (V2) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7:2014-06-09).
2. **MAY** contain zero or one [0..1] @nullFlavor="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1098-32876).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-7891) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.7.1" (CONF:1098-10447).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32533).
4. **SHALL** contain exactly one [1..1] code (CONF:1098-15425).

- a. This code **SHALL** contain exactly one [1..1] **@code**="47519-4" History of Procedures (CONF:1098-15426).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-31138).
5. **SHALL** contain exactly one [1..1] **title** (CONF:1098-7893).
6. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7894).

If section/**@nullFlavor** is not present there **SHALL** be at least one entry conformant to Procedure Activity Act (V2) (templateId 2.16.840.1.113883.10.20.22.4.12:2014-06-09) **OR** Procedure Activity Observation (V2) (templateId: 2.16.840.1.113883.10.20.22.4.13:2014-06-09) **OR** Procedure Activity Procedure (V2) (templateId: 2.16.840.1.113883.10.20.22.4.14:2014-06-09)

7. **SHALL** contain at least one [1..*] **entry** (CONF:1098-7895) such that it
- a. **MAY** contain zero or one [0..1] Procedure Activity Act (V2) (**identifier**: urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09) (CONF:1098-32877).
 - b. **MAY** contain zero or one [0..1] Procedure Activity Observation (V2) (**identifier**: urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09) (CONF:1098-32878).
 - c. **MAY** contain zero or one [0..1] Procedure Activity Procedure (V2) (**identifier**: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09) (CONF:1098-15512).

Figure 34: Procedures Section (entries required) (V2) Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.7" extension="2014-06-09" />
  <!-- Procedures section template -->
  <code code="47519-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="PROCEDURES" />
  <title>Procedures</title>
  <text>
    ...
  </text>
  <entry typeCode="DRIV">
    <procedure classCode="PROC" moodCode="EVN">
      <!-- Procedure Activity Procedure template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09" />
      ...
    </procedure>
  </entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.13" extension="2014-06-09" />
    <!-- Procedure Activity Observation template -->
    ...
  </observation>
  <entry>
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.12" extension="2014-06-09" />
      <!-- Procedure Activity Act template -->
      ...
    </act>
  </entry>
</section>
```

3.14 Procedures Section (entries required) (V2) - Cancer IG Specific Constraints - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.13.10:2014-08-08 (open)]

Table 51: Procedures Section (entries required) (V2) - Cancer IG Specific Constraints Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	Procedure Activity Procedure (V2) - Cancer IG Specific Constraints Radiation Oncology Section

This template defines Cancer Event Report-specific constraints to the C-CDA R2 template "Procedures Section (entries required) (V2)". It requires a Procedure Activity Procedure (V2) - Cancer IG Specific Constraints template to be used. It also contains a new Radiation Oncology Section.

The Procedures Section contains information about interventional, surgical, diagnostic, or therapeutic procedures or treatments. This information is used to evaluate cancer treatment and outcomes and access to care.

Table 52: Procedures Section (entries required) (V2) - Cancer IG Specific Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.13.10:2014-08-08)					
templateId	1..1	SHALL		1126-33058	
@root	1..1	SHALL		1126-33059	2.16.840.1.113883.10.13.10
@extension	1..1	SHALL		1126-33952	2014-08-08
entry	1..*	SHALL		1126-32676	
procedure	1..1	SHALL		1126-32677	Procedure Activity Procedure (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.13.15:2014-08-08)
component	1..1	SHALL		1126-33579	
section	1..1	SHALL		1126-33580	Radiation Oncology Section (identifier: urn:hl7ii:2.16.840.1.113883.10.13.24:2014-08-08)

1. Conforms to [Procedures Section \(entries required\) \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7.1:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33058) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.10" (CONF:1126-33059).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33952).
3. **SHALL** contain at least one [1..*] **entry** (CONF:1126-32676).
 - a. Such entries **SHALL** contain exactly one [1..1] [Procedure Activity Procedure \(V2\) - Cancer IG Specific Constraints](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.15:2014-08-08) (CONF:1126-32677).
4. **SHALL** contain exactly one [1..1] **component** (CONF:1126-33579).
 - a. This component **SHALL** contain exactly one [1..1] [Radiation Oncology Section](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.24:2014-08-08) (CONF:1126-33580).

Figure 35: Procedures Section (entries required) (V2) - Cancer IG Specific Constraints example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.7" extension="2014-06-09" />
  <templateId root="2.16.840.1.113883.10.20.22.2.7.1" extension="2014-06-09" />
  <!-- Procedures section template -->
  <templateId root="2.16.840.1.113883.10.13.10" extension="2014-08-08" />
  <!-- Procedures Section (entries required) (V2) - Cancer IG Specific Constraints
template -->
  <code code="47519-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="PROCEDURES" />
  <title>Procedures</title>
  <text> ... </text>
  <entry typeCode="DRIV">
    <procedure classCode="PROC" moodCode="EVN">
      <!-- Procedure Activity Procedure V2-->
      <templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09" />
      <!-- Procedure Activity Procedure (V2) - Cancer IG Specific Constraints-->
      <templateId root="2.16.840.1.113883.10.13.15" extension="2014-08-08" /> ...
    </procedure>
  </entry>
  ...
  <component>
    <section>
      <templateId root="2.16.840.1.113883.10.13.24" extension="2014-08-08" />
      <!-- Radiation Oncology Section -->
      <code code="34832-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="urn:hl7ii:2.16.840.1.113883.10.13.10:2014-08-08" />
      <title>RADIATION ONCOLOGY</title>
      <text> ... </text>
      <entry>
        <organizer classCode="CLUSTER" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.13.29" extension="2014-08-08" />
          <!-- Radiation Regional Treatment Modality Organizer Constraints -->
          <code code="21964-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Modality Radiation treatment" />
          <statusCode code="completed" />
          <component typeCode="COMP">
            <procedure classCode="PROC" moodCode="EVN">
              <!-- Radiation Regional Treatment Modality Procedure
Constraints -->
              <templateId root="2.16.840.1.113883.10.13.25" extension="2014-
08-08" />
              <id root="4a7eed3b-d1d4-4f67-80fa-4972c563606c" />
              <code code="77404" codeSystem="2.16.840.1.113883.6.12"
codeSystemName="CPT-4" displayName="Radiation treatment delivery, single treatment area,
single port or parallel opposed ports, simple blocks or no blocks; 11-19 MeV" /> ...
            </procedure>
          </component>
        </organizer>
      </entry>
    </entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <!-- Radiation Boost Modality Organizer Constraints -->
      <templateId root="2.16.840.1.113883.10.13.30" extension="2014-08-08" />

```

```

        <code code="42128-9" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Boost radiation treatment modality Radiation treatment"
/>
        <statusCode code="active" />
        <component typeCode="COMP">
            <procedure classCode="PROC" moodCode="EVN">
                <!-- Radiation Boost Modality Procedure Constraints -->
                <templateId root="2.16.840.1.113883.10.13.26" extension="2014-
08-08" />
                <id root="87cb6d8e-b33f-4b8b-a19e-443db01bde15" />
                <code code="77404" codeSystem="2.16.840.1.113883.6.12"
codeSystemName="CPT-4" displayName="Radiation treatment delivery, single treatment area,
single port or parallel opposed ports, simple blocks or no blocks; 11-19 MeV" /> ...

            </procedure>
        </component>
        ...
    </organizer>
</entry>
</section>
</component>
</section>

```

3.15 Radiation Oncology Section - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.13.24:2014-08-08 (open)]

Table 53: Radiation Oncology Section Contexts

Contained By:	Contains:
Procedures Section (entries required) (V2) - Cancer IG Specific Constraints (required)	Radiation Boost Modality Organizer Radiation Regional Treatment Modality Organizer

The Radiation Oncology Section contains a narrative description of the radiation treatment performed by a Radiation Oncologist. Information should include: beginning and ending dates of radiation treatment, Treatment Volume, Number of Treatment Volume, Regional Modality, Regional Dose (cGY), Boost Modality, Boost Dose (cGY), and treatment notes.

The Radiation Oncology Section also includes entries to record the radiation procedure and radiation dose.

Radiation treatment is frequently delivered in two or more phases that can be summarized as regional and boost treatments. To evaluate patterns of radiation oncology care, it is necessary to know which radiation resources were employed in the delivery of therapy. For outcomes analysis, the modalities used for each of these phases can be very important.

Table 54: Radiation Oncology Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.13.24:2014-08-08)					
templateId	1..1	SHALL		1126-32641	
@root	1..1	SHALL		1126-32642	2.16.840.1.113883.10.13.24
@extension	1..1	SHALL		1126-33953	2014-08-08
code	1..1	SHALL		1126-32643	
@code	1..1	SHALL		1126-32644	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 34832-6
title	1..1	SHALL		1126-32645	
text	1..1	SHALL		1126-32646	
entry	1..1	SHALL		1126-33395	
organizer	1..1	SHALL		1126-33653	Radiation Regional Treatment Modality Organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.13.29:2014-08-08)
entry	1..1	SHALL		1126-33652	
organizer	1..1	SHALL		1126-33654	Radiation Boost Modality Organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.13.30:2014-08-08)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-32641).
 - a. This templateId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.24" (CONF:1126-32642).
 - b. This templateId **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33953).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1126-32643).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="34832-6" Radiation Oncology Note (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-32644).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1126-32645).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1126-32646).
5. **SHALL** contain exactly one [1..1] **entry** (CONF:1126-33395) such that it
 - a. **SHALL** contain exactly one [1..1] [Radiation Regional Treatment Modality Organizer](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.29:2014-08-08) (CONF:1126-33653).
6. **SHALL** contain exactly one [1..1] **entry** (CONF:1126-33652) such that it

- a. **SHALL** contain exactly one [1..1] Radiation Boost Modality Organizer
(identifier: urn:hl7ii:2.16.840.1.113883.10.13.30:2014-08-08)
(CONF:1126-33654).

Figure 36: Radiation Oncology Section example

```

<section>
  <templateId root="2.16.840.1.113883.10.13.24" extension="2014-08-08" />
  <!-- Radiation Oncology Section -->
  <code code="34832-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Radiation Oncology Evaluation And Management Note" />
  <title>RADIATION ONCOLOGY</title>
  <text> ... </text>
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.13.29" extension="2014-08-08" />
      <!-- Radiation Regional Treatment Modality Organizer Constraints -->
      <code code="21964-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Modality Radiation treatment" />
      <statusCode code="completed" />
      <component typeCode="COMP">
        <procedure classCode="PROC" moodCode="EVN">
          <!-- Radiation Regional Treatment Modality Procedure Constraints -->
          <templateId root="2.16.840.1.113883.10.13.25" extension="2014-08-08" />
          <id root="4a7eed3b-d1d4-4f67-80fa-4972c563606c" />
          <code code="77404" codeSystem="2.16.840.1.113883.6.12"
codeSystemName="CPT-4" displayName="Radiation treatment delivery, single treatment area,
single port or parallel opposed ports, simple blocks or no blocks; 11-19 MeV" /> ...

          </procedure>
          ...
        </component>
      </organizer>
    </entry>
    <entry>
      <organizer classCode="CLUSTER" moodCode="EVN">
        <!-- Radiation Boost Modality Organizer Constraints -->
        <templateId root="2.16.840.1.113883.10.13.30" extension="2014-08-08" />
        <code code="42128-9" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Boost radiation treatment modality Radiation treatment" />
        <statusCode code="active" />
        <component typeCode="COMP">
          <procedure classCode="PROC" moodCode="EVN">
            <!-- Radiation Boost Modality Procedure Constraints -->
            <templateId root="2.16.840.1.113883.10.13.26" extension="2014-08-08" />
            <id root="87cb6d8e-b33f-4b8b-a19e-443db01bde15" />
            <code code="77404" codeSystem="2.16.840.1.113883.6.12"
codeSystemName="CPT-4" displayName="Radiation treatment delivery, single treatment area,
single port or parallel opposed ports, simple blocks or no blocks; 11-19 MeV" /> ...

            </procedure>
          </component>
          ...
        </organizer>
      </entry>
    </section>

```

3.16 Results Section (entries required) (V2) - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2014-06-09
(open)]

Table 55: Results Section (entries required) (V2) Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	Result Organizer (V2)

The Results Section contains observations of results generated by laboratories, imaging procedures, and other procedures. These coded result observations are contained within a Results Organizer in the Results Section. The scope includes observations such as hematology, chemistry, serology, virology, toxicology, microbiology, plain x-ray, ultrasound, CT, MRI, angiography, echocardiography, nuclear medicine, pathology, and procedure observations. The section often includes notable results such as abnormal values or relevant trends, and could contain all results for the period of time being documented.

Laboratory results are typically generated by laboratories providing analytic services in areas such as chemistry, hematology, serology, histology, cytology, anatomic pathology, microbiology, and/or virology. These observations are based on analysis of specimens obtained from the patient and submitted to the laboratory.

Imaging results are typically generated by a clinician reviewing the output of an imaging procedure, such as where a cardiologist reports the left ventricular ejection fraction based on the review of a cardiac echocardiogram.

Procedure results are typically generated by a clinician to provide more granular information about component observations made during a procedure, such as where a gastroenterologist reports the size of a polyp observed during a colonoscopy.

Table 56: Results Section (entries required) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2014-06-09)					
@nullFlavor	0..1	MAY		1098-32875	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1098-7108	
@root	1..1	SHALL		1098-9137	2.16.840.1.113883.10.20.22.2.3.1
@extension	1..1	SHALL		1098-32592	2014-06-09
code	1..1	SHALL		1098-15433	
@code	1..1	SHALL		1098-15434	30954-2
@codeSystem	1..1	SHALL		1098-31040	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-8892	
text	1..1	SHALL		1098-7111	
entry	1..*	SHALL		1098-7112	
organizer	1..1	SHALL		1098-15516	Result Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09)

1. Conforms to Results Section (entries optional) (V2) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2014-06-09).
2. **MAY** contain zero or one [0..1] @nullFlavor="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1098-32875).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-7108) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.3.1" (CONF:1098-9137).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32592).
4. **SHALL** contain exactly one [1..1] code (CONF:1098-15433).
 - a. This code **SHALL** contain exactly one [1..1] @code="30954-2" Relevant diagnostic tests and/or laboratory data (CONF:1098-15434).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-31040).
5. **SHALL** contain exactly one [1..1] title (CONF:1098-8892).
6. **SHALL** contain exactly one [1..1] text (CONF:1098-7111).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1098-7112) such that it
 - a. **SHALL** contain exactly one [1..1] **Result Organizer (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09) (CONF:1098-15516).

Figure 37: Results Section (entries required) (V2) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.3.1" extension="2014-06-09" />
  <code code="30954-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="RELEVANT DIAGNOSTIC TESTS AND/OR LABORATORY DATA" />
  <title>Results</title>
  <text />
  <entry typeCode="DRIV">
    <organizer classCode="BATTERY" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.1" extension="2014-06-09" />
      ...

      <organizer>
        <component>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2014-
06-09" />
            . . .
          </observation>
        </component>
      </organizer>
    </organizer>
  </entry>
</section>

```

3.17 Social History Section (V2) - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2014-06-09
(open)]

Table 57: Social History Section (V2) Contexts

Contained By:	Contains:
	Smoking Status - Meaningful Use (V2) Social History Observation (V2) Tobacco Use (V2)

This section contains social history data that influence a patient’s physical, psychological or emotional health (e.g., smoking status, pregnancy). Demographic data, such as marital status, race, ethnicity, and religious affiliation, is captured in the header.

Table 58: Social History Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2014-06-09)					
templateId	1..1	SHALL		1098-7936	
@root	1..1	SHALL		1098-10449	2.16.840.1.113883.10.20.22.2.17
@extension	1..1	SHALL		1098-32494	2014-06-09
code	1..1	SHALL		1098-14819	
@code	1..1	SHALL		1098-14820	29762-2
@codeSystem	1..1	SHALL		1098-30814	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7938	
text	1..1	SHALL		1098-7939	
entry	0..*	MAY		1098-7953	
observation	1..1	SHALL		1098-14821	Social History Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09)
entry	0..*	MAY		1098-9132	
observation	1..1	SHALL		1098-14822	Pregnancy Observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8)
entry	0..*	SHOULD		1098-14823	
observation	1..1	SHALL		1098-14824	Smoking Status - Meaningful Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09)
entry	0..*	MAY		1098-16816	
observation	1..1	SHALL		1098-16817	Tobacco Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09)
entry	0..*	MAY		1098-28361	
observation	1..1	SHALL		1098-28362	Caregiver Characteristics (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72)

entry	0..*	MAY		1098-28366	
observation	1..1	SHALL		1098-28367	Cultural and Religious Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111)
entry	0..*	MAY		1098-28825	
observation	1..1	SHALL		1098-28826	Characteristics of Home Environment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7936) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.17" (CONF:1098-10449).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32494).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-14819).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29762-2" Social History (CONF:1098-14820).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-30814).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-7938).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7939).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-7953) such that it
 - a. **SHALL** contain exactly one [1..1] [Social History Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09) (CONF:1098-14821).
6. **MAY** contain zero or more [0..*] **entry** (CONF:1098-9132) such that it
 - a. **SHALL** contain exactly one [1..1] Pregnancy Observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8) (CONF:1098-14822).
7. **SHOULD** contain zero or more [0..*] **entry** (CONF:1098-14823) such that it
 - a. **SHALL** contain exactly one [1..1] [Smoking Status - Meaningful Use \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09) (CONF:1098-14824).
8. **MAY** contain zero or more [0..*] **entry** (CONF:1098-16816) such that it
 - a. **SHALL** contain exactly one [1..1] [Tobacco Use \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09) (CONF:1098-16817).
9. **MAY** contain zero or more [0..*] **entry** (CONF:1098-28361) such that it
 - a. **SHALL** contain exactly one [1..1] Caregiver Characteristics (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72) (CONF:1098-28362).
10. **MAY** contain zero or more [0..*] **entry** (CONF:1098-28366) such that it

- a. **SHALL** contain exactly one [1..1] Cultural and Religious Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111) (CONF:1098-28367).
- 11. **MAY** contain zero or more [0..*] **entry** (CONF:1098-28825) such that it
 - a. **SHALL** contain exactly one [1..1] Characteristics of Home Environment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109) (CONF:1098-28826).

Figure 38: Social History Section (V2) Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.17"
    extension="2014-06-09" />
  <code code="29762-2"
    codeSystem="2.16.840.1.113883.6.1"
    displayName="Social History" />
  <title>SOCIAL HISTORY</title>
  <text>
    . . .
  </text>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Social History Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.38"
        extension="2014-06-09" />
      ...

    </observation>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Smoking Status - Meaningful Use (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.78"
        extension="2014-06-09" />
      ...

    </observation>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Caregiver Characteristics -->
      <templateId root="2.16.840.1.113883.10.20.22.4.72" />
      ...

    </observation>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- **Cultural and Religious Observation**-->
      <templateId root="2.16.840.1.113883.10.20.22.4.111" />
      ...

    </observation>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Characteristics of Home Environment** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.109" />
      ...

    </observation>
  </entry>
</section>
```

3.18 Social History Section (V2) - Cancer IG Specific Constraints (V1.1) - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.13.11:2015-01-29 (open)]

Table 59: Social History Section (V2) - Cancer IG Specific Constraints (V1.1) Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	Employment History Observation Organizer (V1.1) Social History Observation (V2)

This template defines Cancer Event Report-specific constraints to the C-CDA R2 template "Social History Section (V2)". The "Employment History Observation Organizer" template has been added to document patient's employment details such as industry and occupation.

Table 60: Social History Section (V2) - Cancer IG Specific Constraints (V1.1) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.13.11:2015-01-29)					
templateId	1..1	SHALL		1169-33060	
@root	1..1	SHALL		1169-33061	2.16.840.1.113883.10.13.11
@extension	1..1	SHALL		1169-33954	2015-01-29
entry	1..*	SHALL		1169-32699	
organizer	1..1	SHALL		1169-32700	Employment History Observation Organizer (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29)
entry	0..0	SHALL NOT		1169-33884	
observation	1..1	SHALL		1169-33889	Social History Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09)
entry	0..0	SHALL NOT		1169-33885	
observation	1..1	SHALL		1169-33890	Characteristics of Home Environment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109)
entry	0..0	SHALL NOT		1169-33886	
observation	1..1	SHALL		1169-33891	Cultural and Religious Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111)
entry	0..0	SHALL NOT		1169-33887	
observation	1..1	SHALL		1169-33892	Caregiver Characteristics (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72)
entry	0..0	SHALL NOT		1169-33888	
observation	1..1	SHALL		1169-33893	Pregnancy Observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8)

1. Conforms to [Social History Section \(V2\) template \(identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2014-06-09\)](#).

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-33060) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.11" (CONF:1169-33061).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-01-29" (CONF:1169-33954).
3. **SHALL** contain at least one [1..*] **entry** (CONF:1169-32699) such that it
 - a. **SHALL** contain exactly one [1..1] Employment History Observation Organizer (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29) (CONF:1169-32700).
4. **SHALL NOT** contain [0..0] **entry** (CONF:1169-33884) such that it
 - a. **SHALL** contain exactly one [1..1] Social History Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09) (CONF:1169-33889).
5. **SHALL NOT** contain [0..0] **entry** (CONF:1169-33885) such that it
 - a. **SHALL** contain exactly one [1..1] Characteristics of Home Environment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109) (CONF:1169-33890).
6. **SHALL NOT** contain [0..0] **entry** (CONF:1169-33886) such that it
 - a. **SHALL** contain exactly one [1..1] Cultural and Religious Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111) (CONF:1169-33891).
7. **SHALL NOT** contain [0..0] **entry** (CONF:1169-33887) such that it
 - a. **SHALL** contain exactly one [1..1] Caregiver Characteristics (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72) (CONF:1169-33892).
8. **SHALL NOT** contain [0..0] **entry** (CONF:1169-33888) such that it
 - a. **SHALL** contain exactly one [1..1] Pregnancy Observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8) (CONF:1169-33893).

Figure 39: Social History Section (V2) - Cancer IG Specific Constraints (V1.1) example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.17" extension="2014-06-09" />
  <!-- Social History Section -->
  <templateId root="2.16.840.1.113883.10.13.11" extension="2014-08-08" />
  <!-- Social History Section (V2) - Cancer IG Specific Constraints -->
  <code code="29762-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Social History" />
  <title>SOCIAL HISTORY</title>
  <text> . . . </text>
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.13.16" extension="2015-01-29" />
      <!-- Employment history observation organizer --> ...

    </organizer>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Tobacco use ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.85" extension="2014-06-09" />
      ...

    </observation>
  </entry>
</section>
```

3.19 Vital Signs Section (entries required) (V2) - Published

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09
(open)]

Table 61: Vital Signs Section (entries required) (V2) Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	Vital Signs Organizer (V2)

The Vital Signs Section contains relevant vital signs for the context and use case of the document type, such as blood pressure, heart rate, respiratory rate, height, weight, body mass index, head circumference, pulse oximetry, temperature, and body surface area. The section should include notable vital signs such as the most recent, maximum and/or minimum, baseline, or relevant trends.

Vital signs are represented in the same way as other results, but are aggregated into their own section to follow clinical conventions.

Table 62: Vital Signs Section (entries required) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09)					
@nullFlavor	0..1	MAY		1098-32874	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1098-7273	
@root	1..1	SHALL		1098-10452	2.16.840.1.113883.10.20.22.2.4.1
@extension	1..1	SHALL		1098-32585	2014-06-09
code	1..1	SHALL		1098-15962	
@code	1..1	SHALL		1098-15963	8716-3
@codeSystem	1..1	SHALL		1098-30903	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-9967	
text	1..1	SHALL		1098-7275	
entry	1..*	SHALL		1098-7276	
organizer	1..1	SHALL		1098-15964	Vital Signs Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09)

1. Conforms to Vital Signs Section (entries optional) (V2) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2014-06-09).
2. **MAY** contain zero or one [0..1] @nullFlavor="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1098-32874).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-7273) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.4.1" (CONF:1098-10452).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32585).
4. **SHALL** contain exactly one [1..1] code (CONF:1098-15962).
 - a. This code **SHALL** contain exactly one [1..1] @code="8716-3" Vital Signs (CONF:1098-15963).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-30903).
5. **SHALL** contain exactly one [1..1] title (CONF:1098-9967).
6. **SHALL** contain exactly one [1..1] text (CONF:1098-7275).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1098-7276) such that it
 - a. **SHALL** contain exactly one [1..1] **Vital Signs Organizer (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09) (CONF:1098-15964).

Figure 40: Vital Signs Section (entries required) (V2) Example

```
<component>
  <section>
    <!-- ** Vital Signs section with entries required ** -->
    <templateId root="2.16.840.1.113883.10.20.22.2.4.1"
      extension="2014-06-09" />
    <code code="8716-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
      displayName="VITAL SIGNS" />
    <title>VITAL SIGNS</title>
    <text>
      . . .
    </text>
    <entry typeCode="DRIV">
      <organizer classCode="CLUSTER" moodCode="EVN">
        <!-- ** Vital signs organizer ** -->
        <templateId root="2.16.840.1.113883.10.20.22.4.26"
          extension="2014-06-09" />
        . . .
      </organizer>
    </entry>
  </section>
</component>
```


4 ENTRY

4.1 Cancer Diagnosis Concern Act (V1.1) - Published

[act: identifier urn:hl7ii:2.16.840.1.113883.10.13.3:2015-02-05 (open)]

Table 63: Cancer Diagnosis Concern Act (V1.1) Contexts

Contained By:	Contains:
Cancer Diagnosis Section (entries required) (V1.1) (required)	Cancer Diagnosis Observation (V1.1)

Note: This template is modeled based on C-CDA R2 "Problem Concern Act (Condition) (V2)" template.

This template reflects an ongoing concern on behalf of the provider that placed the concern on a patient's problem list. In the context of "Cancer Diagnosis Section", the health concern is: Tumor/Cancer.

Problem Concern Act documents a provider's concern about patient's condition (e.g. cancer diagnosis), whereas Problem Observation (contained within Problem Concern Act) documents details about the cancer (e.g. cancer diagnosis date.)

statusCode (of Problem Concern Act) indicates a status of concern and shall be "active" for as long as cancer is a health concern for the provider. statusCode can be "completed" if cancer is no longer a health concern to the provider. statusCode is NOT used to indicate whether patient's cancer is present or absent; it is used to indicate whether patient's cancer is a concern to the provider.

For example, if a 58- year old patient has had a localized melanoma that was resected at the age of 48, and if patient has been in remission (cancer-free) for 10 years, that patient's cancer may still be an "active" concern to the provider due to the possibility that cancer may return.

The effectiveTime/low of the Problem Concern Act (Condition) asserts when the concern became active. This equates to the time the concern was authored in the patient's chart. The effectiveTime/high asserts when the concern was completed (e.g. when the clinician deemed there is no longer any need to track the underlying cancer condition). <effectiveTime> in Problem Concern Act is NOT used to indicate Cancer Diagnosis Date! Cancer Diagnosis Date is specified in <effectiveTime><low> element within "Cancer Diagnosis Observation" template (nested within entryRelationship in this "Cancer Diagnosis Concern Act" template.

A Cancer Diagnosis Concern Act (Condition) can contain one or more entryRelationships, where each entryRelationship contains only one Cancer Diagnosis Observation; each Cancer Diagnosis Observation is an observation of ONE tumor. For example, if a patient has ONE tumor, then the document contains one entryRelationship with one Cancer Diagnosis Observation. If a patient has TWO tumors, then the document contains two entryRelationships, each describing ONE tumor.

Table 64: Cancer Diagnosis Concern Act (V1.1) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.13.3:2015-02-05)					
@classCode	1..1	SHALL		1169-32427	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1169-32428	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1169-32421	
@root	1..1	SHALL		1169-32429	2.16.840.1.113883.10.13.3
@extension	1..1	SHALL		1169-33955	2015-02-05
id	1..*	SHALL		1169-32430	
code	1..1	SHALL		1169-32422	
@code	1..1	SHALL		1169-32431	CONC
@codeSystem	1..1	SHALL		1169-32432	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = 2.16.840.1.113883.5.6
statusCode	1..1	SHALL		1169-32423	
@code	1..1	SHALL		1169-32433	urn:oid:2.16.840.1.113883.11.20.9.19 (ProblemAct statusCode)
effectiveTime	1..1	SHALL		1169-32424	
low	1..1	SHALL		1169-32434	
high	0..1	SHALL		1169-32435	
@nullFlavor	0..1	MAY		1169-32472	
entryRelationship	1..*	SHALL		1169-32420	
@typeCode	1..1	SHALL		1169-32436	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1169-32426	Cancer Diagnosis Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05)

1. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1169-32427).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1169-32428).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-32421) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.3" (CONF:1169-32429).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-02-05" (CONF:1169-33955).
4. **SHALL** contain at least one [1..*] **id** (CONF:1169-32430).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1169-32422).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="CONC" Concern (CONF:1169-32431).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.6" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1169-32432).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1169-32423).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ProblemAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.19 **STATIC** (CONF:1169-32433).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1169-32424).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1169-32434).
Note: The effectiveTime/low asserts when the concern became active. This equates to the time the concern was authored in the patient's chart.
 - b. This effectiveTime **SHALL** contain zero or one [0..1] **high** (CONF:1169-32435).
Note: The effectiveTime/high asserts when the concern was completed (e.g. when the clinician deemed there is no longer any need to track the underlying condition). This element SHALL be present when statusCode="completed" and SHALL not be present otherwise.
 - i. The high, if present, **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1169-32472).
8. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1169-32420) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1169-32436).
 - b. **SHALL** contain exactly one [1..1] [Cancer Diagnosis Observation \(V1.1\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05) (CONF:1169-32426).

Table 65: ProblemAct statusCode

Value Set: ProblemAct statusCode urn:oid:2.16.840.1.113883.11.20.9.19 A ValueSet of HL7 actStatus codes for use on the concern act Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
completed	ActStatus	urn:oid:2.16.840.1.113883.5.14	Completed
aborted	ActStatus	urn:oid:2.16.840.1.113883.5.14	Aborted
active	ActStatus	urn:oid:2.16.840.1.113883.5.14	Active
suspended	ActStatus	urn:oid:2.16.840.1.113883.5.14	Suspended

Figure 41: Cancer Diagnosis Concern Act example

```
<act classCode="ACT" moodCode="EVN">
  <!-- ** Cancer Diagnosis concern act ** -->
  <templateId root="2.16.840.1.113883.10.13.3" extension="2015-02-05" />
  <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7" />
  <code code="CONC" codeSystem="2.16.840.1.113883.5.6" codeSystemName="HL7ActClass"
displayName="Concern" />
  <!-- The statusCode represents the need to continue tracking the problem -->
  <!-- This is of ongoing concern to the provider -->
  <statusCode code="active" />
  <effectiveTime>
    <!-- The low value represents when the problem was first recorded
in the patient's chart -->
    <!-- Concern was documented on July 6, 2013 -->
    <low value="20140730132515" />
  </effectiveTime>
  <entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </entryRelationship>
</act>
```

4.2 Cancer Diagnosis Observation (V1.1) - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05
(open)]

Table 66: Cancer Diagnosis Observation (V1.1) Contexts

Contained By:	Contains:
Cancer Diagnosis Concern Act (V1.1) (required)	No Known TNM Clinical Stage Observation (V1.1) No Known TNM Pathologic Stage Observation (V1.1) TNM Clinical Stage Observation (V1.1) TNM Pathologic Stage Observation (V1.1)

NOTE: This template is modeled based on C-CDA R2 "Problem Observation (V2)" template.

This template reflects a discrete observation about a patient's cancer. Because it is a discrete observation, it will have a statusCode of "completed".

The <effectiveTime> indicates time of cancer diagnosis. <effectiveTime><low> is used to indicate Cancer Diagnosis Date; <effectiveTime><high> is used to indicate Cancer Resolution Date (when patient is considered to be cancer-free). If<low> value is not known, then a nullFlavor of "UNK" SHALL be specified for <low> element.

A key component of a cancer diagnosis is Morphology. This “records the type of cell that has become neoplastic and its biologic activity; in other words, it records the kind of tumor that has developed and how it behaves. There are three parts to a complete morphology code: cell type (histology), behavior, and grade” [World Health Organization International Classification of Diseases for Oncology, 3rd Edition]. The Implementation guide provides a separate element for each.

- Histologic Type: the type of cell that has become neoplastic
- Behavior: the malignant potential of the tumor, ranging from /0 benign to /3 malignant (invasive).
- Grade: the degree of differentiation

NOTE: Because the TNM staging observations have very detailed constraints that preclude nullFlavor to be used when the staging is not available, this IG provides two templates to record Clinical TNM Stage and two templates for Pathologic TNM Stage. For each staging method (Clinical and Pathologic), one of the two templates SHALL be used.

The first template for Clinical and Pathologic TNM is to record TNM stage when the stage values are known, including situations when, after staging workup, the stage group and/or TNM component(s) are found to be unknown (e.g., Stage Group= 9, and/or TX, and/or NX).

The second template is used when the cancer has not yet been staged, the TNM stage is not available or when no TNM Staging system exists for the cancer. Examples include:

- A cancer is first diagnosed and has not yet had a full work-up to evaluate the extent of the cancer's progression
- The stage has been determined elsewhere
- Cancers with no TNM staging system (e.g., leukemia, brain tumor)

This template allows the fact that no staging is available to be communicated without having to provide nullFlavors for each stage data element in the other template. It is accomplished by allowing the act to be negated via the negationInd.

Table 67: Cancer Diagnosis Observation (V1.1) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05)					
@classCode	1..1	SHALL		1169-32452	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-32453	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1169-32441	
@root	1..1	SHALL		1169-32455	2.16.840.1.113883.10.13.4
@extension	1..1	SHALL		1169-33956	2015-02-05
id	1..*	SHALL		1169-32456	
code	1..1	SHALL		1169-32457	
@code	1..1	SHALL		1169-33309	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 29308-4
@codeSystem	1..1	SHALL		1169-33310	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
text	0..1	SHOULD		1169-32442	
reference	0..1	SHOULD		1169-32443	
@value	1..1	SHALL		1169-32444	
statusCode	1..1	SHALL		1169-32445	
@code	1..1	SHALL		1169-32459	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1169-32446	
@nullFlavor	0..0	SHALL NOT		1169-33245	
low	1..1	SHALL		1169-32460	
@nullFlavor	0..0	SHALL NOT		1169-33246	
high	0..1	MAY		1169-32461	
value	1..1	SHALL	CD	1169-32447	
@nullFlavor	0..1	MAY		1169-34370	

@code	1..1	SHALL		1169-32464	
@codeSystem	1..1	SHALL		1169-32634	
@displayName	1..1	SHALL		1169-32618	
@sdtc:valueSet	0..1	MAY		1169-34003	
originalText	1..1	SHALL		1169-32537	
reference	1..1	SHALL		1169-32538	
@value	1..1	SHALL		1169-32539	
qualifier	1..1	SHALL		1169-32463	
name	1..1	SHALL		1169-32474	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34041	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 31206-6
@codeSystem	1..1	SHALL		1169-34042	2.16.840.1.113883.6.1
value	1..1	SHALL		1169-32475	
@code	0..1	SHOULD		1169-32476	urn:oid:2.16.840.1.113883.3.520.4.14 (NAACCR Behavior Code)
@codeSystem	0..1	SHOULD		1169-32632	urn:oid:2.16.840.1.113883.3.520.3.14 (NAACCR Behavior Code) = 2.16.840.1.113883.3.520.3.14
@displayName	0..1	SHOULD		1169-32615	urn:oid:2.16.840.1.113883.3.520.4.14 (NAACCR Behavior Code)
@sdtc:valueSet	0..1	SHOULD		1169-33703	urn:oid:2.16.840.1.113883.3.520.3.14 (NAACCR Behavior Code) = 2.16.840.1.113883.3.520.4.14
originalText	0..1	SHOULD		1169-32477	
reference	0..1	SHOULD		1169-32478	
@value	0..1	SHOULD		1169-32479	
qualifier	1..1	SHALL		1169-33606	
name	1..1	SHALL		1169-33607	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34045	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21858-6
@codeSystem	1..1	SHALL		1169-34046	2.16.840.1.113883.6.1

value	1..1	SHALL		1169-33608	
@code	0..1	SHOULD		1169-33610	urn:oid:2.16.840.1.113883.3.520.4.15 (NAACCR Grade)
@codeSystem	0..1	SHOULD		1169-33609	urn:oid:2.16.840.1.113883.3.520.3.15 (NAACCR Grade) = 2.16.840.1.113883.3.520.3.15
@displayName	0..1	SHOULD		1169-33611	urn:oid:2.16.840.1.113883.3.520.4.15 (NAACCR Grade)
@sdct:valueSet	0..1	SHOULD		1169-33704	urn:oid:2.16.840.1.113883.3.520.3.15 (NAACCR Grade) = 2.16.840.1.113883.3.520.4.15
originalText	0..1	SHOULD		1169-33612	
reference	0..1	SHOULD		1169-33613	
@value	0..1	SHOULD		1169-33614	
qualifier	1..1	SHALL		1169-32490	
name	1..1	SHALL		1169-32481	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21861-0
@code	1..1	SHALL		1169-34043	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21861-0
@codeSystem	1..1	SHALL		1169-34044	2.16.840.1.113883.6.1
value	1..1	SHALL		1169-32482	
@code	0..1	SHOULD		1169-32483	urn:oid:2.16.840.1.113883.3.520.4.3 (NAACCR Diagnostic Confirmation)
@codeSystem	0..1	SHOULD		1169-32633	urn:oid:2.16.840.1.113883.3.520.3.3 (NAACCR Diagnostic Confirmation) = 2.16.840.1.113883.3.520.3.3
@displayName	0..1	SHOULD		1169-32620	urn:oid:2.16.840.1.113883.3.520.4.3 (NAACCR Diagnostic Confirmation)
@sdct:valueSet	0..1	SHOULD		1169-33705	urn:oid:2.16.840.1.113883.3.520.3.3 (NAACCR Diagnostic Confirmation) = 2.16.840.1.113883.3.520.4.3
originalText	0..1	SHOULD		1169-32484	
reference	0..1	SHOULD		1169-32485	
@value	0..1	SHOULD		1169-32486	

targetSiteCode	1..1	SHALL		1169-32487	
@nullFlavor	0..0	SHALL NOT		1169-33247	
@code	1..1	SHALL		1169-32488	
@codeSystem	1..1	SHALL		1169-33182	
@displayName	0..1	SHOULD		1169-32638	
@sdct:valueSet	0..1	SHOULD		1169-33706	
qualifier	1..1	SHALL		1169-33008	
name	1..1	SHALL		1169-33009	
@code	1..1	SHALL		1169-33011	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 20228-3
@codeSystem	1..1	SHALL		1169-33013	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
@codeSystemName	1..1	SHALL		1169-33014	urn:oid:2.16.840.1.113883.6.1 (LOINC) = LOINC
value	1..1	SHALL		1169-33010	
@code	1..1	SHALL		1169-33012	urn:oid:2.16.840.1.113883.3.520.4.22 (Laterality)
@codeSystem	1..1	SHALL		1169-33015	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
@displayName	1..1	SHALL		1169-33185	urn:oid:2.16.840.1.113883.3.520.4.22 (Laterality)
@sdct:valueSet	1..1	SHALL		1169-33708	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.3.520.4.22
originalText	0..1	SHOULD		1169-33017	
reference	0..1	SHOULD		1169-33018	
@value	0..1	SHOULD		1169-33019	
entryRelationship	1..1	SHALL		1169-32440	
@nullFlavor	0..0	SHALL NOT		1169-33186	
@typeCode	1..1	SHALL		1169-32465	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1169-	true

				32466	
observation	1..1	SHALL		1169-32451	TNM Clinical Stage Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.5:2015-02-05)
observation	1..1	SHALL		1169-34365	No Known TNM Clinical Stage Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.31:2015-04-02)
entryRelationship	1..1	SHALL		1169-33177	
@nullFlavor	0..0	SHALL NOT		1169-33187	
@typeCode	1..1	SHALL		1169-33178	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1169-33179	true
observation	1..1	SHALL		1169-33180	TNM Pathologic Stage Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.7:2015-02-06)
observation	1..1	SHALL		1169-34366	No Known TNM Pathologic Stage Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.32:2015-04-02)
entryRelationship	1..*	SHALL		1169-33192	
@typeCode	1..1	SHALL		1169-33194	REFR
observation	1..1	SHALL		1169-33193	
id	1..1	SHALL		1169-33195	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1169-32452).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1169-32453).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-32441) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.4" (CONF:1169-32455).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-02-05" (CONF:1169-33956).
4. **SHALL** contain at least one [1..*] **id** (CONF:1169-32456).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1169-32457).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29308-4" Diagnosis (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33309).

- b. This code **SHALL** contain exactly one [1..1]
`@codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1 STATIC) (CONF:1169-33310).`
- 6. **SHOULD** contain zero or one [0..1] **text** (CONF:1169-32442).
 - a. The text, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-32443).
 - i. The reference, if present, **SHALL** contain exactly one [1..1] **@value** (CONF:1169-32444).
 - 1. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-32458).
- 7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1169-32445).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1169-32459).
- 8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1169-32446).
 Note: Records the date of initial diagnosis by a recognized medical practitioner for the cancer being reported.
 - a. This effectiveTime **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33245).
 - b. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1169-32460).
 Note: The effectiveTime/low (a.k.a. "onset date") indicates Cancer Diagnosis Date.
 - i. This low **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33246).
 - c. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1169-32461).
 Note: The effectiveTime/high (a.k.a. "resolution date") indicates Cancer Resolution Date. If the problem (cancer) is known to be resolved, but the date of resolution is not known, then the high element **SHALL** be present, and the nullFlavor attribute **SHALL** be set to 'UNK'. Therefore, the existence of an high element within a problem (cancer) indicates that the problem has been resolved (patient is cancer-free).
- 9. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:1169-32447).
 Note: The value records the histologic type (or cell type) of a malignant tumor (e.g., carcinoma, melanoma, sarcoma, lymphoma, leukemia). Histologic tumor type **SHOULD** be encoded and selected from one of the following coding systems: ICD-O-3, ICD-9-CM Appendix A, ICD-10-CM, SNOMED CT. If the code for histologic tumor type cannot be found in one of the aforementioned coding systems then the string value of the histologic tumor type must be provided. In summary: - If tumor histologic type is coded, then the value for the code **SHALL** be provided in **@code** field. In this case, the values for **@displayName** and **@codeSystem** associated with **@code** value **SHALL** be provided.- If tumor histologic type is NOT coded, then the value for the code **SHALL** be provided in **<originalText>** field. In this case **@code** attribute (as well as **@displayName** and **@codeSystem**) with be empty.
 - a. This value **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1169-34370).
 Note: Use **@nullFlavor="NA"** when a coded value is not available.

If value/**@nullFlavor** is not present then

- b. This value **SHALL** contain exactly one [1..1] **@code** (CONF:1169-32464).
 Note: This **@code** attribute is used to document histologic type of tumor. If the

histologic type isn't known, the value of "8000" (with @displayName="Neoplasm") should be used when using code systems ICD-O-3, ICD-9-CM, ICD-10-CM and "86049000" (with @displayName="Neoplasm, malignant (primary)") when using SNOMED CT code system.

- i. The @code for histologic type of tumor, if present, **SHALL** be selected from:
 - (a) ICD-O-3 (CodeSystem: 2.16.840.1.113883.6.43.1) or
 - (b) Morphologic Abnormality of Neoplasms Value Set (ValueSet: 2.16.840.1.114222.4.11.7256) or
 - (c) ICD-9-CM Appendix A-Morphology of Neoplasms (CodeSystem: 2.16.840.1.114222.4.11.6038) or
 - (d) ICD-10-CM (CodeSystem: 2.16.840.1.113883.6.90) (CONF:1169-32473).

If value/@nullFlavor not present then

- c. This value **SHALL** contain exactly one [1..1] @codeSystem (CONF:1169-32634).
 - i. The @codeSystem associated with the code for histologic type of tumor **SHALL** be selected from:
 - (a) ICD-O-3 (CodeSystem: 2.16.840.1.113883.6.43.1) or
 - (b) SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) or
 - (c) ICD-9-CM Appendix A-Morphology of Neoplasms (CodeSystem: 2.16.840.1.114222.4.11.6038) or
 - (d) ICD-10-CM (CodeSystem: 2.16.840.1.113883.6.90) (CONF:1169-32635).

If value/@nullFlavor not present then

- d. This value **SHALL** contain exactly one [1..1] @displayName (CONF:1169-32618).
 - i. The @codeDisplayName associated with the code for histologic type of tumor **SHALL** be selected from:
 - (a) ICD-O-3 (CodeSystem: 2.16.840.1.113883.6.43.1) or
 - (b) Morphologic Abnormality of Neoplasms Value Set (ValueSet: 2.16.840.1.114222.4.11.7256) or
 - (c) ICD-9-CM Appendix A-Morphology of Neoplasms (CodeSystem: 2.16.840.1.114222.4.11.6038) or
 - (d) ICD-10-CM (CodeSystem: 2.16.840.1.113883.6.90) (CONF:1169-32619).

If value/@nullFlavor not present then

- e. This value **MAY** contain zero or one [0..1] @sdct:valueSet (CONF:1169-34003).

If value/@coder not present then

- f. This value **SHALL** contain exactly one [1..1] originalText (CONF:1169-32537).

Note: This <originalText> element is used to document string value of histologic type of tumor in both cases: when histologic type of tumor is coded or is not coded. For example: (1) If histologic tumor type is coded, then the code value SHALL be provided in @code attribute (along with @displayName and @codeSystem values associated with the @code value). In addition, string value (typically the string that the user uses in his own information system) should be provided in <originalText> field. Note that if the user uses the same string value for histologic tumor type in his own system as the string value (=displayName) from the coding system, then the string values for <originalText> and @displayName will be equivalent in Cancer Report. (2)

If histologic tumor type is NOT coded, then the string value SHALL be provided in <originalText>.

- i. This originalText **SHALL** contain exactly one [1..1] **reference** (CONF:1169-32538).

Note: This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1).

- 1. This reference **SHALL** contain exactly one [1..1] **@value** (CONF:1169-32539).
 - a. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-32613).

- g. This value **SHALL** contain exactly one [1..1] **qualifier** (CONF:1169-32463) such that it

Note: This qualifier provides Behavior information, indicating whether the tumor has a benign, uncertain, in situ, malignant or metastatic behavior.

- i. **SHALL** contain exactly one [1..1] **name** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-32474).

- 1. This name **SHALL** contain exactly one [1..1] **@code**="31206-6" Behavior ICD-O-3 Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34041).
- 2. This name **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" CodeSystem: LOINC 2.16.840.1.113883.6.1 (CONF:1169-34042).

- ii. **SHALL** contain exactly one [1..1] **value** (CONF:1169-32475).

Note: - If coded, the code value describing the behavior of the tumor/cancer SHALL be provided in @code (associated @displayName and @codeSystem SHALL also be provided along with the @code).- If uncoded, the string value describing the behavior of the tumor/cancer SHALL be provided within <originalText> element.

- 1. This value **SHOULD** contain zero or one [0..1] **@code**, which **SHALL** be selected from ValueSet [NAACCR Behavior Code](#) urn:oid:2.16.840.1.113883.3.520.4.14 **DYNAMIC** (CONF:1169-32476).
- 2. This value **SHOULD** contain zero or one [0..1] **@codeSystem**="2.16.840.1.113883.3.520.3.14" (CodeSystem: NAACCR Behavior Code urn:oid:2.16.840.1.113883.3.520.3.14 **STATIC**) (CONF:1169-32632).
- 3. This value **SHOULD** contain zero or one [0..1] **@displayName**, which **SHALL** be selected from ValueSet [NAACCR Behavior Code](#) urn:oid:2.16.840.1.113883.3.520.4.14 **DYNAMIC** (CONF:1169-32615).
- 4. This value **SHOULD** contain zero or one [0..1] **@sdtc:valueSet**="2.16.840.1.113883.3.520.4.14" (CodeSystem: NAACCR Behavior Code

urn:oid:2.16.840.1.113883.3.520.3.14 **STATIC**) (CONF:1169-33703).

5. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-32477).
 - a. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-32478).

Note: This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1).

 - i. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1169-32479).
 1. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-32614).

- h. This value **SHALL** contain exactly one [1..1] **qualifier** (CONF:1169-33606) such that it

Note: This qualifier is used to indicate the Grade (or degree of differentiation) of tumor.

- i. **SHALL** contain exactly one [1..1] **name** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33607).
 1. This name **SHALL** contain exactly one [1..1] **@code**="21858-6" Grade Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34045).
 2. This name **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" CodeSystem: LOINC 2.16.840.1.113883.6.1 (CONF:1169-34046).
- ii. **SHALL** contain exactly one [1..1] **value** (CONF:1169-33608).

Note: - If coded, the code value describing the grade of the tumor/cancer SHALL be provided in **@code** (associated **@displayName** and **@codeSystem** SHALL also be provided along with the **@code**). - If uncoded, the string value describing the grade of the tumor/cancer SHALL be provided within **<originalText>** element.

 1. This value **SHOULD** contain zero or one [0..1] **@code**, which **SHALL** be selected from ValueSet [NAACCR Grade](#) urn:oid:2.16.840.1.113883.3.520.4.15 (CONF:1169-33610).
 2. This value **SHOULD** contain zero or one [0..1] **@codeSystem**="2.16.840.1.113883.3.520.3.15" (CodeSystem: NAACCR Grade urn:oid:2.16.840.1.113883.3.520.3.15 **STATIC**) (CONF:1169-33609).
 3. This value **SHOULD** contain zero or one [0..1] **@displayName**, which **SHALL** be selected from ValueSet [NAACCR Grade](#) urn:oid:2.16.840.1.113883.3.520.4.15 (CONF:1169-33611).
 4. This value **SHOULD** contain zero or one [0..1] **@sdtc:valueSet**="2.16.840.1.113883.3.520.4.15" (CodeSystem:

NAACCR Grade urn:oid:2.16.840.1.113883.3.520.3.15 **STATIC**
(CONF:1169-33704).

5. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-33612).
 - a. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-33613).
 - i. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1169-33614).
 1. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-33615).

- i. This value **SHALL** contain exactly one [1..1] **qualifier** (CONF:1169-32490) such that it

Note: This qualifier provides Diagnostic Confirmation information, indicating the best method used to confirm the presence of the cancer being reported, such that

- i. **SHALL** contain exactly one [1..1] **name**="21861-0" Dx confirmed by Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-32481).
 1. This name **SHALL** contain exactly one [1..1] **@code**="21861-0" Dx confirmed by Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34043).
 2. This name **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" CodeSystem: LOINC 2.16.840.1.113883.6.1 (CONF:1169-34044).
- ii. **SHALL** contain exactly one [1..1] **value** (CONF:1169-32482).

Note: - If coded, the code value describing the best method of diagnosis of the tumor/cancer **SHALL** be provided in **@code** (associated **@displayName** and **@codeSystem** **SHALL** also be provided along with the **@code**).- If uncoded, the string value describing the best method of diagnosis of the tumor/cancer **SHALL** be provided within **<originalText>** element.

1. This value **SHOULD** contain zero or one [0..1] **@code**, which **SHALL** be selected from ValueSet [NAACCR Diagnostic Confirmation](#) urn:oid:2.16.840.1.113883.3.520.4.3 **DYNAMIC** (CONF:1169-32483).
2. This value **SHOULD** contain zero or one [0..1] **@codeSystem**="2.16.840.1.113883.3.520.3.3 " (CodeSystem: NAACCR Diagnostic Confirmation urn:oid:2.16.840.1.113883.3.520.3.3 **STATIC**) (CONF:1169-32633).
3. This value **SHOULD** contain zero or one [0..1] **@displayName**, which **SHALL** be selected from ValueSet [NAACCR Diagnostic Confirmation](#) urn:oid:2.16.840.1.113883.3.520.4.3 **DYNAMIC** (CONF:1169-32620).
4. This value **SHOULD** contain zero or one [0..1] **@sdtc:valueSet**="2.16.840.1.113883.3.520.4.3" (CodeSystem:

5. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-32484).
 - a. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-32485).

Note: This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1).

 - i. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1169-32486).
 1. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-33181).

10. **SHALL** contain exactly one [1..1] **targetSiteCode** (CONF:1169-32487).

Note: targetSiteCode indicates the anatomic location where the primary tumor originated (referred to as primary site).

- a. This targetSiteCode **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33247).
- b. This targetSiteCode **SHALL** contain exactly one [1..1] **@code** (CONF:1169-32488).
 - i. The value for @code attribute **SHALL** be selected from:
 - (a) ICD-9-CM Volume 1 & 2 (CodeSystem: 2.16.840.1.113883.6.103) or
 - (b) ICD-10-CM (CodeSystem: 2.16.840.1.113883.6.90) or
 - (c) Value Set: "Body Site" (ValueSet: 2.16.840.1.113883.3.88.12.3221.8.9) - SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) or
 - (d) ICD-O-3 (CodeSystem: 2.16.840.1.113883.6.43.1) (CONF:1169-32489).
- c. This targetSiteCode **SHALL** contain exactly one [1..1] **@codeSystem** (CONF:1169-33182).
 - i. The value for @codeSystem attribute **SHALL** be selected from:
 - (a) ICD-9-CM Volume 1 & 2 (CodeSystem: 2.16.840.1.113883.6.103) or
 - (b) ICD-10-CM (CodeSystem: 2.16.840.1.113883.6.90) or
 - (c) SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) or
 - (d) ICD-O-3 (CodeSystem: 2.16.840.1.113883.6.43.1) (CONF:1169-33620).
- d. This targetSiteCode **SHOULD** contain zero or one [0..1] **@displayName** (CONF:1169-32638).
 - i. The value for @displayName associated with @code **SHALL** be selected from:
 - (a) ICD-9-CM Volume 1 & 2 (CodeSystem: 2.16.840.1.113883.6.103) or
 - (b) ICD-10-CM (CodeSystem: 2.16.840.1.113883.6.90) or
 - (c) Value Set: "Body Site" (ValueSet: 2.16.840.1.113883.3.88.12.3221.8.9) - SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) or
 - (d) ICD-O-3 (CodeSystem: 2.16.840.1.113883.6.43.1) (CONF:1169-32639).
- e. This targetSiteCode **SHOULD** contain zero or one [0..1] **@sdct:valueSet** (CONF:1169-33706).

- i. If the @code is selected from the Value Set "Body Site", then the value for @valueSet **SHALL** be "2.16.840.1.113883.3.88.12.3221.8.9" (CONF:1169-33707).
- f. This targetSiteCode **SHALL** contain exactly one [1..1] **qualifier** (CONF:1169-33008).
 - i. This qualifier **SHALL** contain exactly one [1..1] **name** (CONF:1169-33009).
 - 1. This name **SHALL** contain exactly one [1..1] @code="20228-3" Anatomic part Laterality (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33011).
 - 2. This name **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33013).
 - 3. This name **SHALL** contain exactly one [1..1] @codeSystemName="LOINC" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33014).
 - ii. This qualifier **SHALL** contain exactly one [1..1] **value** (CONF:1169-33010).
 Note: This qualifier provides Laterality, the side of a paired organ, or the side of the body on which the reportable tumor originated.
 - 1. This value **SHALL** contain exactly one [1..1] @code, which **SHALL** be selected from ValueSet [Laterality](#) urn:oid:2.16.840.1.113883.3.520.4.22 (CONF:1169-33012).
 - 2. This value **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:1169-33015).
 - 3. This value **SHALL** contain exactly one [1..1] @displayName, which **SHALL** be selected from ValueSet [Laterality](#) urn:oid:2.16.840.1.113883.3.520.4.22 (CONF:1169-33185).
 - 4. This value **SHALL** contain exactly one [1..1] @sdct:valueSet="2.16.840.1.113883.3.520.4.22" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:1169-33708).
 - 5. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-33017).
 - a. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-33018).
 - i. The reference, if present, **SHOULD** contain zero or one [0..1] @value (CONF:1169-33019).
- 11. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1169-32440) such that it
 - a. **SHALL NOT** contain [0..0] @nullFlavor (CONF:1169-33186).
 - b. **SHALL** contain exactly one [1..1] @typeCode="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1169-32465).
 - c. **SHALL** contain exactly one [1..1] @inversionInd="true" True (CONF:1169-32466).

This entryRelationship **SHALL** contain either

- d. **SHALL** contain exactly one [1..1] TNM Clinical Stage Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.5:2015-02-05) (CONF:1169-32451).

Or

- e. **SHALL** contain exactly one [1..1] No Known TNM Clinical Stage Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.31:2015-04-02) (CONF:1169-34365).

12. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1169-33177) such that it

- a. **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33187).
- b. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1169-33178).
- c. **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:1169-33179).

This entryRelationship SHALL contain either

- d. **SHALL** contain exactly one [1..1] TNM Pathologic Stage Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.7:2015-02-06) (CONF:1169-33180).

OR

- e. **SHALL** contain exactly one [1..1] No Known TNM Pathologic Stage Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.32:2015-04-02) (CONF:1169-34366).

13. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1169-33192) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Reference (CONF:1169-33194).
- b. **SHALL** contain exactly one [1..1] **observation** (CONF:1169-33193).
 - i. This observation **SHALL** contain exactly one [1..1] **id** (CONF:1169-33195).
Note: This "id" is used to link cancer diagnosis observation to the problem observation "id".

Table 68: NAACCR Behavior Code

Value Set: NAACCR Behavior Code urn:oid:2.16.840.1.113883.3.520.4.14			
Indication whether the tumor is benign, in situ, malignant or metastatic			
Value Set Source: http://phinvads.cdc.gov/vads/ViewValueSet.action?id=533DA165-1730-E211-8ECF-001A4BE7FA90			
Code	Code System	Code System OID	Print Name
0	NAACCR Behavior Code	urn:oid:2.16.840.1.113883.3.520.3.14	Benign
1	NAACCR Behavior Code	urn:oid:2.16.840.1.113883.3.520.3.14	Uncertain whether benign or malignant
2	NAACCR Behavior Code	urn:oid:2.16.840.1.113883.3.520.3.14	In situ; non-invasive
3	NAACCR Behavior Code	urn:oid:2.16.840.1.113883.3.520.3.14	Malignant, primary
6	NAACCR Behavior Code	urn:oid:2.16.840.1.113883.3.520.3.14	Malignant, metastatic
9	NAACCR Behavior Code	urn:oid:2.16.840.1.113883.3.520.3.14	Malignant, uncertain whether primary or metastatic

Table 69: NAACCR Diagnostic Confirmation

Value Set: NAACCR Diagnostic Confirmation urn:oid:2.16.840.1.113883.3.520.4.3			
Describes whether the cancer/tumor was microscopically confirmed or alternatively, the method of diagnosis.			
Value Set Source: http://phinvads.cdc.gov/vads/ViewValueSet.action?id=F57C484F-DA04-E011-9273-00188B39829B			
Code	Code System	Code System OID	Print Name
1	NAACCR Diagnostic Confirmation	urn:oid:2.16.840.1.113883.3.520.3.3	Positive Histology
2	NAACCR Diagnostic Confirmation	urn:oid:2.16.840.1.113883.3.520.3.3	Positive cytology, no positive histology
3	NAACCR Diagnostic Confirmation	urn:oid:2.16.840.1.113883.3.520.3.3	Positive histology Plus positive immunophenotyping and/or positive genetic studies
...			

Table 70: NAACCR Grade

Value Set: NAACCR Grade urn:oid:2.16.840.1.113883.3.520.4.15 Code for the grade or degree of differentiation of the reportable tumor. Value Set Source: http://phinvads.cdc.gov/vads/ViewValueSet.action?id=ED08D650-DD04-E011-9273-00188B39829B			
Code	Code System	Code System OID	Print Name
1	NAACCR Grade	urn:oid:2.16.840.1.113883.3.520.3.15	Grade I
2	NAACCR Grade	urn:oid:2.16.840.1.113883.3.520.3.15	Grade II
3	NAACCR Grade	urn:oid:2.16.840.1.113883.3.520.3.15	Grade III
4	NAACCR Grade	urn:oid:2.16.840.1.113883.3.520.3.15	Grade IV
5	NAACCR Grade	urn:oid:2.16.840.1.113883.3.520.3.15	T-cell
6	NAACCR Grade	urn:oid:2.16.840.1.113883.3.520.3.15	B-cell
7	NAACCR Grade	urn:oid:2.16.840.1.113883.3.520.3.15	Null cell
8	NAACCR Grade	urn:oid:2.16.840.1.113883.3.520.3.15	NK (natural killer) cell

Table 71: Laterality

Value Set: Laterality urn:oid:2.16.840.1.113883.3.520.4.22 Code for the side of a paired organ, or the side of the body on which the reportable tumor originated. Value Set Source: http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.22			
Code	Code System	Code System OID	Print Name
24028007	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Right (qualifier value)
7771000	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Left (qualifier value)
66459002	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Unilateral (qualifier value)
51440002	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Right and left (qualifier value)
399488007	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Midline (qualifier value)
261665006	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Unknown (qualifier value)

Table 72: Morphologic Abnormality of Neoplasms

Value Set: Morphologic Abnormality of Neoplasms 2.16.840.1.114222.4.11.7256 Contains codes descending from the following SNOMED CT® concepts: Malignant neoplasm of primary, secondary, or uncertain origin (morphologic abnormality) [367651003], Nervous system tumor morphology (morphologic abnormality) [253061008], Intratubular malignant germ cells (morphologic abnormality) [128902002], In situ melanocytic morphology (morphologic abnormality) [253035009], In situ neoplasm (morphologic abnormality) [127569003], Carcinoma in situ - category (morphologic abnormality) [399919001], Squamous intraepithelial neoplasia - category (morphologic abnormality) [399962000], In situ adenomatous neoplasm - category (morphologic abnormality) [399983006]. Also includes following SNOMED CT codes and any descendants of such codes: Chronic myeloproliferative disorder (morphologic abnormality) [115248004], Cavernous lymphangioma (morphologic abnormality) [89056007], Paraganglioma (morphologic abnormality) [803009], Craniopharyngioma (morphologic abnormality) [40009002], Craniopharyngioma, adamantinomatous (morphologic abnormality) [128781004], Craniopharyngioma, papillary (morphologic abnormality) [128782006], Pineocytoma (morphologic abnormality) [89096009], Pleomorphic adenoma (morphologic abnormality) [8360001], Intratubular malignant germ cells (morphologic abnormality) [128902002]. Value Set Source: http://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7256			
Code	Code System	Code System OID	Print Name
10069009	SNOMED CT	2.16.840.1.113883.6.96	Giant cell tumor of bone, malignant
10146008	SNOMED CT	2.16.840.1.113883.6.96	Chief cell adenocarcinoma
10288008	SNOMED CT	2.16.840.1.113883.6.96	Squamous cell carcinoma, spindle cell
103682005	SNOMED CT	2.16.840.1.113883.6.96	Subcutaneous panniculitic T-cell lymphoma
103685007	SNOMED CT	2.16.840.1.113883.6.96	Hepatosplenic gamma-delta cell lymphoma
...			

Figure 42: Cancer Diagnosis Observation example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.4" extension="2015-02-05"/>
  <id root="5e0584ad-b4b0-421f-85f9-2c2c83c510cc"/>
  <code code="29308-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Diagnosis"/>
  <text>
    <reference value="#Diagnosis_1"/>
  </text>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="20120702"/>
    <high nullFlavor="NA"/>
  </effectiveTime>
  <value xsi:type="CD" code="8140" codeSystem="2.16.840.1.113883.6.43.1"
codeSystemName="ICD-O-3" displayName="Adenocarcinoma, NOS">
    <originalText>
      <reference value="#Histology_1"/>
    </originalText>
    <qualifier>
      <name code="31206-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Behavior ICD-O-3 Cancer"/>
      <value xsi:type="CD" code="3" codeSystem="2.16.840.1.113883.3.520.3.14"
codeSystemName="NAACCR Behavior Code" displayName="Malignant, Primary"
sdtc:valueSet="2.16.840.1.113883.3.520.4.14">
        <originalText>
          <reference value="#Behavior_1"/>
        </originalText>
      </value>
    </qualifier>
    <qualifier>
      <name code="21858-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Grade Cancer"/>
      <value code="II" codeSystem="2.16.840.1.113883.3.520.3.15"
codeSystemName="NAACCR Grade" displayName="Grade II"
sdtc:valueSet="2.16.840.1.113883.3.520.4.15">
        <originalText>
          <reference value="#Grade_1"/>
        </originalText>
      </value>
    </qualifier>
    <qualifier>
      <name code="21861-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Dx confirmed by Cancer"/>
      <value xsi:type="CD" code="1" codeSystem="2.16.840.1.113883.3.520.3.3"
codeSystemName="NAACCR Diagnostic Confirmation" displayName="Positive Histology"
sdtc:valueSet="2.16.840.1.113883.3.520.4.3">
        <originalText>
          <reference value="#Confirmation_1"/>
        </originalText>
      </value>
    </qualifier>
  </value>
  <targetSiteCode code="181131000" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Entire breast"
sdtc:valueSet="2.16.840.1.113883.3.88.12.3221.8.9">
```

```

        <originalText>
            <reference value="#PrimarySite_1"/>
        </originalText>
        <qualifier>
            <name code="20228-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Anatomic part Laterality "/>
            <value code="24028007" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT" displayName="Right (qualifier value)"
sdtc:valueSet="2.16.840.1.113883.3.520.4.22">
                <originalText>
                    <reference value="#Laterality_1"/>
                </originalText>
            </value>
        </qualifier>
    </targetSiteCode>
    <entryRelationship typeCode="SUBJ" inversionInd="true">
        <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.13.5" extension="2015-02-05"/>
            <id root="91473759-6678-48a2-a0d5-084c5ded5afc"/>
            <code code="75620-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="TNM clinical staging before treatment panel Cancer"/>
            <statusCode code="completed"/>
            <effectiveTime>
                <low value="20140801112102"/>
            </effectiveTime>
            <entryRelationship typeCode="COMP">
                <observation classCode="OBS" moodCode="EVN">
                    <templateId root="2.16.840.1.113883.10.13.35" extension="2015-02-05"/>
                    <code code="21908-9" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Stage group.clinical"/>
                    <statusCode code="completed"/>
                    <value xsi:type="CD" code="IIB" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" sdtc:valueSet="2.16.840.1.113883.3.520.4.9">
                        <originalText>
                            <reference value="#ClinicalStageGroup_1"/>
                        </originalText>
                    <qualifier>
                        <name code="21909-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Descriptor.clinical Cancer Narrative"/>
                        <value code="0" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" displayName="None"
sdtc:valueSet="2.16.840.1.113883.3.520.4.10">
                            <originalText>
                                <reference value="#ClinicalNarrative_1"/>
                            </originalText>
                        </value>
                    </qualifier>
                </value>
                <entryRelationship typeCode="COMP">
                    <observation classCode="OBS" moodCode="EVN">
                        <templateId root="2.16.840.1.113883.10.13.36" extension="2015-
02-05"/>
                        <code code="21905-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Primary tumor.clinical [Class] Cancer"/>
                        <value xsi:type="CD" code="T2"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" displayName="Tumor &gt;

```



```

20 mm but <= to 50 mm in greatest dimension"
sdct:valueSet="2.16.840.1.113883.3.520.4.6">
    <originalText>
        <reference value="#ClinicalPrimaryTumor_1"/>
    </originalText>
</value>
</observation>
</entryRelationship>
<entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.37" extension="2015-
02-05"/>
        <code code="21906-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Regional lymph nodes.clinical [Class] Cancer"/>
        <value xsi:type="CD" code="N1"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" displayName="Metastases
to movable ipsilateral level I, II axillary lymph node(s)"
sdct:valueSet="2.16.840.1.113883.3.520.4.7">
            <originalText>
                <reference value="#ClinicalNode_1"/>
            </originalText>
        </value>
    </observation>
</entryRelationship>
<entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.38" extension="2015-
02-05"/>
        <code code="21907-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Distant metastases.clinical [Class] Cancer"/>
        <value xsi:type="CD" code="M0"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" displayName="No
clinical or radiographic evidence of distant metastases"
sdct:valueSet="2.16.840.1.113883.3.520.4.8">
            <originalText>
                <reference value="#ClinicalMetasases_1"/>
            </originalText>
        </value>
    </observation>
</entryRelationship>
<entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.39" extension="2015-
02-05"/>
        <code code="21910-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Stager.clinical Cancer "/>
        <value xsi:type="CD" code="3"
codeSystem="2.16.840.1.113883.3.520.3.4" codeSystemName="NAACCR TNM Clinical Staged By "
displayName="Pathologist and managing physician"
sdct:valueSet="2.16.840.1.113883.3.520.4.4">
            <originalText>
                <reference value="#ClinicalStagedBy_1"/>
            </originalText>
        </value>
    </observation>
</entryRelationship>
</observation>

```

```

        </entryRelationship>
    </observation>
</entryRelationship>
<entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.7" extension="2015-02-06"/>
        <id root="6d064a91-fdae-4acf-9eb8-e1695cf301c9"/>
        <code code="75621-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="TNM pathologic staging after surgery panel"/>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="20140801112253"/>
        </effectiveTime>
        <entryRelationship typeCode="COMP">
            <observation classCode="OBS" moodCode="EVN">
                <templateId root="2.16.840.1.113883.10.13.40" extension="2015-02-05"/>
                <code code="21902-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Stage group.pathology Cancer"/>
                <statusCode code="completed"/>
                <value xsi:type="CD" code="IIB" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" sdtc:valueSet="2.16.840.1.113883.3.520.4.20">
                    <originalText>
                        <reference value="#PathologicStageGroup_1"/>
                    </originalText>
                    <qualifier>
                        <name code="21903-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Descriptor.pathology Cancer Narrative "/>
                        <value code="0" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" sdtc:valueSet="2.16.840.1.113883.3.520.4.21"/>
                    </qualifier>
                </value>
            </entryRelationship typeCode="COMP">
                <observation classCode="OBS" moodCode="EVN">
                    <templateId root="2.16.840.1.113883.10.13.41" extension="2015-
02-05"/>
                    <code code="21899-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Primary tumor.pathology Cancer"/>
                    <value xsi:type="CD" code="T2"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" displayName="Tumor >
20 mm but <= to 50 mm in greatest dimension"
sdtc:valueSet="2.16.840.1.113883.3.520.4.17"/>
                </observation>
            </entryRelationship>
            <entryRelationship typeCode="COMP">
                <observation classCode="OBS" moodCode="EVN">
                    <templateId root="2.16.840.1.113883.10.13.42" extension="2015-
02-05"/>
                    <code code="21900-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Regional lymph nodes.pathology [Class] Cancer"/>
                    <value xsi:type="CD" code="N1"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition"
displayName="Micrometastases; or metastases in 1 to 3 axillary lymph nodes; and/or in
internal mammary nodes with metastases detected by sentinel lymph node biopsy but not
clinically detected." sdtc:valueSet="2.16.840.1.113883.3.520.4.18"/>
                </observation>
            </entryRelationship>
        </entryRelationship typeCode="COMP">

```

```

        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.13.43" extension="2015-
02-05"/>
          <code code="21901-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Distant metastases.pathology [Class] Cancer"/>
          <value xsi:type="CD" code="MX"
codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition"
sdtc:valueSet="2.16.840.1.113883.3.520.4.19"/>
        </observation>
      </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.44" extension="2015-
02-05"/>
        <code code="21904-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Stager.pathology Cancer"/>
        <value xsi:type="CD" code="3"
codeSystem="2.16.840.1.113883.3.520.3.17" codeSystemName="NAACCR TNM Pathologic Staged By"
displayName="Pathologist and managing physician"
sdtc:valueSet="2.16.840.1.113883.3.520.4.27"/>
      </observation>
    </entryRelationship>
  </observation>
</entryRelationship>
</observation>
<entryRelationship typeCode="REFR">
  <observation classCode="OBS" moodCode="EVN">
    <id root="ab1791b0-5c71-11db-b0de-0800200c9a66"/>
    <code code="64572001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Condition"/>
  </observation>
</entryRelationship>
</observation>

```

4.3 Coverage Activity (V2) - Published

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2014-06-09 (open)]

Table 73: Coverage Activity (V2) Contexts

Contained By:	Contains:
Payers Section (V2) (optional)	Policy Activity (V2)

A Coverage Activity groups the policy and authorization acts within a Payers Section to order the payment sources. A Coverage Activity contains one or more Policy Activities, each of which contains zero or more Authorization Activities. The Coverage Activity id is the ID from the patient's insurance card. The sequenceNumber/@value shows the policy order of preference.

Table 74: Coverage Activity (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2014-06-09)					
@classCode	1..1	SHALL		1098-8872	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-8873	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-8897	
@root	1..1	SHALL		1098-10492	2.16.840.1.113883.10.20.22.4.60
@extension	1..1	SHALL		1098-32596	2014-06-09
id	1..*	SHALL		1098-8874	
code	1..1	SHALL		1098-8876	
@code	1..1	SHALL		1098-19160	48768-6
@codeSystem	1..1	SHALL		1098-32156	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-8875	
@code	1..1	SHALL		1098-19094	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
entryRelationship	1..*	SHALL		1098-8878	
@typeCode	1..1	SHALL		1098-8879	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
sequenceNumber	0..1	MAY		1098-17174	
@value	1..1	SHALL		1098-17175	
act	1..1	SHALL		1098-15528	Policy Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8872).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8873).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-8897) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.60" (CONF:1098-10492).

- b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32596).
- 4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8874).
- 5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-8876).
 - a. This code **SHALL** contain exactly one [1..1] @code="48768-6" Payment sources (CONF:1098-19160).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-32156).
- 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-8875).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19094).
- 7. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1098-8878) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8879).
 - b. **MAY** contain zero or one [0..1] **sequenceNumber** (CONF:1098-17174).
 - i. The sequenceNumber, if present, **SHALL** contain exactly one [1..1] @value (CONF:1098-17175).
 - c. **SHALL** contain exactly one [1..1] Policy Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09) (CONF:1098-15528).

Figure 43: Coverage Activity (V2) Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.60" extension="2014-06-09" />
  <id root="1fe2cdd0-7aad-11db-9fe1-0800200c9a66" />
  <code code="48768-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Payment sources" />
  <statusCode code="completed" />
  <entryRelationship typeCode="COMP">
    <act classCode="ACT" moodCode="EVN">
      <sequenceNumber value="2" />
      <templateId root="2.16.840.1.113883.10.20.22.4.61" extension="2014-06-09" />
      . . .
    </act>
  </entryRelationship>
</act>

```

4.4 Distant Metastases Clinical - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.38:2015-02-05
(open)]

Table 75: Distant Metastases Clinical Contexts

Contained By:	Contains:
TNM Clinical Stage Group (required)	

This template records the results of evaluating whether the cancer has metastasized or distantly spread in the body, usually through the vascular and/or lymphatic channels.

Table 76: Distant Metastases Clinical Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.38:2015-02-05)					
@classCode	1..1	SHALL		1169-34115	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-34116	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1169-34251	
@root	1..1	SHALL		1169-34252	2.16.840.1.113883.10.13.38
@extension	1..1	SHALL		1169-34253	2015-02-05
code	1..1	SHALL		1169-34117	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34118	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21907-1
@codeSystem	1..1	SHALL		1169-34119	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL	CD	1169-34120	
@code	1..1	SHALL		1169-34121	urn:oid:2.16.840.1.113883.3.520.4.8 (TNM Clinical Metastasis)
@codeSystem	1..1	SHALL		1169-34122	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.15.6
@sdtc:valueSet	1..1	SHALL		1169-34123	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.3.520.4.8
originalText	0..1	SHOULD		1169-34124	
reference	0..1	SHOULD		1169-34125	
@value	0..1	SHOULD		1169-34126	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1169-34115).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1169-34116).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1169-34251) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.13.38" (CONF:1169-34252).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-02-05" (CONF:1169-34253).

4. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34117).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="21907-1" Distant
metastases.clinical [Class] Cancer (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34118).
 - b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34119).
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1169-34120).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from
ValueSet TNM Clinical Metastasis urn:oid:2.16.840.1.113883.3.520.4.8
(CONF:1169-34121).
 - b. This value **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition
urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34122).
 - c. This value **SHALL** contain exactly one [1..1]
@sdtc:valueSet="2.16.840.1.113883.3.520.4.8" (CodeSystem: TNM 7.
Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34123).
 - d. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-34124).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference**
(CONF:1169-34125).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value**
(CONF:1169-34126).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point
to its corresponding narrative (using the approach defined in
CDA Release 2, section 4.3.5.1) (CONF:1169-34127).

Table 77: TNM Clinical Metastasis

Value Set: TNM Clinical Metastasis urn:oid:2.16.840.1.113883.3.520.4.8			
Detailed site-specific codes for the clinical tumor (M) as defined by AJCC and recorded by the physician.			
Note: The AJCC Staging Manual TNM system is proprietary and its definitions cannot be included in other documents without permission.			
Value Set Source:			
http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.8			
Code	Code System	Code System OID	Print Name
MX	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	Site specific descriptions prevent listing of text equivalents.
M1C	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M1B	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M1A	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M1	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M0	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
Not applicable (no AJCC staging scheme)	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M0+	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M0I+	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M1d	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
...			

Figure 44: Distant Metastases Clinical example

<pre> <observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.13.38" extension="2015-02-05" /> <code code="21907-1" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Distant metastases.clinical [Class] Cancer" /> <value xsi:type="CD" code="M0" codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" displayName="No clinical or radiographic evidence of distant metastases" sdtc:valueSet="2.16.840.1.113883.3.520.4.8"> <originalText> <reference value="#ClinicalMetasases_1" /> </originalText> </value> </observation> </pre>

4.5 Distant Metastases Pathologic - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.43:2015-02-05
(open)]

Table 78: Distant Metastases Pathologic Contexts

Contained By:	Contains:
TNM Pathologic Stage Group (required)	

This template records the results of evaluating whether the cancer has metastasized or distantly spread in the body, usually through the vascular and/or lymphatic channels.

Table 79: Distant Metastases Pathologic Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.43:2015-02-05)					
@classCode	1..1	SHALL		1169-34219	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-34220	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1169-34218	
@root	1..1	SHALL		1169-34221	2.16.840.1.113883.10.13.43
@extension	1..1	SHALL		1169-34222	2015-02-05
code	1..1	SHALL		1169-34223	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34224	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21901-4
@codeSystem	1..1	SHALL		1169-34225	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL	CD	1169-34226	
@code	1..1	SHALL		1169-34227	urn:oid:2.16.840.1.113883.3.520.4.19 (TNM Pathologic Metastasis)
@codeSystem	1..1	SHALL		1169-34228	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.15.6
@sdct:valueSet	1..1	SHALL		1169-34229	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.3.520.4.19
originalText	0..1	SHOULD		1169-34230	
reference	0..1	SHOULD		1169-34231	
@value	0..1	SHOULD		1169-34232	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1169-34219).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1169-34220).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1169-34218) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.13.43" (CONF:1169-34221).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-02-05" (CONF:1169-34222).

4. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34223).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="21901-4" Distant
metastases.pathology [Class] Cancer (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34224).
 - b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34225).
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1169-34226).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from
ValueSet [TNM Pathologic Metastasis](#)
urn:oid:2.16.840.1.113883.3.520.4.19 (CONF:1169-34227).
 - b. This value **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition
urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34228).
 - c. This value **SHALL** contain exactly one [1..1]
@sdtc:valueSet="2.16.840.1.113883.3.520.4.19" (CodeSystem: TNM 7.
Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34229).
 - d. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-34230).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference**
(CONF:1169-34231).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value**
(CONF:1169-34232).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point
to its corresponding narrative (using the approach defined in
CDA Release 2, section 4.3.5.1) (CONF:1169-34233).

Table 80: TNM Pathologic Metastasis

Value Set: TNM Pathologic Metastasis urn:oid:2.16.840.1.113883.3.520.4.19			
Detailed site-specific codes for the pathologic metastasis (M) as defined by AJCC and recorded by the physician.			
Note: The AJCC Staging Manual TNM system is proprietary and its definitions cannot be included in other documents without permission.			
Value Set Source:			
http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.19			
Code	Code System	Code System OID	Print Name
M0	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	Site specific descriptions prevent listing of text equivalents.
M1	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M1a	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M1b	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M1c	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M1d	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M1e	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M1m	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
M1m1	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
MX	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""

Figure 45: Distant Metastases Pathologic example

<pre> <observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.13.43" extension="2015-02-05" /> <code code="21901-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Distant metastases.pathology [Class] Cancer" /> <value xsi:type="CD" code="MX" codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" sdtc:valueSet="2.16.840.1.113883.3.520.4.19" /> </observation> </pre>

4.6 Employment History Observation Organizer (V1.1) - Published

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29
(open)]

Table 81: Employment History Observation Organizer (V1.1) Contexts

Contained By:	Contains:
Social History Section (V2) - Cancer IG Specific Constraints (V1.1) (required)	Usual Industry History Usual Occupation History

Table 82: Employment History Observation Organizer (V1.1) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29)					
@nullFlavor	0..1	MAY		1169-34250	
@classCode	1..1	SHALL		1169-32701	CLUSTER
@moodCode	1..1	SHALL		1169-32702	EVN
templateId	1..1	SHALL		1169-33070	
@root	1..1	SHALL		1169-33071	2.16.840.1.113883.10.13.16
@extension	1..1	SHALL		1169-33957	2015-01-29
component	1..1	SHALL		1169-32704	
@typeCode	1..1	SHALL		1169-32705	COMP
@contextConductionInd	1..1	SHALL		1169-32706	true
observation	1..1	SHALL		1169-32707	Usual Industry History (identifier: urn:hl7ii:2.16.840.1.113883.10.13.33:2015-01-29)
component	1..1	SHALL		1169-32712	
@typeCode	1..1	SHALL		1169-32713	COMP
@contextConductionInd	1..1	SHALL		1169-32714	true
observation	1..1	SHALL		1169-32715	Usual Occupation History (identifier: urn:hl7ii:2.16.840.1.113883.10.13.34:2015-01-29)

1. **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1169-34250).
2. **SHALL** contain exactly one [1..1] **@classCode="CLUSTER"** (CONF:1169-32701).
3. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CONF:1169-32702).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-33070).
 - a. This templateId **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.13.16"** (CONF:1169-33071).
 - b. This templateId **SHALL** contain exactly one [1..1] **@extension="2015-01-29"** (CONF:1169-33957).

If organizer/@nullFlavor is not present:

5. **SHALL** contain exactly one [1..1] **component** (CONF:1169-32704) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CONF:1169-32705).
 - b. **SHALL** contain exactly one [1..1] **@contextConductionInd="true"** (CONF:1169-32706).
 - c. **SHALL** contain exactly one [1..1] Usual Industry History (identifier: urn:hl7ii:2.16.840.1.113883.10.13.33:2015-01-29) (CONF:1169-32707).

If organizer/@nullFlavor is not present:

6. **SHALL** contain exactly one [1..1] **component** (CONF:1169-32712) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CONF:1169-32713).
 - b. **SHALL** contain exactly one [1..1] **@contextConductionInd="true"** (CONF:1169-32714).
 - c. **SHALL** contain exactly one [1..1] Usual Occupation History (identifier: urn:hl7ii:2.16.840.1.113883.10.13.34:2015-01-29) (CONF:1169-32715).

Figure 46: Employment History Observation Organizer example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.16" extension="2015-01-29" />
  <!-- Employment history observation organizer -->
  <statusCode code="completed" />
  <component typeCode="COMP" contextConductionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.13.33" extension="2015-01-29" />
      <code code="21844-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Usual industry Hx" />
      <effectiveTime>
        <low value="20010101" />
      </effectiveTime>
      <value xsi:type="CD" code="7280" codeSystem="2.16.840.1.114222.4.5.315"
codeSystemName="Industry CDC Census 2010" displayName="Accounting, tax preparation,
bookkeeping, and payroll services" sdtc:valueSet="2.16.840.1.114222.4.11.7187">
        <originalText>
          <reference value="#Industry_1" />
        </originalText>
      </value>
    </observation>
  </component>
  <component typeCode="COMP" contextConductionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.13.34" extension="2015-01-29" />
      <code code="21843-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Usual occupation Hx" />
      <effectiveTime>
        <low value="20010101" />
      </effectiveTime>
      <value xsi:type="CD" code="0800" codeSystem="2.16.840.1.114222.4.5.314"
codeSystemName="Occupation CDC Census 2010" displayName="Accountants and auditors"
sdtc:valueSet="2.16.840.1.114222.4.11.7186">
        <originalText>
          <reference value="#Occupation_1" />
        </originalText>
      </value>
    </observation>
  </component>
</organizer>
```

4.7 Family History Observation (V2) - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2014-06-09
(open)]

Table 83: Family History Observation (V2) Contexts

Contained By:	Contains:
Family History Organizer (V2) (required)	

Family History Observations related to a particular family member are contained within a Family History Organizer. The effectiveTime in the Family History Observation is the biologically or clinically relevant time of the observation. The biologically or clinically relevant time is the time at which the observation holds (is effective) for the family member (the subject of the observation).

Table 84: Family History Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2014-06-09)					
@classCode	1..1	SHALL		1098-8586	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-8587	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-8599	
@root	1..1	SHALL		1098-10496	2.16.840.1.113883.10.20.22.4.46
@extension	1..1	SHALL		1098-32605	2014-06-09
id	1..*	SHALL		1098-8592	
code	1..1	SHALL		1098-32427	urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type)
statusCode	1..1	SHALL		1098-8590	
@code	1..1	SHALL		1098-19098	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	SHOULD		1098-8593	
value	1..1	SHALL	CD	1098-8591	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem)
entryRelationship	0..1	MAY		1098-8675	
@typeCode	1..1	SHALL		1098-8676	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = SUBJ
@inversionInd	1..1	SHALL		1098-8677	true
observation	1..1	SHALL		1098-15526	Age Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31)
entryRelationship	0..1	MAY		1098-8678	
@typeCode	1..1	SHALL		1098-8679	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CAUS
observation	1..1	SHALL		1098-15527	Family History Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.47)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8586).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8587).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8599) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.46" (CONF:1098-10496).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32605).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8592).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Problem Type](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 **STATIC** 2014-09-02 (CONF:1098-32427).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-8590).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19098).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-8593).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [Problem](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1098-8591).
9. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-8675) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Subject (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8676).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:1098-8677).
 - c. **SHALL** contain exactly one [1..1] Age Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31) (CONF:1098-15526).
10. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-8678) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="CAUS" Causal or Contributory (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8679).
 - b. **SHALL** contain exactly one [1..1] Family History Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.47) (CONF:1098-15527).

Table 85: Problem Type

Value Set: Problem Type urn:oid:2.16.840.1.113883.3.88.12.3221.7.2			
This value set indicates the level of medical judgment used to determine the existence of a problem.			
Value Set Source: http://www.loinc.org/			
Code	Code System	Code System OID	Print Name
75326-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Problem HL7.CCDAR2
75325-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Symptom HL7.CCDAR2
75324-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Functional performance HL7.CCDAR2
75323-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Functional performance HL7.CCDAR2
75323-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Condition HL7.CCDAR2
29308-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Diagnosis
75322-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Complaint HL7.CCDAR2
75321-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Clinical finding HL7.CCDAR2
75319-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Cognitive function family member HL7.CCDAR2
75319-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Cognitive function family member HL7.CCDAR2
...			

Table 86: Problem

Value Set: Problem urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 A value set of SNOMED-CT codes limited to terms descending from the Clinical Findings (404684003) or Situation with Explicit Context (243796009) hierarchies. Specific URL Pending Value Set Source: http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.7.4			
Code	Code System	Code System OID	Print Name
46635009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	diabetes mellitus type 1
234422006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	acute intermittent porphyria
31712002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	primary biliary cirrhosis
302002000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	difficulty moving
15188001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	hearing loss
129851009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	alteration in bowel elimination
247472004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	hives
39579001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	anaphylaxis
274945004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	AA amyloidosis (disorder)
129851009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	alteration in comfort: pain
...			

Figure 47: Family History Observation (V2) Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.46" extension="2014-06-09" />
  <!-- Family History Observation template -->
  <id root="d42ebf70-5c89-11db-b0de-0800200c9a66" />
  <code code="75315-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Condition Family Member"/>
  <statusCode code="completed" />
  <effectiveTime value="1967" />
  <value xsi:type="CD" code="408643008" codeSystem="2.16.840.1.113883.6.96"
displayName="Infiltrating duct carcinoma of breast" />
  <entryRelationship typeCode="CAUS">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.47" />
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.31" />
      ....
    </observation>
  </entryRelationship>
</observation>

```

4.8 Family History Organizer (V2) - Published

```

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2014-06-09
(open)]

```

Table 87: Family History Organizer (V2) Contexts

Contained By:	Contains:
Family History Section (V2) (optional)	Family History Observation (V2)

The Family History Organizer associates a set of observations with a family member. For example, the Family History Organizer can group a set of observations about the patient's father.

Table 88: Family History Organizer (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2014-06-09)					
@classCode	1..1	SHALL		1098-8600	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1098-8601	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-8604	
@root	1..1	SHALL		1098-10497	2.16.840.1.113883.10.20.22.4.45
@extension	1..1	SHALL		1098-32606	2014-06-09
id	1..*	SHALL		1098-32485	
statusCode	1..1	SHALL		1098-8602	
@code	1..1	SHALL		1098-19099	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
subject	1..1	SHALL		1098-8609	
relatedSubject	1..1	SHALL		1098-15244	
@classCode	1..1	SHALL		1098-15245	urn:oid:2.16.840.1.113883.5.41 (EntityClass) = PRS
code	1..1	SHALL		1098-15246	
@code	1..1	SHALL		1098-15247	urn:oid:2.16.840.1.113883.1.11.19579 (Family Member Value Set)
subject	0..1	SHOULD		1098-15248	
administrativeGenderCode	1..1	SHALL		1098-15974	
@code	1..1	SHALL		1098-15975	urn:oid:2.16.840.1.113883.1.11.1 (Administrative Gender (HL7 V3))
birthTime	0..1	SHOULD		1098-15976	
component	1..*	SHALL		1098-32428	
observation	1..1	SHALL		1098-32429	Family History Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode="CLUSTER"** Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8600).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8601).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8604) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.45"** (CONF:1098-10497).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32606).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-32485).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-8602).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19099).
6. **SHALL** contain exactly one [1..1] **subject** (CONF:1098-8609).
 - a. This subject **SHALL** contain exactly one [1..1] **relatedSubject** (CONF:1098-15244).
 - i. This relatedSubject **SHALL** contain exactly one [1..1] **@classCode="PRS"** Person (CodeSystem: EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:1098-15245).
 - ii. This relatedSubject **SHALL** contain exactly one [1..1] **code** (CONF:1098-15246).
 1. This code **SHALL** contain exactly one [1..1] **@code**, which **SHOULD** be selected from ValueSet [Family Member Value Set](#) urn:oid:2.16.840.1.113883.1.11.19579 **DYNAMIC** (CONF:1098-15247).
 - iii. This relatedSubject **SHOULD** contain zero or one [0..1] **subject** (CONF:1098-15248).
 1. The subject, if present, **SHALL** contain exactly one [1..1] **administrativeGenderCode** (CONF:1098-15974).
 - a. This administrativeGenderCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Administrative Gender \(HL7 V3\)](#) urn:oid:2.16.840.1.113883.1.11.1 **DYNAMIC** (CONF:1098-15975).
 2. The subject, if present, **SHOULD** contain zero or one [0..1] **birthTime** (CONF:1098-15976).
 3. The subject **SHOULD** contain zero or more [0..*] **sdtc:id**. The prefix **sdtc:** **SHALL** be bound to the namespace “urn:hl7-org:sdtc”. The use of the namespace provides a necessary extension to CDA R2 for the use of the id element (CONF:1098-15249).
 4. The subject **MAY** contain zero or one [0..1] **sdtc:deceasedInd**. The prefix **sdtc:** **SHALL** be bound to the namespace “urn:hl7-org:sdtc”. The use of the namespace provides a necessary extension to CDA R2 for the use of the deceasedInd element (CONF:1098-15981).
 5. The subject **MAY** contain zero or one [0..1] **sdtc:deceasedTime**. The prefix **sdtc:** **SHALL** be bound to the namespace “urn:hl7-org:sdtc”.

The use of the namespace provides a necessary extension to CDA R2 for the use of the deceasedTime element (CONF:1098-15982).

6. The age of a relative at the time of a family history observation **SHOULD** be inferred by comparing RelatedSubject/subject/birthTime with Observation/effectiveTime (CONF:1098-15983).

7. **SHALL** contain at least one [1..*] **component** (CONF:1098-32428).
 - a. Such components **SHALL** contain exactly one [1..1] [Family History Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2014-06-09) (CONF:1098-32429).

Table 89: Family Member Value Set

Value Set: Family Member Value Set urn:oid:2.16.840.1.113883.1.11.19579			
Family Relationships record the familial relationship of a person to another person. This value set is to be used when it is necessary to record family relationships (e.g., next of kin, or blood relations). This is a subset of the value set used for personal relationships			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.htm			
Code	Code System	Code System OID	Print Name
ADOPT	RoleCode	urn:oid:2.16.840.1.113883.5.111	adopted child
AUNT	RoleCode	urn:oid:2.16.840.1.113883.5.111	aunt
CHILD	RoleCode	urn:oid:2.16.840.1.113883.5.111	Child
CHLDINLAW	RoleCode	urn:oid:2.16.840.1.113883.5.111	child in-law
COUSN	RoleCode	urn:oid:2.16.840.1.113883.5.111	cousin
DOMPART	RoleCode	urn:oid:2.16.840.1.113883.5.111	domestic partner
FAMMEMB	RoleCode	urn:oid:2.16.840.1.113883.5.111	Family Member
CHLDFOST	RoleCode	urn:oid:2.16.840.1.113883.5.111	foster child
GRNDCHILD	RoleCode	urn:oid:2.16.840.1.113883.5.111	grandchild
GRPRN	RoleCode	urn:oid:2.16.840.1.113883.5.111	Grandparent
...			

Figure 48: Family History Organizer (V2) Example

```
<organizer moodCode="EVN" classCode="CLUSTER">
  <templateId root="2.16.840.1.113883.10.20.22.4.45" extension="2014-06-09" />
  <statusCode code="completed" />
  <subject>
    <relatedSubject classCode="PRS">
      <code code="FTH" displayName="Father" codeSystemName="HL7 FamilyMember"
codeSystem="2.16.840.1.113883.5.111">
        <translation code="9947008" displayName="Natural father"
codeSystemName="SNOMED" codeSystem="2.16.840.1.113883.6.96" />
      </code>
    </subject>
    <sdtc:id root="2.16.840.1.113883.19.5.99999.2" extension="99999999" />
    <id root="2.16.840.1.113883.19.5.99999.2" extension="1234" />
    <administrativeGenderCode code="M" />
    <birthTime value="1910" />
    <!-- Example use of sdtc extensions :-->
    <!-- <sdtc:deceasedInd value="true"/>
        <sdtc:deceasedTime value="1967"/>
    -->
  </subject>
</relatedSubject>
</subject>
<component>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.46" />
    . . .

  </observation>
</component>
</organizer>
```

4.9 Health Status Observation (V2) - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09
(open)]

Table 90: Health Status Observation (V2) Contexts

Contained By:	Contains:
Problem Section (entries required) (V2) (optional) Cancer Diagnosis Section (entries required) (V1.1) (optional)	

This template represents information about the overall health status of the patient. To represent the impact of a specific problem or concern related to the patient's expected health outcome use the Prognosis Observation template 2.16.840.1.113883.10.20.22.4.113.

Table 91: Health Status Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09)					
@classCode	1..1	SHALL		1098-9057	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-9072	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-16756	
@root	1..1	SHALL		1098-16757	2.16.840.1.113883.10.20.22.4.5
@extension	1..1	SHALL		1098-32558	2014-06-09
id	1..*	SHALL		1098-32486	
code	1..1	SHALL		1098-19143	
@code	1..1	SHALL		1098-19144	11323-3
@codeSystem	1..1	SHALL		1098-32161	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-9074	
@code	1..1	SHALL		1098-19103	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1098-9075	urn:oid:2.16.840.1.113883.1.11.20.12 (HealthStatus)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-9057).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-9072).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-16756) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.5" (CONF:1098-16757).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32558).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-32486).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-19143).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11323-3" Health status (CONF:1098-19144).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-32161).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-9074).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19103).
7. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHALL** be selected from ValueSet HealthStatus urn:oid:2.16.840.1.113883.1.11.20.12 **DYNAMIC** (CONF:1098-9075).

Table 92: HealthStatus

Value Set: HealthStatus urn:oid:2.16.840.1.113883.1.11.20.12 Represents the general health status of the patient. Value Set Source: https://www.hl7.org/			
Code	Code System	Code System OID	Print Name
81323004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Alive and well
313386006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	In remission
162467007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Symptom free
161901003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Chronically ill
271593001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Severely ill
21134002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Disabled
161045001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Severely disabled
419099009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Deceased
135818000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	General health poor
135815002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	General health good
...			

Figure 49: Health Status Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.5" extension="2014-06-09"/>
  <code code="11323-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Health status" />
  <text>
    <reference value="#healthstatus" />
  </text>
  <statusCode code="completed" />
  <value xsi:type="CD" code="81323004" codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT" displayName="Alive and well" />
</observation>
```

4.10 Indication (V2) - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
(open)]

Table 93: Indication (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (optional) Procedure Activity Procedure (V2) (optional) Planned Encounter (V2) (optional) Planned Procedure (V2) (optional) Planned Medication Activity (V2) (optional)	

This template represents the rationale for an action such as an encounter, a medication administration, or a procedure. The id element can be used to reference a problem recorded elsewhere in the document, or can be used with a code and value to record the problem. Indications for treatment are not laboratory results; rather the problem associated with the laboratory result should be sited (e.g., hypokalemia instead of a laboratory result of Potassium 2.0 mEq/L). Use the Drug Monitoring Act [templateId 2.16.840.1.113883.10.20.22.4.123] to indicate if a particular drug needs special monitoring (e.g., anticoagulant therapy). Use Precondition for Substance Administration (V2) [templateId 2.16.840.1.113883.10.20.22.4.25.2] to represent that a medication is to be administered only when the associated criteria are met.

Table 94: Indication (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)					
@classCode	1..1	SHALL		1098-7480	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7481	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7482	
@root	1..1	SHALL		1098-10502	2.16.840.1.113883.10.20.22.4.19
@extension	1..1	SHALL		1098-32570	2014-06-09
id	1..*	SHALL		1098-7483	
code	1..1	SHALL		1098-31229	urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type)
statusCode	1..1	SHALL		1098-7487	
@code	1..1	SHALL		1098-19105	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	SHOULD		1098-7488	
value	0..1	MAY	CD	1098-7489	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7480).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7481).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7482) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.19" (CONF:1098-10502).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32570).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7483).
 Note: If the id element is used to reference a problem recorded elsewhere in the document then this id must equal another entry/id in the same document instance. Application Software must be responsible for resolving the identifier back to its original object and then rendering the information in the correct place in the containing section's narrative text. Its purpose is to obviate the need to repeat the complete XML representation of the referred to entry when relating one entry to another.
5. **SHALL** contain exactly one [1..1] **code**, which **MAY** be selected from ValueSet [Problem Type](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 **STATIC** 2014-09-02 (CONF:1098-31229).

6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7487).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19105).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7488).
8. **MAY** contain zero or one [0..1] **value** with **@xsi:type="CD"**, where the code **SHOULD** be selected from ValueSet [Problem](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1098-7489).

Figure 50: Indication (V2) Example

```

<entry typeCode="DRIV">
  <substanceAdministration classCode="SBADM" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
    <!-- ** MEDICATION ACTIVITY -->
    <id root="cdbd33f0-6cde-11db-9fe1-0800200c9a66" />
    <text>
      <reference value="#Med1" /> 0.09 MG/ACTUAT inhalant solution, 2 puffs QID PRN
wheezing
    </text>
    ...
    <!-- Indication snippet inside a Medication Activity -->
    <entryRelationship typeCode="RSON">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09"
/>
        <!-- Note that this id equals the problem observation/id -->
        <id root="db734647-fc99-424c-a864-7e3cda82e703" />
        <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
        <statusCode code="completed" />
        <value xsi:type="CD" code="32398004" displayName="Bronchitis"
codeSystem="2.16.840.1.113883.6.96" />
      </observation>
    </entryRelationship>
    ...
  </substanceAdministration>
</entry>
  <!-- Points to a problem on the problem list -->
  <!-- Problem observation template
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  Note that this id equals the Indication observation/id
  <id root="db734647-fc99-424c-a864-7e3cda82e703"/> -->

```

4.11 Indication (V2) - Cancer IG Specific Constraints - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08
(open)]

Table 95: Indication (V2) - Cancer IG Specific Constraints Contexts

Contained By:	Contains:
Medication Activity (V2) - Cancer IG Specific Constraints (required) Procedure Activity Procedure (V2) - Cancer IG Specific Constraints (required) Radiation Boost Modality Procedure (required) Radiation Regional Treatment Modality Procedure (required)	

This template defines Cancer Event Report-specific constraints to the C-CDA R2.0 Indication (V2) template.

Table 96: Indication (V2) - Cancer IG Specific Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08)					
@classCode	1..1	SHALL		1126-33204	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1126-33205	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1126-33202	
@root	1..1	SHALL		1126-33206	2.16.840.1.113883.10.13.19
@extension	1..1	SHALL		1126-33958	2014-08-08
id	1..*	SHALL		1126-33215	

1. Conforms to [Indication \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1126-33204).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1126-33205).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33202) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.19" (CONF:1126-33206).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33958).

5. **SHALL** contain at least one [1..*] **id** (CONF:1126-33215).

Note: The "id" is intended to reference a problem recorded in the Problem Observation, Medication Activity, Procedure Activity, Radiation Boost Modality Procedure, and Radiation Regional Treatment Modality Procedure, by matching the Observation's id element. When a related problem has not been recorded, then use a null flavor such as "NA" on this id element to indicate there is not a related problem documented (@nullFlavor="NA").

Figure 51: Indication (V2) - Cancer IG Specific Constraints example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
  <templateId root="2.16.840.1.113883.10.13.19" extension="2014-08-08" />
  <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
  <code code="29308-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="Diagnosis"></code>
  <statusCode code="completed" />
  <effectiveTime value="20140731124200" />
  <value xsi:type="CD" code="408643008" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT" displayName="Infiltrating duct carcinoma of breast" />
</observation>
```

4.12 Medication Activity (V2) - Published

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 (open)]

Table 97: Medication Activity (V2) Contexts

Contained By:	Contains:
Medications Section (entries required) (V2) (required)	Author Participation
Procedure Activity Procedure (V2) (optional)	Indication (V2)
Medications Administered Section (V2) (optional)	Medication Information (V2)

A Medication Activity describes substance administrations that have actually occurred (e.g., pills ingested or injections given) or are intended to occur (e.g., "take 2 tablets twice a day for the next 10 days"). Medication activities in "INT" mood are reflections of what a clinician intends a patient to be taking. For example, a clinician may intend that a patient to be administered Lisinopril 20 mg PO for blood pressure control. If what was actually administered was Lisinopril 10 mg., then the Medication activities in the "EVN" mood would reflect actual use.

A moodCode of INT is allowed, but it is recommended that the Planned Medication Activity (V2) template be used for moodCodes other than EVN if the document type contains a section that includes Planned Medication Activity (V2) (for example a Care Plan document with Plan of Treatment, Intervention, or Goal sections).

At a minimum, a Medication Activity shall include an effectiveTime indicating the duration of the administration (or single-administration timestamp). Ambulatory medication lists generally provide a summary of use for a given medication over time - a medication activity in event mood with the duration reflecting when the medication started and stopped. Ongoing

medications will not have a stop date (or will have a stop date with a suitable NULL value). Ambulatory medication lists will generally also have a frequency (e.g., a medication is being taken twice a day). Inpatient medications generally record each administration as a separate act.

The dose (doseQuantity) represents how many of the consumables are to be administered at each administration event. As a result, the dose is always relative to the consumable and the interval of administration. Thus, a patient consuming a single "metoprolol 25mg tablet" per administration will have a doseQuantity of "1", whereas a patient consuming "metoprolol" will have a dose of "25 mg".

Table 98: Medication Activity (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09)					
@classCode	1..1	SHALL		1098-7496	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		1098-7497	urn:oid:2.16.840.1.113883.11.20.9.18 (MoodCodeEvnInt)
templateId	1..1	SHALL		1098-7499	
@root	1..1	SHALL		1098-10504	2.16.840.1.113883.10.20.22.4.16
@extension	1..1	SHALL		1098-32498	2014-06-09
id	1..*	SHALL		1098-7500	
code	0..1	MAY		1098-7506	
statusCode	1..1	SHALL		1098-7507	
@code	1..1	SHALL		1098-32360	urn:oid:2.16.840.1.113883.1.11.159331 (ActStatus)
effectiveTime	1..1	SHALL	IVL_TS	1098-7508	
@value	0..1	SHOULD		1098-32775	
low	0..1	SHOULD		1098-32776	
high	0..1	MAY		1098-32777	
effectiveTime	0..1	SHOULD		1098-7513	
@operator	1..1	SHALL		1098-9106	A
repeatNumber	0..1	MAY		1098-7555	
routeCode	0..1	SHOULD		1098-7514	urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 (Medication Route FDA)
approachSiteCode	0..1	MAY	SET<CD>	1098-7515	urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
doseQuantity	1..1	SHALL		1098-7516	
@unit	0..1	SHOULD		1098-7526	urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
rateQuantity	0..1	MAY		1098-	

				7517	
@unit	1..1	SHALL		1098-7525	urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
maxDoseQuantity	0..1	MAY	RTO<P Q, PQ>	1098-7518	
administrationUnitCode	0..1	MAY		1098-7519	urn:oid:2.16.840.1.113883.1.11.14570 (AdministrableDrugForm)
consumable	1..1	SHALL		1098-7520	
manufacturedProduct	1..1	SHALL		1098-16085	Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09)
performer	0..1	MAY		1098-7522	
author	0..*	SHOULD		1098-31150	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..*	MAY		1098-7523	
@typeCode	1..1	SHALL		1098-7524	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
participantRole	1..1	SHALL		1098-16086	Drug Vehicle (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24)
entryRelationship	0..*	MAY		1098-7536	
@typeCode	1..1	SHALL		1098-7537	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-16087	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..1	MAY		1098-7539	
@typeCode	1..1	SHALL		1098-7540	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-7542	true
act	1..1	SHALL		1098-31387	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)
entryRelationship	0..1	MAY		1098-7543	
@typeCode	1..1	SHALL		1098-7547	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR

supply	1..1	SHALL		1098-16089	Medication Supply Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2 0.22.4.17:2014-06-09
entryRelationship	0..*	MAY		1098-7549	
@typeCode	1..1	SHALL		1098-7553	urn:oid:2.16.840.1.113883.5.100 2 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1098-16090	Medication Dispense (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2 0.22.4.18:2014-06-09
entryRelationship	0..1	MAY		1098-7552	
@typeCode	1..1	SHALL		1098-7544	urn:oid:2.16.840.1.113883.5.100 2 (HL7ActRelationshipType) = CAUS
observation	1..1	SHALL		1098-16091	Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2 0.22.4.9:2014-06-09
entryRelationship	0..1	MAY		1098-30820	
@typeCode	1..1	SHALL		1098-30821	COMP
act	1..1	SHALL		1098-30822	Drug Monitoring Act (identifier: urn:oid:2.16.840.1.113883.10.20. 22.4.123
entryRelationship	0..*	MAY		1098-31515	
@typeCode	1..1	SHALL		1098-31516	urn:oid:2.16.840.1.113883.5.100 2 (HL7ActRelationshipType) = COMP
@inversionInd	1..1	SHALL		1098-31517	true
sequenceNumber	0..1	MAY		1098-31518	
act	1..1	SHALL		1098-31519	Substance Administered Act (identifier: urn:oid:2.16.840.1.113883.10.20. 22.4.118
precondition	0..*	MAY		1098-31520	
@typeCode	1..1	SHALL		1098-31882	PRCN
criterion	1..1	SHALL		1098-31883	Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2 0.22.4.25:2014-06-09

1. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7496).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [MoodCodeEvnInt](#) urn:oid:2.16.840.1.113883.11.20.9.18 **STATIC** 2011-04-03 (CONF:1098-7497).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7499) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.16" (CONF:1098-10504).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32498).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7500).
5. **MAY** contain zero or one [0..1] **code** (CONF:1098-7506).
 Note: SubstanceAdministration.code is an optional field. Per HL7 Pharmacy Committee, "this is intended to further specify the nature of the substance administration act. To date the committee has made no use of this attribute". Because the type of substance administration is generally implicit in the routeCode, in the consumable participant, etc., the field is generally not used, and there is no defined value set.
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7507).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ActStatus](#) urn:oid:2.16.840.1.113883.1.11.159331 **DYNAMIC** (CONF:1098-32360).

The substance administration effectiveTime field can repeat, in order to represent varying levels of complex dosing. effectiveTime can be used to represent the duration of administration (e.g., "10 days"), the frequency of administration (e.g., "every 8 hours"), and more. Here, we require that there SHALL be an effectiveTime documentation of the duration (or single-administration timestamp), and that there SHOULD be an effectiveTime documentation of the frequency. Other timing nuances, supported by the base CDA R2 standard, may also be included.

7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-7508) such that it
 Note: this effectiveTime represents either the medication duration (i.e., the time the medication was started and stopped) or the single-administration timestamp.
 - a. **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-32775).
 Note: indicates a single-administration timestamp
 - b. **SHOULD** contain zero or one [0..1] **low** (CONF:1098-32776).
 Note: indicates when medication started
 - c. **MAY** contain zero or one [0..1] **high** (CONF:1098-32777).
 Note: indicates when medication stopped
 - d. This effectiveTime **SHALL** contain either a low or a @value but not both (CONF:1098-32890).
8. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7513) such that it
 Note: This effectiveTime represents the medication frequency (e.g., administration times per day).
 - a. **SHALL** contain exactly one [1..1] **@operator**="A" (CONF:1098-9106).
 - b. **SHALL** contain exactly one [1..1] **@xsi:type**="PIVL_TS" or "EIVL_TS" (CONF:1098-28499).

In "INT" (intent) mood, the repeatNumber defines the number of allowed administrations. For example, a repeatNumber of "3" means that the substance can be administered up to 3 times. In "EVN" (event) mood, the repeatNumber is the number of occurrences. For example, a repeatNumber of "3" in a substance administration event means that the current administration is the 3rd in a series.

9. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:1098-7555).
10. **SHOULD** contain zero or one [0..1] **routeCode**, which **SHALL** be selected from ValueSet [Medication Route FDA](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 **DYNAMIC** (CONF:1098-7514).
11. **MAY** contain zero or one [0..1] **approachSiteCode**, where the code **SHALL** be selected from ValueSet [Body Site](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-7515).
12. **SHALL** contain exactly one [1..1] **doseQuantity** (CONF:1098-7516).
 - a. This doseQuantity **SHOULD** contain zero or one [0..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-7526).
 - b. Pre-coordinated consumable: If the consumable code is a pre-coordinated unit dose (e.g., "metoprolol 25mg tablet") then doseQuantity is a unitless number that indicates the number of products given per administration (e.g., "2", meaning 2 x "metoprolol 25mg tablet" per administration) (CONF:1098-16878).
 - c. Not pre-coordinated consumable: If the consumable code is not pre-coordinated (e.g., is simply "metoprolol"), then doseQuantity must represent a physical quantity with **@unit**, e.g., "25" and "mg", specifying the amount of product given per administration (CONF:1098-16879).
13. **MAY** contain zero or one [0..1] **rateQuantity** (CONF:1098-7517).
 - a. The rateQuantity, if present, **SHALL** contain exactly one [1..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-7525).
14. **MAY** contain zero or one [0..1] **maxDoseQuantity** (CONF:1098-7518).
15. **MAY** contain zero or one [0..1] **administrationUnitCode**, which **SHALL** be selected from ValueSet [AdministrableDrugForm](#) urn:oid:2.16.840.1.113883.1.11.14570 **DYNAMIC** (CONF:1098-7519).
16. **SHALL** contain exactly one [1..1] **consumable** (CONF:1098-7520).
 - a. This consumable **SHALL** contain exactly one [1..1] [Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-16085).
17. **MAY** contain zero or one [0..1] **performer** (CONF:1098-7522).
18. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31150).
19. **MAY** contain zero or more [0..*] **participant** (CONF:1098-7523) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="CSM"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-7524).
 - b. **SHALL** contain exactly one [1..1] **Drug Vehicle** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24) (CONF:1098-16086).

20. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7536) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7537).
 - b. **SHALL** contain exactly one [1..1] **Indication (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-16087).
21. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7539) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7540).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-7542).
 - c. **SHALL** contain exactly one [1..1] **Instruction (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31387).
22. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7543) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7547).
 - b. **SHALL** contain exactly one [1..1] **Medication Supply Order (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09) (CONF:1098-16089).
23. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7549) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7553).
 - b. **SHALL** contain exactly one [1..1] **Medication Dispense (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09) (CONF:1098-16090).
24. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7552) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="CAUS"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7544).
 - b. **SHALL** contain exactly one [1..1] **Reaction Observation (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1098-16091).
25. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-30820) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CONF:1098-30821).
 - b. **SHALL** contain exactly one [1..1] **Drug Monitoring Act** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.123) (CONF:1098-30822).

The following entryRelationship is used to indicate a given medication's order in a series. The nested Substance Administered Act identifies an administration in the series. The entryRelationship/sequenceNumber shows the order of this particular administration in that series.

26. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31515) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31516).
 - SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:1098-31517).
 - MAY** contain zero or one [0..1] **sequenceNumber** (CONF:1098-31518).
 - SHALL** contain exactly one [1..1] Substance Administered Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118) (CONF:1098-31519).
27. **MAY** contain zero or more [0..*] **precondition** (CONF:1098-31520).
- The precondition, if present, **SHALL** contain exactly one [1..1] **@typeCode="PRCN"** (CONF:1098-31882).
 - The precondition, if present, **SHALL** contain exactly one [1..1] Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1098-31883).
28. Medication Activity **SHOULD** include doseQuantity **OR** rateQuantity (CONF:1098-30800).

Table 99: MoodCodeEvnInt

Value Set: MoodCodeEvnInt urn:oid:2.16.840.1.113883.11.20.9.18 Contains moodCode EVN and INT Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
EVN	ActMood	urn:oid:2.16.840.1.113883.5.1001	Event
INT	ActMood	urn:oid:2.16.840.1.113883.5.1001	Intent

Table 100: Medication Route FDA

Value Set: Medication Route FDA urn:oid:2.16.840.1.113883.3.88.12.3221.8.7			
Route of Administration value set is based upon FDA Drug Registration and Listing Database (FDA Orange Book) which are used in FDA Structured Product Labeling (SPL).			
Value Set Source:			
https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.8.7			
Code	Code System	Code System OID	Print Name
C38192	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.26.1.1	AURICULAR (OTIC)
C38193	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.26.1.1	BUCCAL
C38194	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.26.1.1	CONJUNCTIVAL
C38675	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.26.1.1	CUTANEOUS
C38197	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.26.1.1	DENTAL
C38633	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.26.1.1	ELECTRO-OSMOSIS
C38205	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.26.1.1	ENDOCERVICAL
C38206	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.26.1.1	ENDOSINUSIAL
C38208	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.26.1.1	ENDOTRACHEAL
C38209	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.26.1.1	ENTERAL
...			

Table 101: Body Site

Value Set: Body Site urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 Contains values descending from the SNOMED CT® Anatomical Structure (91723000) hierarchy or Acquired body structure (body structure) (280115004) or Anatomical site notations for tumor staging (body structure) (258331007) or Body structure, altered from its original anatomical structure (morphologic abnormality) (118956008) or Physical anatomical entity (body structure) (91722005) This indicates the anatomical site. Value Set Source: http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.8.9			
Code	Code System	Code System OID	Print Name
362783006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	entire medial surface of lower extremity (body structure)
302539009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	entire hand (body structure)
287679003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	left hip region structure (body structure)
3341006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	right lung structure (body structure)
87878005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	left ventricular structure (body structure)
49848007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	structure of myocardium of left ventricle (body structure)
38033009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	amputation stump (body structure)
305005006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	6/7 interchondral joint (body structure)
28726007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	corneal structure (body structure)
75324005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	70 to 79 percent of body surface (body structure)
...			

Table 102: UnitsOfMeasureCaseSensitive

Value Set: UnitsOfMeasureCaseSensitive urn:oid:2.16.840.1.113883.1.11.12839			
The UCUM code system provides a set of structural units from which working codes are built. There is an unlimited number of possible valid UCUM codes.			
Value Set Source: http://unitsofmeasure.org/ucum.html			
Code	Code System	Code System OID	Print Name
min	UCUM	urn:oid:2.16.840.1.113883.6.8	minute
hour	UCUM	urn:oid:2.16.840.1.113883.6.8	hr
%	UCUM	urn:oid:2.16.840.1.113883.6.8	percent
cm	UCUM	urn:oid:2.16.840.1.113883.6.8	centimeter
g	UCUM	urn:oid:2.16.840.1.113883.6.8	gram
g/(12.h)	UCUM	urn:oid:2.16.840.1.113883.6.8	gram per 12 hour
g/L	UCUM	urn:oid:2.16.840.1.113883.6.8	gram per liter
mol	UCUM	urn:oid:2.16.840.1.113883.6.8	mole
[IU]	UCUM	urn:oid:2.16.840.1.113883.6.8	international unit
Hz	UCUM	urn:oid:2.16.840.1.113883.6.8	Hertz
...			

Table 103: AdministrableDrugForm

Value Set: AdministrableDrugForm urn:oid:2.16.840.1.113883.1.11.14570 Indicates the form in which the drug product should be administered. Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
PUFF	orderableDrugForm	urn:oid:2.16.840.1.113883.5.85	Puff
SCOOP	orderableDrugForm	urn:oid:2.16.840.1.113883.5.85	Scoops
APPFUL	orderableDrugForm	urn:oid:2.16.840.1.113883.5.85	Applicatorful
DROP	orderableDrugForm	urn:oid:2.16.840.1.113883.5.85	Drops
SPRY	orderableDrugForm	urn:oid:2.16.840.1.113883.5.85	Sprays
...			

Table 104: ActStatus

Value Set: ActStatus urn:oid:2.16.840.1.113883.1.11.159331 Contains the names (codes) for each of the states in the state-machine of the RIM Act class. Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
normal	ActStatus	urn:oid:2.16.840.1.113883.5.14	normal
aborted	ActStatus	urn:oid:2.16.840.1.113883.5.14	aborted
active	ActStatus	urn:oid:2.16.840.1.113883.5.14	active
cancelled	ActStatus	urn:oid:2.16.840.1.113883.5.14	cancelled
completed	ActStatus	urn:oid:2.16.840.1.113883.5.14	completed
held	ActStatus	urn:oid:2.16.840.1.113883.5.14	held
new	ActStatus	urn:oid:2.16.840.1.113883.5.14	new
suspended	ActStatus	urn:oid:2.16.840.1.113883.5.14	suspended
nullified	ActStatus	urn:oid:2.16.840.1.113883.5.14	nullified
obsolete	ActStatus	urn:oid:2.16.840.1.113883.5.14	obsolete

Figure 52: Medication Activity (V2) Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN">
  <!-- ** Medication Activity (V2) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.16"
    extension="2014-06-09"/>
  <id root="6c844c75-aa34-411c-b7bd-5e4a9f206e29"/>
  <statusCode code="active"/>
  <effectiveTime xsi:type="IVL_TS">
    <low value="20120318"/>
  </effectiveTime>
  <effectiveTime xsi:type="PIVL_TS" institutionSpecified="true" operator="A">
    <period value="12" unit="h"/>
  </effectiveTime>
  <routeCode code="C38288"
    codeSystem="2.16.840.1.113883.3.26.1.1"
    codeSystemName="NCI Thesaurus"
    displayName="ORAL"/>
  <doseQuantity value="1"/>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- ** Medication information ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23"
        extension="2014-06-09"/>
      <id root="2a620155-9d11-439e-92b3-5d9815ff4ee8"/>
      <manufacturedMaterial>
        <code code="197380"
          displayName="Atenolol 25 MG Oral Tablet"
          codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm"/>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Indication ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.19"
        extension="2014-06-09"/>
      <id root="e63166c7-6482-4a44-83a1-37ccdbde725b"/>
      <code code="75321-0"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Clinical finding"/>
      <statusCode code="completed"/>
      <value xsi:type="CD"
        code="38341003"
        displayName="Hypertension"
        codeSystem="2.16.840.1.113883.6.96"/>
    </observation>
  </entryRelationship>
</substanceAdministration>
```

Figure 53: No Known Medications Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="true">
  <!-- ** Medication activity ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
  <id root="072f00fc-4f9d-4516-8d6f-ed00ed523fe0" />
  <statusCode code="active" />
  <effectiveTime xsi:type="IVL_TS">
    <low value="20110103" />
  </effectiveTime>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- ** Medication information ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09" />
      <manufacturedMaterial>
        <code nullFlavor="OTH" codeSystem="2.16.840.1.113883.6.88">
          <translation code="410942007" displayName="drug or medication"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
        </code>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
</substanceAdministration>
```

4.13 Medication Activity (V2) - Cancer IG Specific Constraints - Published

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.13.14:2014-08-08 (open)]

Table 105: Medication Activity (V2) - Cancer IG Specific Constraints Contexts

Contained By:	Contains:
Medications Section (entries required) (V2) - Cancer IG Specific Constraints (required) Medications Administered Section (V2) - Cancer IG Specific Constraints (required)	Indication (V2) - Cancer IG Specific Constraints

This template defines Cancer Event Report-specific constraints to the C-CDA R2 template “Medication Activity (V2)”

Table 106: Medication Activity (V2) - Cancer IG Specific Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.13.14:2014-08-08)					
templateId	1..1	SHALL		1126-33066	
@root	1..1	SHALL		1126-33067	2.16.840.1.113883.10.13.14
@extension	1..1	SHALL		1126-33959	2014-08-08
entryRelationship	1..*	SHALL		1126-32664	
@typeCode	1..1	SHALL		1126-32665	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1126-33211	Indication (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08)

1. Conforms to [Medication Activity \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33066) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.14" (CONF:1126-33067).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33959).
3. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1126-32664) such that it

Note: The reason for administering medication SHALL be provided for all cancer-related medications. The reason for administering medication MAY be provided for all NON-cancer-related medications. If the reason is not known, then appropriate nullFlavor SHALL be used.

 - a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-32665).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\) - Cancer IG Specific Constraints](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08) (CONF:1126-33211).

Figure 54: Medication Activity (V2) - Cancer IG Specific Constraints example

```
<substanceAdministration classCode="SBADM" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09"/>
  <templateId root="2.16.840.1.113883.10.13.14" extension="2014-08-08"/>
  <id root="bc152409-65fc-4c5e-a498-ad3450f08981"/>
  <text>
    <reference value="#MedicationsAdmin_1">
      <!--PRIMITIVE: This reference/@value *SHALL* begin with a '#' and *SHALL* point
to its corresponding narrative (using the approach defined in CDA Release 2, section
4.3.5.1)-->
    </reference>
  </text>
  <!--Indication snippet inside a Medication Activity-->
  <statusCode code="completed"/>
  <effectiveTime xsi:type="IVL_TS">
    <low value="20120318"/>
    <high nullFlavor="UNK"/>
  </effectiveTime>
  <routeCode code="C38276" codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="Medication Route FDA Value Set" displayName="Intravenous"/>
  <approachSiteCode code="LA" codeSystem="2.16.840.1.113883.12.163"
codeSystemName="Administrative Site" displayName="Left Arm">
    <doseQuantity>
      <low value="2" unit="mg/ml">
        <translation>
          <originalText>
            <reference value="#MedicationAdminDose_1"/>
          </originalText>
        </translation>
      </low>
      <high value="2" unit="mg/ml">
        <translation>
          <originalText>
            <reference value="#MedicationAdminDose_1"/>
          </originalText>
        </translation>
      </high>
    </doseQuantity>
  </approachSiteCode>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- ** Medication information ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09"/>
      <id root="2a620155-9d11-439e-92b3-5d9815ff4ee8"/>
      <manufacturedMaterial>
        <code code="310024" displayName="Doxorubicin 2 MG/ML Injectable Solution"
codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm">
          <originalText>
            <reference value="#MedicationAdminName_1"/>
          </originalText>
        </code>
        <name>Diflucortolone</name>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
  <entryRelationship typeCode="RSON">
```

```

      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09"/>
        <templateId root="2.16.840.1.113883.10.13.19" extension="2014-08-08"/>
        <id root="ab1791b0-5c71-11db-b0de-0800200c9a66"/>
        <code code="29308-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Diagnosis"/>
        <statusCode code="completed"/>
        <effectiveTime value="20140731124200"/>
        <value xsi:type="CD" code="408643008" codeSystem="2.16.840.1.113883.6.96"
displayName="Infiltrating duct carcinoma of breast"
sdctc:valueSet="2.16.840.1.113883.3.88.12.3221.7.4" />
      </observation>
    </entryRelationship>
  </substanceAdministration>

```

4.14 Medication Information (V2) - Published

[manufacturedProduct: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 (open)]

Table 107: Medication Information (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (required)	
Planned Medication Activity (V2) (required)	

A medication should be recorded as a pre-coordinated ingredient + strength + dose form (e.g., “metoprolol 25mg tablet”, “amoxicillin 400mg/5mL suspension”) where possible. This includes RxNorm codes whose Term Type is SCD (semantic clinical drug), SBD (semantic brand drug), GPCK (generic pack), BPCK (brand pack).

The dose (doseQuantity) represents how many of the consumables are to be administered at each administration event. As a result, the dose is always relative to the consumable. Thus, a patient consuming a single "metoprolol 25mg tablet" per administration will have a doseQuantity of "1", whereas a patient consuming "metoprolol" will have a dose of "25 mg".

Table 108: Medication Information (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
manufacturedProduct (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09)					
@classCode	1..1	SHALL		1098-7408	urn:oid:2.16.840.1.113883.5.110 (RoleClass) = MANU
templateId	1..1	SHALL		1098-7409	
@root	1..1	SHALL		1098-10506	2.16.840.1.113883.10.20.22.4.23
@extension	1..1	SHALL		1098-32579	2014-06-09
id	0..*	MAY		1098-7410	
manufacturedMaterial	1..1	SHALL		1098-7411	
code	1..1	SHALL		1098-7412	urn:oid:2.16.840.1.113762.1.4.1010.4 (Medication Clinical Drug)
translation	0..*	MAY		1098-31884	urn:oid:2.16.840.1.113762.1.4.1010.2 (Clinical Substance)
manufacturerOrganization	0..1	MAY		1098-7416	

1. **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:1098-7408).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7409) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.23" (CONF:1098-10506).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32579).
3. **MAY** contain zero or more [0..*] **id** (CONF:1098-7410).
4. **SHALL** contain exactly one [1..1] **manufacturedMaterial** (CONF:1098-7411).
 Note: A medication should be recorded as a pre-coordinated ingredient + strength + dose form (e.g., "metoprolol 25mg tablet", "amoxicillin 400mg/5mL suspension") where possible. This includes RxNorm codes whose Term Type is SCD (semantic clinical drug), SBD (semantic brand drug), GPCK (generic pack), BPCK (brand pack).
 - a. This **manufacturedMaterial** **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [Medication Clinical Drug](#) urn:oid:2.16.840.1.113762.1.4.1010.4 **DYNAMIC** (CONF:1098-7412).
 - i. This **code** **MAY** contain zero or more [0..*] **translation**, which **MAY** be selected from ValueSet [Clinical Substance](#) urn:oid:2.16.840.1.113762.1.4.1010.2 **DYNAMIC** (CONF:1098-31884).
5. **MAY** contain zero or one [0..1] **manufacturerOrganization** (CONF:1098-7416).

Table 109: Medication Clinical Drug

Value Set: Medication Clinical Drug urn:oid:2.16.840.1.113762.1.4.1010.4 All prescribable medication formulations represented using either a "generic" or "brand-specific" concept. This includes RxNorm codes whose Term Type is SCD (semantic clinical drug), SBD (semantic brand drug), GPCK (generic pack), BPCK (brand pack), SCDG (semantic clinical drug group), SBDG (semantic brand drug group), SCDF (semantic clinical drug form), or SBDF (semantic brand drug form). Value set intensionally defined as a GROUPING made up of: Value Set: Medication Clinical General Drug (2.16.840.1.113883.3.88.12.80.17) (RxNorm Generic Drugs); Value Set: Medication Clinical Brand-specific Drug (2.16.840.1.113762.1.4.1010.5) (RxNorm Branded Drugs). Value Set Source: http://phinvads.cdc.gov/vads/ViewValueSet.action?id=239BEF3E-971C-DF11-B334-0015173D1785			
Code	Code System	Code System OID	Print Name
978727	RxNorm	urn:oid:2.16.840.1.113883.6.88	0.2 ML Dalteparin Sodium 12500 UNT/ML Prefilled Syringe [Fragmin]
827318	RxNorm	urn:oid:2.16.840.1.113883.6.88	Acetaminophen 250 MG / Aspirin 250 MG / Caffeine 65 MG Oral Capsule
199274	RxNorm	urn:oid:2.16.840.1.113883.6.88	Aspirin 300 MG Oral Capsule
362867	RxNorm	urn:oid:2.16.840.1.113883.6.88	Cefotetan Injectable Solution [Cefotan]
...			

Table 110: Clinical Substance

Value Set: Clinical Substance urn:oid:2.16.840.1.113762.1.4.1010.2 All substances that may need to be represented in the context of health care related activities. This value set is quite broad in coverage and includes concepts that may never be needed in a health care activity event, particularly the included SNOMED CT concepts. The code system-specific value sets in this grouping value set are intended to provide broad coverage of all kinds of agents, but the expectation for use is that the chosen concept identifier for a substance should be appropriately specific and drawn from the appropriate code system as noted: prescribable medications should use RXNORM concepts, more specific drugs and chemicals should be represented using UNII concepts, and any substances not found in either of those two code systems, should use the appropriate SNOMED CT concept. This overarching grouping value set is intended to support identification of prescribable medications, foods, general substances and environmental entities. Value set intensionally defined as a GROUPING made up of: Value Set: Medication Clinical Drug (2.16.840.1.113762.1.4.1010.4) (RxNorm generic and brand codes); Value Set: Unique Ingredient Identifier - Complete Set (2.16.840.1.113883.3.88.12.80.20) (UNII codes); Value Set: Substance Other Than Clinical Drug (2.16.840.1.113762.1.4.1010.9) (SNOMED CT codes). Value Set Source: https://vsac.nlm.nih.gov/			
Code	Code System	Code System OID	Print Name
369436	RxNorm	urn:oid:2.16.840.1.113883.6.88	6-Aminocaproic Acid Oral Tablet [Amicar]
1116447	RxNorm	urn:oid:2.16.840.1.113883.6.88	Acepromazine Oral Tablet
9042592173	Unique Ingredient Identifier (UNII)	urn:oid:2.16.840.1.113883.4.9	ATROMEPINE
7673326042	Unique Ingredient Identifier (UNII)	urn:oid:2.16.840.1.113883.4.9	IRINOTECAN
413480003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Almond product (substance)
256915001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Aluminum hydroxide absorbed plasma (substance)
...			

Figure 55: Medication Information (V2) Example

```
<manufacturedProduct classCode="MANU">
  <!-- ** Medication information ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09" />
  <id root="2a620155-9d11-439e-92b3-5d9815ff4ee8" />
  <manufacturedMaterial>
    <code code="310024" displayName="Doxorubicin 2 MG/ML Injectable Solution"
codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm">
      <originalText>
        <reference value="#MedicationAdminName_1"/>
      </originalText>
    </code>
  </manufacturedMaterial>
  <manufacturerOrganization>
    <name>Diflu cortolone</name>
  </manufacturerOrganization>
</manufacturedProduct>
```

4.15 No Known TNM Clinical Stage Observation (V1.1) - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.31:2015-04-02
(open)]

Table 111: No Known TNM Clinical Stage Observation (V1.1) Contexts

Contained By:	Contains:
Cancer Diagnosis Observation (V1.1) (required)	

Note: This template is modeled based on C-CDA R2 "No Known Medication" example.

TNM Clinical Stage describes detailed site-specific information on the progression of disease for the cancer/tumor as defined by AJCC and recorded by the ambulatory healthcare provider (physician).

The AJCC Staging Manual TNM system is proprietary and its definitions cannot be included in this IG or in other documents without permission.

This template is used when the cancer has not yet been staged, the TNM stage is not available, or when no TNM Staging system exists for the cancer. Examples include:

- A cancer is first diagnosed and has not yet had a full work-up to evaluate the extent of the cancer's progression
- The stage has been determined elsewhere
- Cancers with no TNM staging system (e.g., leukemia, brain tumor)

This template allows the fact that no staging is available to be communicated without having to provide nullFlavors for each stage data element in the other template. It is accomplished by allowing the act to be negated via the negationInd.

Table 112: No Known TNM Clinical Stage Observation (V1.1) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.31:2015-04-02)					
@nullFlavor	0..0	SHALL NOT		1169-33777	
@classCode	1..1	SHALL		1169-33772	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-33773	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
@negationInd	1..1	SHALL		1169-33780	true
templateId	1..1	SHALL		1169-33727	
@root	1..1	SHALL		1169-33769	2.16.840.1.113883.10.13.31
@extension	1..1	SHALL		1169-34367	2015-04-02
code	1..1	SHALL		1169-33731	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-33775	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 75620-5
@codeSystem	1..1	SHALL		1169-33776	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1

1. **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33777).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1169-33772).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1169-33773).
4. **SHALL** contain exactly one [1..1] **@negationInd**="true" (CONF:1169-33780).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-33727) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.31" (CONF:1169-33769).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-02" (CONF:1169-34367).
6. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33731).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75620-5" TNM clinical staging before treatment panel Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33775).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33776).

Figure 56: No Known TNM Clinical Stage Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="true">
  <templateId root="2.16.840.1.113883.10.13.31" extension="2015-04-02" />
  <code code="75620-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="TNM clinical staging before treatment panel Cancer" />
</observation>
```

4.16 No Known TNM Pathologic Stage Observation (V1.1) - Published

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.32:2015-04-02
(open) ]
```

Table 113: No Known TNM Pathologic Stage Observation (V1.1) Contexts

Contained By:	Contains:
Cancer Diagnosis Observation (V1.1) (required)	

Note: This template is modeled based on C-CDA R2 "No Known Medication" example.

TNM Pathologic Stage describes detailed site-specific information on the progression of disease for the cancer/tumor as defined by AJCC and recorded by the ambulatory healthcare provider (physician).

The AJCC Staging Manual TNM system is proprietary and its definitions cannot be included in this IG or in other documents without permission.

This template is used when the cancer has not yet been staged, the TNM stage is not available or when no TNM Staging system exists for the cancer. Examples include:

- A cancer is first diagnosed and has not yet had a full work-up to evaluate the extent of the cancer's progression
- The stage has been determined elsewhere
- Cancers with no TNM staging system (e.g., leukemia, brain tumor)

This template allows the fact that no staging is available to be communicated without having to provide nullFlavors for each stage data element in the other template. It is accomplished by allowing the act to be negated via the negationInd.

Table 114: No Known TNM Pathologic Stage Observation (V1.1) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.32:2015-04-02)					
@nullFlavor	0..0	SHALL NOT		1169-34369	
@classCode	1..1	SHALL		1169-33852	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-33853	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
@negationInd	0..1	MAY		1169-33858	true
templateId	1..1	SHALL		1169-33805	
@root	1..1	SHALL		1169-33849	2.16.840.1.113883.10.13.32
@extension	1..1	SHALL		1169-34368	2015-04-02
code	1..1	SHALL		1169-33809	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-33855	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 75621-3
@codeSystem	1..1	SHALL		1169-33856	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1

1. **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-34369).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1169-33852).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1169-33853).
4. **MAY** contain zero or one [0..1] **@negationInd**="true" (CONF:1169-33858).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-33805) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.32" (CONF:1169-33849).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-02" (CONF:1169-34368).
6. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33809).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75621-3" TNM pathologic staging after surgery panel Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33855).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33856).

Figure 57: No Known TNM Pathologic Stage Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="true">
  <templateId root="2.16.840.1.113883.10.13.32" extension="2015-04-02" />
  <code code="75621-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="TNM pathologic staging after surgery panel Cancer" />
</observation>
```

4.17 Planned Encounter (V2) - Published

```
[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09
(open) ]
```

Table 115: Planned Encounter (V2) Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional)	Author Participation Indication (V2) Service Delivery Location

This template represents a planned or ordered encounter. The type of encounter (e.g., comprehensive outpatient visit) is represented. Clinicians participating in the encounter and the location of the planned encounter may be captured. The priority that the patient and providers place on the encounter may be represented.

Table 116: Planned Encounter (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09)					
@classCode	1..1	SHALL		1098-8564	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1098-8565	urn:oid:2.16.840.1.113883.11.20.9.23 (Planned moodCode (Act/Encounter/Procedure))
templateId	1..1	SHALL		1098-30437	
@root	1..1	SHALL		1098-30438	2.16.840.1.113883.10.20.22.4.40
@extension	1..1	SHALL		1098-32553	2014-06-09
id	1..*	SHALL		1098-8567	
code	0..1	SHOULD		1098-31032	urn:oid:2.16.840.1.113883.11.20.9.52 (Encounter Planned)
statusCode	1..1	SHALL		1098-30439	
@code	1..1	SHALL		1098-31880	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	0..1	SHOULD		1098-30440	
performer	0..*	MAY		1098-30442	
assignedEntity	1..1	SHALL		1098-31874	
author	0..*	SHOULD		1098-32045	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..*	MAY		1098-30443	
@typeCode	1..1	SHALL		1098-31875	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = LOC
participantRole	1..1	SHALL		1098-31876	Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32)
entryRelationship	0..1	MAY		1098-31033	
@typeCode	1..1	SHALL		1098-31034	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-31035	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.

					22.4.143
entryRelationship	0..*	MAY		1098-31877	
@typeCode	1..1	SHALL		1098-31878	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-31879	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.19:2014-06-09

1. **SHALL** contain exactly one [1..1] **@classCode="ENC"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8564).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Planned moodCode \(Act/Encounter/Procedure\)](#) urn:oid:2.16.840.1.113883.11.20.9.23 **STATIC** 2011-09-30 (CONF:1098-8565).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30437) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.40"** (CONF:1098-30438).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32553).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8567).

Records the type of encounter ordered or recommended.

5. **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Encounter Planned](#) urn:oid:2.16.840.1.113883.11.20.9.52 **DYNAMIC** (CONF:1098-31032).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-30439).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31880).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-30440).

Performers represent clinicians who are responsible for assessing and treating the patient.

8. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30442) such that it
 - a. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-31874).

The author in a planned encounter represents the clinician who is requesting or planning the encounter.

9. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32045).

This location participation captures where the planned or ordered encounter may take place.

10. **MAY** contain zero or more [0..*] **participant** (CONF:1098-30443) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31875).
 - b. **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1098-31876).

The following entryRelationship represents the priority that a patient or a provider places on the encounter.

11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-31033) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31034).
 - b. **SHALL** contain exactly one [1..1] Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31035).

The following entryRelationship captures the reason for the planned or ordered encounter

12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31877) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31878).
 - b. **SHALL** contain exactly one [1..1] **Indication (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-31879).

Table 117: Planned moodCode (Act/Encounter/Procedure)

Value Set: Planned moodCode (Act/Encounter/Procedure) urn:oid:2.16.840.1.113883.11.20.9.23 This value set is used to restrict the moodCode on an act, an encounter or a procedure to future moods Value Set Source: http://hl7.org/implement/standards/fhir/v3/ActMood/			
Code	Code System	Code System OID	Print Name
INT	ActMood	urn:oid:2.16.840.1.113883.5.1001	Intent
ARQ	ActMood	urn:oid:2.16.840.1.113883.5.1001	Appointment Request
PRMS	ActMood	urn:oid:2.16.840.1.113883.5.1001	Promise
PRP	ActMood	urn:oid:2.16.840.1.113883.5.1001	Proposal
RQO	ActMood	urn:oid:2.16.840.1.113883.5.1001	Request
APT	ActMood	urn:oid:2.16.840.1.113883.5.1001	Appointment

Table 118: Encounter Planned

Value Set: Encounter Planned urn:oid:2.16.840.1.113883.11.20.9.52 A value set of SNOMED-CT codes descending from "308335008" patient encounter procedure (procedure). Value Set Source: http://vts1.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=308335008			
Code	Code System	Code System OID	Print Name
185349003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	encounter for "check-up" (procedure)
439740005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	postoperative follow-up visit (procedure)
439708006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	home visit (procedure)
438515009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	E-mail encounter from carer (procedure)
14736009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	patient evaluation and management
4525004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	emergency department patient visit
12586001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	physician direction of emergency medical systems
11429006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	consultation
680007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	radiation physics consultation
726007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	pathology consultation, comprehensive, records and specimen with report
...			

Figure 58: Planned Encounter (V2) Example

```
<entry>
  <encounter moodCode="INT" classCode="ENC">
    <templateId root="2.16.840.1.113883.10.20.22.4.40" extension="2014-06-09" />
    <!-- Planned Encounter V2 template -->
    <id root="9a6d1bac-17d3-4195-89a4-1121bc809b4d" />
    <code code="185349003" displayName="encounter for check-up (procedure)"
codeSystemName="SNOMED CT" codeSystem="2.16.840.1.113883.6.96"> </code>
    <statusCode code="active" />
    <effectiveTime value="20130615" />
    <performer>
      <assignedEntity>
        ...
      </assignedEntity>
    </performer>
    <entryRelationship typeCode="REFR">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Patient Priority Preference-->
        <templateId root="2.16.840.1.113883.10.20.22.4.142" />
        ...
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="REFR">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Provider Priority Preference-->
        ...
      </observation>
    </entryRelationship>
  </encounter>
</entry>
```

4.18 Planned Encounter (V2) - Cancer IG Specific Constraints - Published

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.13.20:2014-08-08
(open)]

Table 119: Planned Encounter (V2) - Cancer IG Specific Constraints Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) - Cancer IG Specific Constraints (required)	Service Delivery Location US Realm Address (AD.US.FIELDDED) US Realm Person Name (PN.US.FIELDDED)

This template defines Cancer Event Report-specific constraints to the C-CDA R2.0 Planned Encounter (V2) template. Conformance has been changed to “SHALL” for performer and participant.

Table 120: Planned Encounter (V2) - Cancer IG Specific Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.13.20:2014-08-08)					
@classCode	1..1	SHALL		1126-33218	ENC
@moodCode	1..1	SHALL		1126-33219	
templateId	1..1	SHALL		1126-33216	
@root	1..1	SHALL		1126-33217	2.16.840.1.113883.10.13.20
@extension	1..1	SHALL		1126-33962	2014-08-08
performer	1..1	SHALL		1126-33220	
@typeCode	1..1	SHALL		1126-33980	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF
assignedEntity	1..1	SHALL		1126-33937	
id	1..*	SHALL		1126-33938	
@root	0..1	SHOULD		1126-33941	2.16.840.1.113883.4.6
id	0..*	SHOULD		1126-33942	
addr	0..1	SHOULD		1126-33943	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	0..*	SHOULD		1126-33939	
assignedPerson	0..1	SHOULD		1126-33940	
name	0..*	SHOULD		1126-33945	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
representedOrganization	0..1	SHOULD		1126-33979	
name	0..1	SHOULD		1126-33981	
participant	1..*	SHALL		1126-33222	
@typeCode	1..1	SHALL		1126-33982	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		1126-	Service Delivery Location

				33983	(identifier: urn:oid:2.16.840.1.113883.10.20. 22.4.32

1. Conforms to [Planned Encounter \(V2\)](#) template (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="ENC" Encounter (CONF:1126-33218).
3. **SHALL** contain exactly one [1..1] **@moodCode** (CONF:1126-33219).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33216) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.20" (CONF:1126-33217).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33962).
5. **SHALL** contain exactly one [1..1] **performer** (CONF:1126-33220) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" Performer (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1126-33980).
 - b. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1126-33937).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1126-33938) such that it
 1. **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1126-33941).
 - ii. This assignedEntity **SHOULD** contain zero or more [0..*] **id** (CONF:1126-33942).
Note: This id is to be used to provide the Cancer Registry approved local identifier.
 - iii. This assignedEntity **SHOULD** contain zero or one [0..1] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier:
urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1126-33943).
 - iv. This assignedEntity **SHOULD** contain zero or more [0..*] **telecom** (CONF:1126-33939).
 - v. This assignedEntity **SHOULD** contain zero or one [0..1] **assignedPerson** (CONF:1126-33940) such that it
 1. **SHOULD** contain zero or more [0..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier:
urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1126-33945).
 - vi. This assignedEntity **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:1126-33979) such that it
 1. **SHOULD** contain zero or one [0..1] **name** (CONF:1126-33981).
6. **SHALL** contain at least one [1..*] **participant** (CONF:1126-33222) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="LOC" Location (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1126-33982).
 - b. **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier:
urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1126-33983).

Figure 59: Planned Encounter (V2) - Cancer IG Specific Constraints example

```

<entry>
  <encounter moodCode="INT" classCode="ENC">
    <templateId root="2.16.840.1.113883.10.20.22.4.40" extension="2014-06-09" />
    <!-- Planned Encounter V2 template -->
    <templateId root="2.16.840.1.113883.10.13.20" extension="2014-08-08" />
    <id root="9a6dlbac-17d3-4195-89a4-1121bc809b4d" />
    <code code="698314001" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED
CT" displayName="Consultation for treatment (procedure)" />
    <statusCode code="active" />
    <effectiveTime value="20130615" />
    <performer typeCode="PRF">
      <assignedEntity classCode="ASSIGNED">
        <id extension="5555555555" root="2.16.840.1.113883.4.6" />
        <id extension="111111111" root="2.16.840.1.113883.19.5"></id>
        <code code="207QA0505X" codeSystem="2.16.840.1.113883.5.53"
codeSystemName="Health Care Provider Taxonomy" displayName="Adult Medicine" />
        <addr>
          <streetAddressLine>4444 Healthcare Drive</streetAddressLine>
          <city>Ann Arbor</city>
          <state>MI</state>
          <postalCode>99999</postalCode>
          <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-3001" />
        <assignedPerson>
          <name>
            <given>Patricia</given>
            <given qualifier="CL">Patty</given>
            <family>Primary</family>
            <suffix qualifier="AC">M.D.</suffix>
          </name>
        </assignedPerson>
        <representedOrganization>
          <name> Level Seven Healthcare, Inc.</name>
        </representedOrganization>
      </assignedEntity>
    </performer>
  </author>
  <templateId root="2.16.840.1.113883.10.20.22.4.119" />
  <time value="201308011235-0800" />
  <assignedAuthor>
    <id root="20cf14fb-b65c-4c8c-a54d-b0cca834c18c" />
    <code code="163W00000X" codeSystem="2.16.840.1.113883.5.53"
codeSystemName="Health Care Provider Taxonomy" displayName="Registered nurse" />
    <assignedPerson>
      <name>
        <given>Nurse</given>
        <family>Nightingale</family>
        <suffix>RN</suffix>
      </name>
    </assignedPerson>
    <representedOrganization>
      <id root="2.16.840.1.113883.19.5" />
      <name>Good Health Hospital</name>
    </representedOrganization>
  </assignedAuthor>

```

```

        </assignedAuthor>
    </author>
    <participant typeCode="LOC">
        <participantRole classCode="SDLOC">
            <templateId root="2.16.840.1.113883.10.20.22.4.32" />
            <code code="1200-5" codeSystem="2.16.840.1.113883.6.259"
codeSystemName="HealthcareServiceLocation" displayName="Hematology/oncology clinic" />
            <addr>
                <streetAddressLine>1000 Hospital Lane</streetAddressLine>
                <city>Ann Arbor</city>
                <state>MI</state>
                <postalCode>99999</postalCode>
                <country>US</country>
            </addr>
            <telecom use="WP" value="tel:+1(555)555-5000" />
            <playingEntity classCode="PLC">
                <name>Good Health Hospital</name>
            </playingEntity>
        </participantRole>
    </participant>
</encounter>
</entry>

```

4.19 Planned Medication Activity (V2) - Published

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09 (open)]

Table 121: Planned Medication Activity (V2) Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional) Plan of Treatment Section (V2) - Cancer IG Specific Constraints (required)	Author Participation Indication (V2) Medication Information (V2)

This template represents planned medication activities. The priority of the medication activity to the patient and provider is communicated through Priority Preference. The effectiveTime indicates the time when the medication activity is intended to take place. The authorTime indicates when the documentation of the plan occurred.

Table 122: Planned Medication Activity (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09)					
@classCode	1..1	SHALL		1098-8572	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		1098-8573	urn:oid:2.16.840.1.113883.11.20.9.24 (Planned moodCode (SubstanceAdministration/Supply))
templateId	1..1	SHALL		1098-30465	
@root	1..1	SHALL		1098-30466	2.16.840.1.113883.10.20.22.4.42
@extension	1..1	SHALL		1098-32557	2014-06-09
id	1..*	SHALL		1098-8575	
statusCode	1..1	SHALL		1098-32087	
@code	1..1	SHALL		1098-32088	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	1..1	SHALL		1098-30468	
repeatNumber	0..1	MAY		1098-32066	
routeCode	0..1	MAY		1098-32067	urn:oid:2.16.840.1.113883.3.88.1.2.3221.8.7 (Medication Route FDA)
approachSiteCode	0..*	MAY		1098-32078	urn:oid:2.16.840.1.113883.3.88.1.2.3221.8.9 (Body Site)
doseQuantity	0..1	MAY		1098-32068	
@unit	0..1	SHOULD		1098-32133	urn:oid:2.16.840.1.113883.1.11.1.2839 (UnitsOfMeasureCaseSensitive)
rateQuantity	0..1	MAY		1098-32079	
@unit	0..1	SHOULD		1098-32134	urn:oid:2.16.840.1.113883.1.11.1.2839 (UnitsOfMeasureCaseSensitive)
maxDoseQuantity	0..1	MAY		1098-32080	
administrationUnitCode	0..1	MAY		1098-32081	urn:oid:2.16.840.1.113883.1.11.1.4570 (AdministrableDrugForm)
consumable	1..1	SHALL		1098-32082	

manufacturedProduct	1..1	SHALL		1098-32083	Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.23:2014-06-09)
performer	0..*	MAY		1098-30470	
author	0..1	SHOULD		1098-32046	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.2.22.4.119)
entryRelationship	0..*	MAY		1098-31104	
@typeCode	1..1	SHALL		1098-31105	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-31106	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.2.22.4.143)
entryRelationship	0..*	MAY		1098-32069	
@typeCode	1..1	SHALL		1098-32070	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-32071	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.19:2014-06-09)
entryRelationship	0..*	MAY		1098-32072	
@typeCode	1..1	SHALL		1098-32073	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
act	1..1	SHALL		1098-32074	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.20:2014-06-09)
precondition	0..*	MAY		1098-32084	
@typeCode	1..1	SHALL		1098-32085	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = PRCN
criterion	1..1	SHALL		1098-32086	Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.25:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="SBADM" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8572).
2. **SHALL** contain exactly one [1..1] @moodCode, which **SHALL** be selected from ValueSet [Planned moodCode \(SubstanceAdministration/Supply\)](#) urn:oid:2.16.840.1.113883.11.20.9.24 **STATIC** 2011-09-30 (CONF:1098-8573).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-30465) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.42" (CONF:1098-30466).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32557).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8575).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-32087).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="active" Active (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-32088).

The **effectiveTime** in a planned medication activity represents the time that the medication activity should occur.

6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-30468).

In a Planned Medication Activity, **repeatNumber** defines the number of allowed administrations. For example, a **repeatNumber** of "3" means that the substance can be administered up to 3 times.

7. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:1098-32066).
8. **MAY** contain zero or one [0..1] **routeCode**, which **SHALL** be selected from ValueSet [Medication Route FDA](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 **DYNAMIC** (CONF:1098-32067).
9. **MAY** contain zero or more [0..*] **approachSiteCode**, which **SHALL** be selected from ValueSet [Body Site](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-32078).
10. **MAY** contain zero or one [0..1] **doseQuantity** (CONF:1098-32068).
 - a. The **doseQuantity**, if present, **SHOULD** contain zero or one [0..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-32133).
11. **MAY** contain zero or one [0..1] **rateQuantity** (CONF:1098-32079).
 - a. The **rateQuantity**, if present, **SHOULD** contain zero or one [0..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-32134).
12. **MAY** contain zero or one [0..1] **maxDoseQuantity** (CONF:1098-32080).
13. **MAY** contain zero or one [0..1] **administrationUnitCode**, which **SHALL** be selected from ValueSet [AdministrableDrugForm](#) urn:oid:2.16.840.1.113883.1.11.14570 **DYNAMIC** (CONF:1098-32081).
14. **SHALL** contain exactly one [1..1] **consumable** (CONF:1098-32082).
 - a. This **consumable** **SHALL** contain exactly one [1..1] [Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-32083).

The clinician who is expected to perform the medication activity could be identified using **substanceAdministration/performer**.

15. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30470).

The author in a planned medication activity represents the clinician who is requesting or planning the medication activity.

16. **SHOULD** contain zero or one [0..1] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32046).

The following entryRelationship represents the priority that a patient or a provider places on the planned medication activity.

17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31104) such that it
- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31105).
 - SHALL** contain exactly one [1..1] Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31106).

The following entryRelationship represents the indication for the planned medication activity.

18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32069) such that it
- SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32070).
 - SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-32071).

The following entryRelationship captures any instructions associated with the planned medication activity.

19. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32072) such that it
- SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32073).
 - SHALL** contain exactly one [1..1] Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-32074).
20. **MAY** contain zero or more [0..*] **precondition** (CONF:1098-32084).
- The precondition, if present, **SHALL** contain exactly one [1..1] **@typeCode="PRCN"** Precondition (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32085).
 - The precondition, if present, **SHALL** contain exactly one [1..1] Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1098-32086).

Table 123: Planned moodCode (SubstanceAdministration/Supply)

Value Set: Planned moodCode (SubstanceAdministration/Supply) urn:oid:2.16.840.1.113883.11.20.9.24 This value set is used to restrict the moodCode on a substance administration or a supply to future moods. Value Set Source: http://hl7.org/implement/standards/fhir/v3/ActMood/			
Code	Code System	Code System OID	Print Name
INT	ActMood	urn:oid:2.16.840.1.113883.5.1001	Intent
PRMS	ActMood	urn:oid:2.16.840.1.113883.5.1001	Promise
PRP	ActMood	urn:oid:2.16.840.1.113883.5.1001	Proposal
RQO	ActMood	urn:oid:2.16.840.1.113883.5.1001	Request

Figure 60: Planned Medication Activity (V2) Example

```
<substanceAdministration moodCode="INT" classCode="SBADM">
  <templateId root="2.16.840.1.113883.10.20.22.4.42" extension="2014-06-09" />
  <!-- Planned Medication Activity (V2)-->
  <id root="cdbc33f0-6cde-11db-9fe1-0800200c9a66" />
  <text>Heparin 0.25 ml Prefilled Syringe</text>
  <statusCode code="active" />
  <!-- The effectiveTime in a planned medication activity
    represents the time that the medication activity should occur. -->
  <effectiveTime value="20130905" />
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- Medication Information (V2) -->
      ...
    </manufacturedProduct>
  </consumable>
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Patient Priority Preference-->
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Provider Priority Preference-->
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="RSON">
    <!-- Indication (V2) -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="SUBJ">
    <!-- Instruction (V2) -->
    ...
  </entryRelationship>
</substanceAdministration>
```

4.20 Planned Procedure (V2) - Published

[procedure: identifier urn:h17ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09
(open)]

Table 124: Planned Procedure (V2) Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional) Plan of Treatment Section (V2) - Cancer IG Specific Constraints (required)	Author Participation Indication (V2)

This template represents planned alterations of the patient's physical condition. Examples of such procedures are tracheostomy, knee replacement, and craniectomy. The priority of the

procedure to the patient and provider is communicated through Priority Preference. The effectiveTime indicates the time when the procedure is intended to take place and authorTime indicates when the documentation of the plan occurred. The Planned Procedure Template may also indicate the potential insurance coverage for the procedure.

Table 125: Planned Procedure (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09)					
@classCode	1..1	SHALL		1098-8568	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		1098-8569	urn:oid:2.16.840.1.113883.11.20.9.23 (Planned moodCode (Act/Encounter/Procedure))
templateId	1..1	SHALL		1098-30444	
@root	1..1	SHALL		1098-30445	2.16.840.1.113883.10.20.22.4.41
@extension	1..1	SHALL		1098-32554	2014-06-09
id	1..*	SHALL		1098-8571	
code	1..1	SHALL		1098-31976	
statusCode	1..1	SHALL		1098-30446	
@code	1..1	SHALL		1098-31978	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	0..1	SHOULD		1098-30447	
methodCode	0..*	MAY		1098-31980	
targetSiteCode	0..*	MAY		1098-31981	urn:oid:2.16.840.1.113883.3.88.1.2.3221.8.9 (Body Site)
performer	0..*	MAY		1098-30449	
author	0..1	SHOULD		1098-31979	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	MAY		1098-31079	
@typeCode	1..1	SHALL		1098-31080	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-31081	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143)
entryRelationship	0..*	MAY		1098-31982	
@typeCode	1..1	SHALL		1098-31983	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON

observation	1..1	SHALL		1098-31984	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.19:2014-06-09)
entryRelationship	0..*	MAY		1098-31985	
@typeCode	1..1	SHALL		1098-31986	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-31987	true
act	1..1	SHALL		1098-31989	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.20:2014-06-09)
entryRelationship	0..*	MAY		1098-31990	
@typeCode	1..1	SHALL		1098-31991	COMP
act	1..1	SHALL		1098-31992	Planned Coverage (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129)

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8568).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Planned moodCode \(Act/Encounter/Procedure\)](#) urn:oid:2.16.840.1.113883.11.20.9.23 **STATIC** 2011-09-30 (CONF:1098-8569).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30444) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.41" (CONF:1098-30445).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32554).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8571).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31976).
 - a. The procedure/code in a planned procedure **SHOULD** be selected from LOINC (codeSystem 2.16.840.1.113883.6.1) **OR** SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (CodeSystem: 2.16.840.1.113883.6.12) **OR** ICD10 PCS (CodeSystem: 2.16.840.1.113883.6.4) (CONF:1098-31977).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-30446).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="active" Active (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31978).

The effectiveTime in a planned procedure represents the time that the procedure should occur.

7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-30447).

In a planned procedure the provider may suggest that a procedure should be performed using a particular method.

MethodCode **SHALL NOT** conflict with the method inherent in Procedure / code.

8. **MAY** contain zero or more [0..*] **methodCode** (CONF:1098-31980).

The targetSiteCode is used to identify the part of the body of concern for the planned procedure.

9. **MAY** contain zero or more [0..*] **targetSiteCode**, which **SHALL** be selected from ValueSet [Body Site](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-31981).

The clinician who is expected to perform the procedure could be identified using procedure/performer.

10. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30449).

The author in a planned procedure represents the clinician who is requesting or planning the procedure.

11. **SHOULD** contain zero or one [0..1] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31979).

The following entryRelationship represents the priority that a patient or a provider places on the procedure.

12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31079) such that it

- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31080).
- SHALL** contain exactly one [1..1] Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31081).

The following entryRelationship represents the indication for the procedure.

13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31982) such that it

- SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31983).
- SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-31984).

The following entryRelationship captures any instructions associated with the planned procedure.

14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31985) such that it

- SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31986).
- SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-31987).
- SHALL** contain exactly one [1..1] Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31989).

The following entryRelationship represents the insurance coverage the patient may have for the procedure.

15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31990) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CONF:1098-31991).
 - b. **SHALL** contain exactly one [1..1] **Planned Coverage** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129) (CONF:1098-31992).

Figure 61: Planned Procedure (V2) Example

```
<entry>
  <procedure moodCode="RQO" classCode="PROC">
    <templateId root="2.16.840.1.113883.10.20.22.4.41" extension="2014-06-09" />
    <!-- **Planned Procedure (V2) template ** -->
    <id root="9a6d1bac-17d3-4195-89c4-1121bc809b5a" />
    <code code="73761001" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED
CT" displayName="Colonoscopy" />
    <statusCode code="active" />
    <effectiveTime value="20130613" />
    <!-- Author Participation -->
    <author typeCode="AUT">
      ...
    </author>
    <entryRelationship typeCode="REFR">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Patient Priority Preference-->
        <templateId root="2.16.840.1.113883.10.20.22.4.142" />
        ...
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="REFR">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Provider Priority Preference-->
        <templateId root="2.16.840.1.113883.10.20.22.4.143" />
        ...
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="RSON">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Indication-->
        <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09"
/>
        ...
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="SUBJ">
      <act classCode="ACT" moodCode="INT">
        <!-- Instruction-->
        <templateId root="2.16.840.1.113883.10.20.22.4.20" extension="2014-06-09"
/>
        ...
      </act>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="ACT" moodCode="INT">
        <!-- Planned Coverage -->
        <templateId root="2.16.840.1.113883.10.20.22.4.129" />
        ...
      </observation>
    </entryRelationship>
  </procedure>
</entry>
```

4.21 Policy Activity (V2) - Published

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09 (open)]

Table 126: Policy Activity (V2) Contexts

Contained By:	Contains:
Coverage Activity (V2) (required)	US Realm Address (AD.US.FIELDDED)

A policy activity represents the policy or program providing the coverage. The person for whom payment is being provided (i.e., the patient) is the covered party. The subscriber of the policy or program is represented as a participant that is the holder of the coverage. The payer is represented as the performer of the policy activity.

Table 127: Policy Activity (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09)					
@classCode	1..1	SHALL		1098-8898	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-8899	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-8900	
@root	1..1	SHALL		1098-10516	2.16.840.1.113883.10.20.22.4.61
@extension	1..1	SHALL		1098-32595	2014-06-09
id	1..*	SHALL		1098-8901	
code	1..1	SHALL		1098-8903	urn:oid:2.16.840.1.114222.4.11.3591 (Payer)
statusCode	1..1	SHALL		1098-8902	
@code	1..1	SHALL		1098-19109	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
performer	1..1	SHALL		1098-8906	
@typeCode	1..1	SHALL		1098-8907	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF
templateId	1..1	SHALL		1098-16808	
@root	1..1	SHALL		1098-16809	2.16.840.1.113883.10.20.22.4.87
assignedEntity	1..1	SHALL		1098-8908	
id	1..*	SHALL		1098-8909	
code	0..1	SHOULD		1098-8914	
@code	1..1	SHALL		1098-15992	urn:oid:2.16.840.1.113883.1.11.10416 (HL7FinanciallyResponsiblePartyType)
addr	0..1	MAY		1098-8910	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	0..*	MAY		1098-8911	
representedOrganization	0..1	SHOULD		1098-	

		D		8912	
name	0..1	SHOULD		1098-8913	
performer	0..1	SHOULD		1098-8961	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF
templateId	1..1	SHALL		1098-16810	
@root	1..1	SHALL		1098-16811	2.16.840.1.113883.10.20.22.4.88
time	0..1	SHOULD		1098-8963	
assignedEntity	1..1	SHALL		1098-8962	
code	1..1	SHALL		1098-8968	
@code	1..1	SHALL		1098-16096	GUAR
@codeSystem	1..1	SHALL		1098-32165	2.16.840.1.113883.5.110
addr	0..1	SHOULD		1098-8964	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	0..*	SHOULD		1098-8965	
participant	1..1	SHALL		1098-8916	
@typeCode	1..1	SHALL		1098-8917	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = COV
templateId	1..1	SHALL		1098-16812	
@root	1..1	SHALL		1098-16814	2.16.840.1.113883.10.20.22.4.89
time	0..1	SHOULD		1098-8918	
low	0..1	SHOULD		1098-8919	
high	0..1	SHOULD		1098-8920	
participantRole	1..1	SHALL		1098-8921	
id	1..*	SHALL		1098-8922	
code	1..1	SHALL		1098-8923	
@code	0..1	SHOULD		1098-16078	urn:oid:2.16.840.1.113883.1.11.18877 (Coverage Role Type)

addr	0..1	SHOULD		1098-8956	
playingEntity	0..1	SHOULD		1098-8932	
name	1..*	SHALL		1098-8930	
sdct:birthTime	1..1	SHALL		1098-31344	
participant	0..1	SHOULD		1098-8934	
@typeCode	1..1	SHALL		1098-8935	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = HLD
templateId	1..1	SHALL		1098-16813	
@root	1..1	SHALL		1098-16815	2.16.840.1.113883.10.20.22.4.90
time	0..1	MAY		1098-8938	
participantRole	1..1	SHALL		1098-8936	
id	1..*	SHALL		1098-8937	
addr	0..1	SHOULD		1098-8925	
entryRelationship	1..*	SHALL		1098-8939	
@typeCode	1..1	SHALL		1098-8940	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8898).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8899).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8900) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.61"** (CONF:1098-10516).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32595).

This id is a unique identifier for the policy or program providing the coverage

4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8901).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Payer](#) urn:oid:2.16.840.1.114222.4.11.3591 **DYNAMIC** (CONF:1098-8903).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-8902).

- a. This `statusCode` **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19109).

This performer represents the Payer.

7. **SHALL** contain exactly one [1..1] `performer` (CONF:1098-8906) such that it
 - a. **SHALL** contain exactly one [1..1] `@typeCode="PRF"` Performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8907).
 - b. **SHALL** contain exactly one [1..1] `templateId` (CONF:1098-16808).
 - i. This `templateId` **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.22.4.87"` Payer Performer (CONF:1098-16809).
 - c. **SHALL** contain exactly one [1..1] `assignedEntity` (CONF:1098-8908).
 - i. This `assignedEntity` **SHALL** contain at least one [1..*] `id` (CONF:1098-8909).
 - ii. This `assignedEntity` **SHOULD** contain zero or one [0..1] `code` (CONF:1098-8914).
 1. The code, if present, **SHALL** contain exactly one [1..1] `@code`, which **SHOULD** be selected from ValueSet [HL7FinanciallyResponsiblePartyType](#) urn:oid:2.16.840.1.113883.1.11.10416 **DYNAMIC** (CONF:1098-15992).
 - iii. This `assignedEntity` **MAY** contain zero or one [0..1] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-8910).
 - iv. This `assignedEntity` **MAY** contain zero or more [0..*] `telecom` (CONF:1098-8911).
 - v. This `assignedEntity` **SHOULD** contain zero or one [0..1] `representedOrganization` (CONF:1098-8912).
 1. The `representedOrganization`, if present, **SHOULD** contain zero or one [0..1] `name` (CONF:1098-8913).

This performer represents the Guarantor.

8. **SHOULD** contain zero or one [0..1] `performer="PRF"` Performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8961) such that it
 - a. **SHALL** contain exactly one [1..1] `templateId` (CONF:1098-16810).
 - i. This `templateId` **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.22.4.88"` Guarantor Performer (CONF:1098-16811).
 - b. **SHOULD** contain zero or one [0..1] `time` (CONF:1098-8963).
 - c. **SHALL** contain exactly one [1..1] `assignedEntity` (CONF:1098-8962).
 - i. This `assignedEntity` **SHALL** contain exactly one [1..1] `code` (CONF:1098-8968).
 1. This code **SHALL** contain exactly one [1..1] `@code="GUAR"` Guarantor (CONF:1098-16096).

2. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.5.110" (CONF:1098-32165).
 - ii. This assignedEntity **SHOULD** contain zero or one [0..1] US Realm Address (AD.US.FIELDDED) (identifier:
urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-8964).
 - iii. This assignedEntity **SHOULD** contain zero or more [0..*] **telecom** (CONF:1098-8965).
 - iv. **SHOULD** include assignedEntity/assignedPerson/name AND/OR
assignedEntity/representedOrganization/name (CONF:1098-8967).
9. **SHALL** contain exactly one [1..1] **participant** (CONF:1098-8916) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="COV" Coverage target (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8917).
 - b. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-16812).
 - i. This templateId **SHALL** contain exactly one [1..1]
@root="2.16.840.1.113883.10.20.22.4.89" Covered Party Participant (CONF:1098-16814).
 - c. **SHOULD** contain zero or one [0..1] **time** (CONF:1098-8918).
 - i. The time, if present, **SHOULD** contain zero or one [0..1] **low** (CONF:1098-8919).
 - ii. The time, if present, **SHOULD** contain zero or one [0..1] **high** (CONF:1098-8920).
 - d. **SHALL** contain exactly one [1..1] **participantRole** (CONF:1098-8921).
 - i. This participantRole **SHALL** contain at least one [1..*] **id** (CONF:1098-8922).
 1. This id is a unique identifier for the covered party member.
Implementers **SHOULD** use the same GUID for each instance of a member identifier from the same health plan (CONF:1098-8984).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **code** (CONF:1098-8923).
 1. This code **SHOULD** contain zero or one [0..1] @code, which **SHOULD** be selected from ValueSet Coverage Role Type
urn:oid:2.16.840.1.113883.1.11.18877 **DYNAMIC** (CONF:1098-16078).
 - iii. This participantRole **SHOULD** contain zero or one [0..1] **addr** (CONF:1098-8956).
 1. The content of addr **SHALL** be a conformant US Realm Address (AD.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:1098-10484).
 - iv. This participantRole **SHOULD** contain zero or one [0..1] **playingEntity** (CONF:1098-8932).

If the covered party's name is recorded differently in the health plan and in the registration/pharmacy benefit summary (due to marriage or for other reasons), use the name as it is recorded in the health plan.

1. The playingEntity, if present, **SHALL** contain at least one [1..*] **name** (CONF:1098-8930).

If the covered party's date of birth is recorded differently in the health plan and in the registration/pharmacy benefit summary, use the date of birth as it is recorded in the health plan.

2. The playingEntity, if present, **SHALL** contain exactly one [1..1] **sdtc:birthTime** (CONF:1098-31344).
 - a. The prefix sdtc: **SHALL** be bound to the namespace "urn:hl7-org:sdtc". The use of the namespace provides a necessary extension to CDA R2 for the use of the birthTime element (CONF:1098-31345).

When the Subscriber is the patient, the participant element describing the subscriber **SHALL NOT** be present. This information will be recorded instead in the data elements used to record member information.

10. **SHOULD** contain zero or one [0..1] **participant** (CONF:1098-8934) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="HLD"** Holder (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8935).
 - b. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-16813).
 - i. This templateId **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.90"** Policy Holder Participant (CONF:1098-16815).
 - c. **MAY** contain zero or one [0..1] **time** (CONF:1098-8938).
 - d. **SHALL** contain exactly one [1..1] **participantRole** (CONF:1098-8936).
 - i. This participantRole **SHALL** contain at least one [1..*] **id** (CONF:1098-8937).
 1. This id is a unique identifier for the subscriber of the coverage (CONF:1098-10120).
 - ii. This participantRole **SHOULD** contain zero or one [0..1] **addr** (CONF:1098-8925).
 1. The content of addr **SHALL** be a conformant US Realm Address (AD.US.FIELDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:1098-10483).
 - e. When the Subscriber is the patient, the participant element describing the subscriber **SHALL NOT** be present. This information will be recorded instead in the data elements used to record member information (CONF:1098-17139).
11. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1098-8939) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8940).
 - b. The target of a policy activity with act/entryRelationship/@typeCode="REFR" **SHALL** be an authorization activity (templateId 2.16.840.1.113883.10.20.1.19) **OR** an act, with act@classCode="ACT"] and act[@moodCode="DEF"], representing a description of the coverage plan (CONF:1098-8942).

- c. A description of the coverage plan **SHALL** contain one or more act/id, to represent the plan identifier, and an act/text with the name of the plan (CONF:1098-8943).

Table 128: Payer

Value Set: Payer urn:oid:2.16.840.1.114222.4.11.3591 A value set of Public Health Data Standards Consortium Source of Payment Typology Version 3.0 Codes Value Set Source: http://www.phdsc.org/standards/payer-typology.asp			
Code	Code System	Code System OID	Print Name
1	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388.3.3.221.5	Medicare
2	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388.3.3.221.5	Medicaid
311	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388.3.3.221.5	Tricare (CHAMPUS)
33	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388.3.3.221.5	Indian Health Service or Tribe
62	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388.3.3.221.5	BC Indemnity
61	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388.3.3.221.5	BC Managed Care
611	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388.3.3.221.5	BC Managed Care - HMO
619	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388.3.3.221.5	BC Managed Care - Other
613	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388.3.3.221.5	BC Managed Care - POS
612	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388.3.3.221.5	BC Managed Care - PPO
...			

Table 129: HL7FinanciallyResponsiblePartyType

Value Set: HL7FinanciallyResponsiblePartyType urn:oid:2.16.840.1.113883.1.11.10416 RoleClass 2.16.840.1.113883.5.110 http://www.hl7.org/memonly/downloads/v3edition.cfm#V32008 Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
GUAR	RoleClass	urn:oid:2.16.840.1.11388.3.5.110	Guarantor
EMP	RoleClass	urn:oid:2.16.840.1.11388.3.5.110	Employee
INVSBJ	RoleClass	urn:oid:2.16.840.1.11388.3.5.110	Investigation Subject

Table 130: Coverage Role Type

Value Set: Coverage Role Type urn:oid:2.16.840.1.113883.1.11.18877			
A value set of HL7 role Codes for role recognized through the issuance of insurance coverage to an identified covered party who has this relationship with the policy holder such as the policy holder themselves (self), spouse, child, etc.			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/inrastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
FAMDEP	RoleCode	urn:oid:2.16.840.1.113883.5.111	Family dependent
FSTUD	RoleCode	urn:oid:2.16.840.1.113883.5.111	Full-time student
SELF	RoleCode	urn:oid:2.16.840.1.113883.5.111	Self
...			

Figure 62: Policy Activity (V2) Example

```
<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.61" extension="2014-06-09" />
  <id root="3e676a50-7aac-11db-9fe1-0800200c9a66" />
  <code code="81" displayName="self-pay"
        codeSystemName="Source of Payment Typology (PHDSC)"
        codeSystem="2.16.840.1.113883.3.221.5" />
  <statusCode code="completed" />
  <!-- Insurance company information -->
  <performer typeCode="PRF">
    <templateId root="2.16.840.1.113883.10.20.22.4.87" />
    <time>
      <low nullFlavor="UNK" />
      <high nullFlavor="UNK" />
    </time>
    <assignedEntity>
      <id root="2.16.840.1.113883.19" />
      <code code="PAYOR" codeSystem="2.16.840.1.113883.5.110" codeSystemName="HL7
RoleCode" />
      <addr use="WP">
        <streetAddressLine>123 Insurance Road</streetAddressLine>
        <city>Blue Bell</city>
        <state>MA</state>
        <postalCode>02368</postalCode>
        <country>US</country>
        <!-- US is "United States" from ISO 3166-1 Country Codes: 1.0.3166.1 -->
      </addr>
      <telecom value="tel:+(555)555-1515" use="WP" />
      <representedOrganization>
        <name>Good Health Insurance</name>
        <telecom value="tel:+(555)555-1515" use="WP" />
        <addr use="WP">
          <streetAddressLine>123 Insurance Road</streetAddressLine>
          <city>Blue Bell</city>
          <state>MA</state>
          <postalCode>02368</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
  <!-- Guarantor information (the person responsible for the final bill) -->
  <performer typeCode="PRF">
    <templateId root="2.16.840.1.113883.10.20.22.4.88" />
    <time>
      <low nullFlavor="UNK" />
      <high nullFlavor="UNK" />
    </time>
    <assignedEntity>
      <id root="329fcdf0-7ab3-11db-9fe1-0800200c9a66" />
      <code code="GUAR" codeSystem="2.16.840.1.113883.5.111" codeSystemName="HL7
RoleCode" />
      <addr use="HP">
        <streetAddressLine>17 Daws Rd.</streetAddressLine>
        <city>Blue Bell</city>
        <state>MA</state>
```

```

        <postalCode>02368</postalCode>
        <country>US</country>
    </addr>
    <telecom value="tel:+(781)555-1212" use="HP" />
    <assignedPerson>
        <name>
            <prefix>Mr.</prefix>
            <given>Adam</given>
            <given>Frankie</given>
            <family>Everyman</family>
        </name>
    </assignedPerson>
</assignedEntity>
</performer>
<!-- Covered party -->
<participant typeCode="COV">
    <templateId root="2.16.840.1.113883.10.20.22.4.89.2" />
    <time>
        <low nullFlavor="UNK" />
        <high nullFlavor="UNK" />
    </time>
    <participantRole classCode="PAT">
        <!-- Health plan ID for patient. -->
        <id root="1.1.1.1.1.1.1.14" extension="1138345" />
        <code code="SELF" codeSystem="2.16.840.1.113883.5.111" />
        <addr use="HP">
            <streetAddressLine>17 Daws Rd.</streetAddressLine>
            <city>Blue Bell</city>
            <state>MA</state>
            <postalCode>02368</postalCode>
            <country>US</country>
        </addr>
        <playingEntity>
            <name>
                <!-- Name is needed if different than name on health plan. -->
                <prefix>Mr.</prefix>
                <given>Frank</given>
                <given>A.</given>
                <family>Everyman</family>
            </name>
        </playingEntity>
    </participantRole>
</participant>
<!-- Policy holder -->
<participant typeCode="HLD">
    <templateId root="2.16.840.1.113883.10.20.22.4.90.2" />
    <participantRole>
        <id extension="1138345" root="2.16.840.1.113883.19" />
        <addr use="HP">
            <streetAddressLine>17 Daws Rd.</streetAddressLine>
            <city>Blue Bell</city>
            <state>MA</state>
            <postalCode>02368</postalCode>
            <country>US</country>
        </addr>
    </participantRole>
</participant>

```

```

<entryRelationship typeCode="REFR">
  <act classCode="ACT" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.1.19" />
    . . .
  </act>
</entryRelationship>
</act>

```

4.22 Primary Tumor Clinical - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.36:2015-02-05
(open)]

Table 131: Primary Tumor Clinical Contexts

Contained By:	Contains:
TNM Clinical Stage Group (required)	

This template records the results of evaluating the tumor size or how far the primary tumor has spread directly to adjacent organs and structures.

Table 132: Primary Tumor Clinical Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.36:2015-02-05)					
@classCode	1..1	SHALL		1169-34077	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-34078	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1169-34074	
@root	1..1	SHALL		1169-34075	2.16.840.1.113883.10.13.36
@extension	1..1	SHALL		1169-34076	2015-02-05
code	1..1	SHALL		1169-34079	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34080	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21905-5
@codeSystem	1..1	SHALL		1169-34081	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL	CD	1169-34082	
@code	1..1	SHALL		1169-34083	urn:oid:2.16.840.1.113883.3.520.4.6 (TNM Clinical Tumor)
@codeSystem	1..1	SHALL		1169-34087	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.15.6
@sdct:valueSet	1..1	SHALL		1169-34088	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.3.520.4.6
originalText	0..1	SHOULD		1169-34084	
reference	0..1	SHOULD		1169-34085	
@value	0..1	SHOULD		1169-34086	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1169-34077).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1169-34078).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1169-34074) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.13.36" (CONF:1169-34075).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-02-05" (CONF:1169-34076).

4. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34079).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="21905-5" Primary tumor.clinical [Class] Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34080).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34081).
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1169-34082).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [TNM Clinical Tumor](#) urn:oid:2.16.840.1.113883.3.520.4.6 (CONF:1169-34083).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34087).
 - c. This value **SHALL** contain exactly one [1..1] **@sdtc:valueSet**="2.16.840.1.113883.3.520.4.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34088).
 - d. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-34084).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-34085).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1169-34086).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-34089).

Table 133: TNM Clinical Tumor

Value Set: TNM Clinical Tumor urn:oid:2.16.840.1.113883.3.520.4.6			
Detailed site-specific codes for the clinical tumor (T) as defined by AJCC and recorded by the physician.			
Note: The AJCC Staging Manual TNM system is proprietary and its definitions cannot be included in other documents without permission.			
Value Set Source:			
http://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.6			
Code	Code System	Code System OID	Print Name
TX	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	Site specific descriptions prevent listing of text equivalents.
Tis	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
Ta	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
T4d	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
T4c	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
T4b	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
T4a	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
T4	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
T3c	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
T3b	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
...			

Figure 63: Primary Tumor Clinical example

<pre> <observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.13.36" extension="2015-02-05" /> <code code="21905-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Primary tumor.clinical [Class] Cancer" /> <value xsi:type="CD" code="T2" codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" displayName="Tumor &gt; 20 mm but &lt;= to 50 mm in greatest dimension" sdtc:valueSet="2.16.840.1.113883.3.520.4.6"> <originalText> <reference value="#ClinicalPrimaryTumor_1" /> </originalText> </value> </observation> </pre>

4.23 Primary Tumor Pathologic - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.41:2015-02-05
(open)]

Table 134: Primary Tumor Pathologic Contexts

Contained By:	Contains:
TNM Pathologic Stage Group (required)	

This template records the results of evaluating the tumor size or how far the primary tumor has spread directly to adjacent organs and structures.

Table 135: Primary Tumor Pathologic Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.41:2015-02-05)					
@classCode	1..1	SHALL		1169-34187	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-34188	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1169-34186	
@root	1..1	SHALL		1169-34189	2.16.840.1.113883.10.13.41
@extension	1..1	SHALL		1169-34190	2015-02-05
code	1..1	SHALL		1169-34191	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34192	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21899-0
@codeSystem	1..1	SHALL		1169-34193	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL	CD	1169-34194	
@code	1..1	SHALL		1169-34195	urn:oid:2.16.840.1.113883.3.520.4.17 (TNM Pathologic Tumor)
@codeSystem	1..1	SHALL		1169-34196	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.15.6
@sdtc:valueSet	1..1	SHALL		1169-34197	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.3.520.4.17
originalText	0..1	SHOULD		1169-34198	
reference	0..1	SHOULD		1169-34199	
@value	0..1	SHOULD		1169-34200	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1169-34187).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1169-34188).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1169-34186) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.13.41" (CONF:1169-34189).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-02-05" (CONF:1169-34190).

4. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34191).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="21899-0" Primary tumor.pathology Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34192).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:1169-34193).
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1169-34194).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [TNM Pathologic Tumor](#) urn:oid:2.16.840.1.113883.3.520.4.17 (CONF:1169-34195).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34196).
 - c. This value **SHALL** contain exactly one [1..1] **@sdtc:valueSet**="2.16.840.1.113883.3.520.4.17" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34197).
 - d. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-34198).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-34199).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1169-34200).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-34201).

Table 136: TNM Pathologic Tumor

Value Set: TNM Pathologic Tumor urn:oid:2.16.840.1.113883.3.520.4.17

Detailed site-specific codes for the pathological tumor (T) as defined by AJCC and recorded by the physician.

Note: The AJCC Staging Manual TNM system is proprietary and its definitions cannot be included in other documents without permission.

Value Set Source:

<http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.17>

Code	Code System	Code System OID	Print Name
TX	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	Site specific descriptions prevent listing of text equivalents.
Tispu	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
Tispd	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
Tis	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
Ta	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
T4d	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
T4c	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
T4b	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
T4a	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
T4	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
...			

Figure 64: Primary Tumor Pathologic example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.41" extension="2015-02-05" />
  <code code="21899-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Primary tumor.pathology Cancer" />
  <value xsi:type="CD" code="T2" codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM
7. Edition" displayName="Tumor &gt; 20 mm but &lt;= to 50 mm in greatest dimension"
sdct:valueSet="2.16.840.1.113883.3.520.4.17" />
</observation>

```

4.24 Problem Concern Act (V2) - Published

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2014-06-09 (open)]

Table 137: Problem Concern Act (V2) Contexts

Contained By:	Contains:
Problem Section (entries required) (V2) (required)	Author Participation Problem Observation (V2)

This template reflects an ongoing concern on behalf of the provider that placed the concern on a patient's problem list. So long as the underlying condition is of concern to the provider (i.e., as long as the condition, whether active or resolved, is of ongoing concern and interest to the provider), the statusCode is "active". Only when the underlying condition is no longer of concern is the statusCode set to "completed". The effectiveTime reflects the time that the underlying condition was felt to be a concern; it may or may not correspond to the effectiveTime of the condition (e.g., even five years later, the clinician may remain concerned about a prior heart attack).

The statusCode of the Problem Concern Act is the definitive indication of the status of the concern, whereas the effectiveTime of the nested Problem Observation is the definitive indication of whether or not the underlying condition is resolved.

The effectiveTime/low of the Problem Concern Act asserts when the concern became active. This equates to the time the concern was authored in the patient's chart. The effectiveTime/high asserts when the concern was completed (e.g., when the clinician deemed there is no longer any need to track the underlying condition).

A Problem Concern Act can contain many Problem Observations (templateId 2.16.840.1.113883.10.20.22.4.4.2). Each Problem Observation is a discrete observation of a condition, and therefore will have a statusCode of "completed". The many Problem Observations nested under a Problem Concern Act reflect the change in the clinical understanding of a condition over time. For instance, a Concern may initially contain a Problem Observation of "chest pain":

- Problem Concern 1
 - Problem Observation: Chest Pain

Later, a new Problem Observation of "esophagitis" will be added, reflecting a better understanding of the nature of the chest pain. The later problem observation will have a more recent author time stamp.

- Problem Concern 1
 - Problem Observation (author/time Jan 3, 2012): Chest Pain
 - Problem Observation (author/time Jan 6, 2012): Esophagitis

Many systems display the nested Problem Observation with the most recent author time stamp, and provide a mechanism for viewing prior observations.

Table 138: Problem Concern Act (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2014-06-09)					
@classCode	1..1	SHALL		1098-9024	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-9025	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-16772	
@root	1..1	SHALL		1098-16773	2.16.840.1.113883.10.20.22.4.3
@extension	1..1	SHALL		1098-32509	2014-06-09
id	1..*	SHALL		1098-9026	
code	1..1	SHALL		1098-9027	
@code	1..1	SHALL		1098-19184	CONC
@codeSystem	1..1	SHALL		1098-32168	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = 2.16.840.1.113883.5.6
statusCode	1..1	SHALL		1098-9029	
@code	1..1	SHALL		1098-31525	urn:oid:2.16.840.1.113883.11.20.9.19 (ProblemAct statusCode)
effectiveTime	1..1	SHALL		1098-9030	
low	1..1	SHALL		1098-9032	
high	0..1	MAY		1098-9033	
author	0..*	SHOULD		1098-31146	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	1..*	SHALL		1098-9034	
@typeCode	1..1	SHALL		1098-9035	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1098-15980	Problem Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09)
entryRelationship	0..*	MAY		1098-31638	

@typeCode	1..1	SHALL		1098-31639	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-31640	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143

1. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-9024).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-9025).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-16772) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.3" (CONF:1098-16773).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32509).
4. **SHALL** contain at least one [1..*] id (CONF:1098-9026).
5. **SHALL** contain exactly one [1..1] code (CONF:1098-9027).
 - a. This code **SHALL** contain exactly one [1..1] @code="CONC" Concern (CONF:1098-19184).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.6" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-32168).
6. **SHALL** contain exactly one [1..1] statusCode (CONF:1098-9029).

The statusCode of the Problem Concern Act is the definitive indication of the status of the concern, whereas the effectiveTime of the nested Problem Observation is the definitive indication of whether or not the underlying condition is resolved.

- a. This statusCode **SHALL** contain exactly one [1..1] @code, which **SHALL** be selected from ValueSet [ProblemAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.19 **STATIC** 2011-09-10 (CONF:1098-31525).
7. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1098-9030).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] low (CONF:1098-9032).
Note: The effectiveTime/low asserts when the concern became active. This equates to the time the concern was authored in the patient's chart.
 - b. This effectiveTime **MAY** contain zero or one [0..1] high (CONF:1098-9033).
Note: The effectiveTime/high asserts when the concern was completed (e.g., when the clinician deemed there is no longer any need to track the underlying condition).
8. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31146).
9. **SHALL** contain at least one [1..*] entryRelationship (CONF:1098-9034) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-9035).

- b. **SHALL** contain exactly one [1..1] [Problem Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09) (CONF:1098-15980).

The following entryRelationship represents the importance of the concern to a provider.

- 10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31638) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31639).
 - b. **SHALL** contain exactly one [1..1] **Priority Preference** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31640).

Figure 65: Problem Concern Act (V2) Example

```
<act classCode="ACT" moodCode="EVN">
  <!-- ** Problem Concern Act (V2) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.3"
    extension="2014-06-09" />
  <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7" />
  <code code="CONC" codeSystem="2.16.840.1.113883.5.6" displayName="Concern" />
  <!-- The statusCode represents the need to continue tracking the problem -->
  <!-- This is of ongoing concern to the provider -->
  <statusCode code="active" />
  <effectiveTime>
    <!-- The low value represents when the problem was first recorded in the patient's
  chart -->
    <!-- Concern was documented on July 6, 2013 -->
    <low value="201307061145-0800" />
  </effectiveTime>
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    <!-- Same as Concern effectiveTime/low -->
    <time value="201307061145-0800" />
    <assignedAuthor>
      <id extension="555555555" root="2.16.840.1.113883.4.6" />
      <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.6.101"
      codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
    </assignedAuthor>
  </author>
  <entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Problem Observation (V2) ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
      <code code="75323-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Condition" />
      <!-- The statusCode reflects the status of the observation itself -->
      <statusCode code="completed" />
      <effectiveTime>
        <!-- The low value reflects the date of onset -->
        <!-- Based on patient symptoms, presumed onset is July 3, 2013 -->
        <low value="20130703" />
        <!-- The high value reflects when the problem was known to be resolved -->
        <!-- Based on signs and symptoms, appears to be resolved on Aug 14, 2013 -->
        <high value="20080814" />
      </effectiveTime>
      <value xsi:type="CD"
        code="233604007"
        codeSystem="2.16.840.1.113883.6.96"
        displayName="Pneumonia" />
      <author typeCode="AUT">
        <templateId root="2.16.840.1.113883.10.20.22.4.119" />
        <time value="200808141030-0800" />
        <assignedAuthor>
          <id extension="555555555" root="2.16.840.1.113883.4.6" />
          <code code="207QA0505X"
            displayName="Adult Medicine"
            codeSystem="2.16.840.1.113883.6.101"
          />
        </assignedAuthor>
      </author>
    </observation>
  </entryRelationship>
</act>
```

```

        codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
    </assignedAuthor>
</author>
</observation>
</entryRelationship>
</act>

```

4.25 Problem Concern Act (V2) - Cancer IG Specific Constraints - Published

[act: identifier urn:hl7ii:2.16.840.1.113883.10.13.22:2014-08-08 (open)]

Table 139: Problem Concern Act (V2) - Cancer IG Specific Constraints Contexts

Contained By:	Contains:
Problem Section (entries required) (V2) - Cancer IG Specific Constraints (required)	Problem Observation (V2) - Cancer IG Specific Constraints

This template defines Cancer Event Report-specific constraints to the C-CDA R2.0 Problem Concern Act (V2). It requires the Problem Observation (V2) – Cancer IG Specific Constraints template to be used.

Table 140: Problem Concern Act (V2) - Cancer IG Specific Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.13.22:2014-08-08)					
@classCode	1..1	SHALL		1126-33255	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1126-33257	urn:oid:2.16.840.1.113883.5.100 1 (ActMood) = EVN
templateId	1..1	SHALL		1126-33254	
@root	1..1	SHALL		1126-33256	2.16.840.1.113883.10.13.22
@extension	1..1	SHALL		1126-33963	2014-08-08
entryRelationship	1..*	SHALL		1126-33258	
@typeCode	1..1	SHALL		1126-33259	urn:oid:2.16.840.1.113883.5.100 2 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1126-33260	Problem Observation (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.13.23:2014-08-08)

1. Conforms to [Problem Concern Act \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode="ACT"** Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33255).
3. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33257).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33254) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.13.22"** (CONF:1126-33256).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-08-08"** (CONF:1126-33963).
5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1126-33258) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33259).
 - b. **SHALL** contain exactly one [1..1] [Problem Observation \(V2\) - Cancer IG Specific Constraints](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.23:2014-08-08) (CONF:1126-33260).

Figure 66: Problem Concern Act (V2) - Cancer IG Specific Constraints example

```

<act classCode="ACT" moodCode="EVN">
  <!-- ** Problem concern act ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.3" extension="2014-06-09" />
  <templateId root="2.16.840.1.113883.10.13.22" extension="2014-08-08" />
  <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7" />
  <code code="CONC" codeSystem="2.16.840.1.113883.5.6" codeSystemName="HL7ActClass"
displayName="Concern" />
  <!-- The statusCode represents the need to continue tracking the problem -->
  <!-- This is of ongoing concern to the provider -->
  <statusCode code="active" />
  <effectiveTime>
    <!-- The low value represents when the problem was first recorded
         in the patient's chart -->
    <!-- Concern was documented on July 6, 2013 -->
    <low value="201307061145-0800" />
  </effectiveTime>
  <author typeCode="AUT">
    <!-- Same as Concern effectiveTime/low -->
    <time value="201307061145-0800" />
    <assignedAuthor>
      <id extension="555555555" root="2.16.840.1.113883.19" />
    </assignedAuthor>
  </author>
  <entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Problem observation ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <templateId root="2.16.840.1.113883.10.13.23" extension="2014-08-08" />
      <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
      <code code="64572001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Condition" />
      <!-- The statusCode reflects the status of the observation itself -->
      <statusCode code="completed" />
      <effectiveTime>
        <!-- The low value reflects the date of onset -->
        <low value="20080814" />
        <!-- The high value reflects when the problem was known to be resolved -->
        <high value="20130703" />
      </effectiveTime>
      <value xsi:type="CD" code="408643008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Infiltrating duct carcinoma of breast"
sdct:valueSet="2.16.840.1.113883.3.88.12.3221.7.4 " />
      <author typeCode="AUT">
        <time value="201307061145-0800" />
        <assignedAuthor>
          <id extension="555555555" root="2.16.840.1.113883.19" />
        </assignedAuthor>
      </author>
    </observation>
  </entryRelationship>
</act>

```

4.26 Problem Observation (V2) - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09
(open)]

Table 141: Problem Observation (V2) Contexts

Contained By:	Contains:
Problem Concern Act (V2) (required)	Author Participation Problem Status (DEPRECATED)

This template reflects a discrete observation about a patient's problem. Because it is a discrete observation, it will have a statusCode of "completed". The effectiveTime, also referred to as the “biologically relevant time” is the time at which the observation holds for the patient. For a provider seeing a patient in the clinic today, observing a history of heart attack that occurred five years ago, the effectiveTime is five years ago.

The effectiveTime of the Problem Observation is the definitive indication of whether or not the underlying condition is resolved. If the problem is known to be resolved, then an effectiveTime/high would be present. If the date of resolution is not known, then effectiveTime/high will be present with a nullFlavor of "UNK".

Table 142: Problem Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09)					
@classCode	1..1	SHALL		1098-9041	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-9042	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
@negationInd	0..1	MAY		1098-10139	
templateId	1..1	SHALL		1098-14926	
@root	1..1	SHALL		1098-14927	2.16.840.1.113883.10.20.22.4.4
@extension	1..1	SHALL		1098-32508	2014-06-09
id	1..*	SHALL		1098-9043	
code	1..1	SHALL		1098-9045	urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type)
statusCode	1..1	SHALL		1098-9049	
@code	1..1	SHALL		1098-19112	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-9050	
low	1..1	SHALL		1098-15603	
high	0..1	MAY		1098-15604	
value	1..1	SHALL	CD	1098-9058	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem)
qualifier	0..*	MAY		1098-31870	
translation	0..*	MAY		1098-16749	
@code	0..1	MAY		1098-16750	urn:oid:2.16.840.1.113883.6.90 (ICD10CM)
@code	0..1	MAY		1098-31871	
author	0..*	SHOULD		1098-31147	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..1	MAY		1098-9059	
@typeCode	1..1	SHALL		1098-9060	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) =

					SUBJ
@inversionInd	1..1	SHALL		1098-9069	true
observation	1..1	SHALL		1098-15590	Age Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31
entryRelationship	0..1	MAY		1098-29951	
@typeCode	1..1	SHALL		1098-31531	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-29952	Prognosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113
entryRelationship	0..*	MAY		1098-31063	
@typeCode	1..1	SHALL		1098-31532	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-31064	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143
entryRelationship	0..1	MAY		1098-9063	
@typeCode	1..1	SHALL		1098-9068	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-15591	Problem Status (DEPRECATED) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09

1. **SHALL** contain exactly one [1..1] @**classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-9041).
2. **SHALL** contain exactly one [1..1] @**moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-9042).

The negationInd is used to indicate the absence of the condition in observation/value. A negationInd of "true" coupled with an observation/value of SNOMED code 64572001 "Disease (disorder)" indicates that the patient has no known conditions.

3. **MAY** contain zero or one [0..1] @**negationInd** (CONF:1098-10139).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-14926) such that it
 - a. **SHALL** contain exactly one [1..1] @**root**="2.16.840.1.113883.10.20.22.4.4" (CONF:1098-14927).
 - b. **SHALL** contain exactly one [1..1] @**extension**="2014-06-09" (CONF:1098-32508).
5. **SHALL** contain at least one [1..*] **id** (CONF:1098-9043).

6. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Problem Type](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 **STATIC** 2014-09-02 (CONF:1098-9045).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-9049).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19112).

If the problem is known to be resolved, but the date of resolution is not known, then the high element **SHALL** be present, and the nullFlavor attribute **SHALL** be set to 'UNK'. Therefore, the existence of an high element within a problem does indicate that the problem has been resolved.

8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-9050).

The effectiveTime/low (a.k.a. "onset date") asserts when the condition became biologically active.

- a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1098-15603).

The effectiveTime/high (a.k.a. "resolution date") asserts when the condition became biologically resolved.

- b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1098-15604).

9. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHOULD** be selected from ValueSet [Problem](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1098-9058).

The observation/value and all the qualifiers together (often referred to as a post-coordinated expression) make up one concept. Qualifiers constrain the meaning of the primary code, and cannot negate it or change its meaning. Qualifiers can only be used according to well-defined rules of post-coordination and only if the underlying code system defines the use of such qualifiers or if there is a third code system that specifies how other code systems may be combined.

For example, SNOMED CT allows constructing concepts as a combination of multiple codes. SNOMED CT defines a concept "pneumonia (disorder)" (233604007) an attribute "finding site" (363698007) and another concept "left lower lobe of lung (body structure)" (41224006). SNOMED CT allows one to combine these codes in a code phrase, as shown in the sample XML.

- a. This value **MAY** contain zero or more [0..*] **qualifier** (CONF:1098-31870).
 - b. This value **MAY** contain zero or more [0..*] **translation** (CONF:1098-16749) such that it
 - i. **MAY** contain zero or one [0..1] **@code** (CodeSystem: ICD10CM urn:oid:2.16.840.1.113883.6.90 **STATIC**) (CONF:1098-16750).

A negationInd of "true" coupled with an observation/value/@code of SNOMED code 64572001 "Disease (disorder)" indicates that the patient has no known conditions.

- c. This value **MAY** contain zero or one [0..1] **@code** (CONF:1098-31871).

10. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31147).

11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-9059) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-9060).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-9069).
 - c. **SHALL** contain exactly one [1..1] Age Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31) (CONF:1098-15590).
12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-29951) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31531).
 - b. **SHALL** contain exactly one [1..1] Prognosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113) (CONF:1098-29952).
13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31063) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31532).
 - b. **SHALL** contain exactly one [1..1] Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31064).
14. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-9063) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-9068).
 - b. **SHALL** contain exactly one [1..1] **Problem Status (DEPRECATED)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09) (CONF:1098-15591).

Figure 67: Problem Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Problem Observation (V2) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
  <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
  <code code="75323-6"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Condition" />
  <!-- The statusCode reflects the status of the observation itself -->
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value reflects the date of onset -->
    <!-- Based on patient symptoms, presumed onset is July 3, 2013 -->
    <low value="20130703" />
    <!-- The high value reflects when the problem was known to be resolved -->
    <!-- Based on signs and symptoms, appears to be resolved on Aug 14, 2013 -->
    <high value="20080814" />
  </effectiveTime>
  <value xsi:type="CD"
    code="233604007"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Pneumonia" />
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    <time value="200808141030-0800" />
    <assignedAuthor>
      <id extension="555555555" root="2.16.840.1.113883.4.6" />
      <code code="207QA0505X"
        displayName="Adult Medicine"
        codeSystem="2.16.840.1.113883.6.101"
        codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
    </assignedAuthor>
  </author>
</observation>
```


Figure 68: No Known Problems Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="true">
  <!-- Model of Meaning for No Problems -->
  <!-- This is more consistent with how we did no known allergies. -->
  <!-- The use of negationInd corresponds with the newer Observation.ValueNegationInd -->
  <!-- The negationInd = true negates the value element. -->
  <!-- problem observation template -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"
    extension="2014-06-09" />
  <id root="4adc1021-7b14-11db-9fe1-0800200c9a67" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <text>
    <reference value="#problems1" />
  </text>
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20130607160506" />
  </effectiveTime>
  <!-- The time when this was biologically relevant, i.e., true for the patient. -->
  <!-- As a minimum time interval over which this is true, populate the effectiveTime/low
with the current time. -->
  <!-- It would be equally valid to have a longer range of time over which this statement
was represented as being true. -->
  <!-- As a maximum, you would never indicate an effectiveTime/high that was greater than
the current point in time. -->
  <!-- This idea assumes that the value element could come from the Problem value set, or--
>
  <!-- when negationInd was true, is could also come from the ProblemType value set (and
code would be ASSERTION). -->
  <value xsi:type="CD" code="55607006" displayName="Problem"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <originalText>
      <reference value="#problemType1" />
    </originalText>
  </value>
</observation>
```

Figure 69: Resolved Problem and Resolved Concern Example

```
<act classCode="ACT" moodCode="EVN">
  <!-- ** Problem concern act (V2) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.3"
    extension="2014-06-09" />
  <id root="b5159d48-04aa-4927-b355-00d1dcb7158c" />
  <code code="CONC" codeSystem="2.16.840.1.113883.5.6" displayName="Concern" />
  <!-- The statusCode represents the need to continue tracking the problem -->
  <!-- This is no longer of ongoing concern to the provider -->
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value represents when the problem was first recorded in the patient's
chart -->
    <!-- Concern was documented on Mar 10, 1998 -->
    <low value="199803101030-0800" />
    <!-- The high value reflects when there was no longer a need to track the problem -->
    <!-- Concern was closed on May 4, 1998 -->
    <high value="199805041145-0800" />
  </effectiveTime>
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    <!-- Same as Concern effectiveTime/low -->
    <time value="199803161030-0800" />
    <assignedAuthor>
      <id extension="555555555" root="2.16.840.1.113883.4.6" />
      <code code="207QA0505X"
        displayName="Adult Medicine"
        codeSystem="2.16.840.1.113883.6.101"
        codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
    </assignedAuthor>
  </author>
  <entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Problem observation (V2) ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"
        extension="2014-06-09" />
      <id root="10506b4d-c30a-4220-8bec-97bff9568fd1" />
      <code code="75323-6"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Condition" />
      <!-- The statusCode reflects the status of the observation itself -->
      <statusCode code="completed" />
      <effectiveTime>
        <!-- The low value reflects the date of onset -->
        <!-- Based on patient symptoms, presumed onset is Mar 10, 1998 -->
        <low value="19980310" />
        <!-- The high value reflects when the problem was known to be resolved -->
        <high value="19980316" />
      </effectiveTime>
      <value xsi:type="CD"
        code="233604007"
        codeSystem="2.16.840.1.113883.6.96"
        displayName="Pneumonia">
        <qualifier>
          <name code="363698007" displayName="Finding site" />
        </qualifier>
      </value>
    </observation>
  </entryRelationship>
</act>
```

```

        <value code="41224006" displayName="Left lower lobe of lung" />
      </qualifier>
    </value>
    <author typeCode="AUT">
      <templateId root="2.16.840.1.113883.10.20.22.4.119" />
      <time value="199803161030-0800" />
      <assignedAuthor>
        <id extension="555555555" root="2.16.840.1.113883.4.6" />
        <code code="207QA0505X"
          displayName="Adult Medicine"
          codeSystem="2.16.840.1.113883.6.101"
          codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
      </assignedAuthor>
    </author>
  </observation>
</entryRelationship>
</act>

```

Figure 70: Problem with Qualifiers Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Problem observation (V2) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"
    extension="2014-06-09" />
  <id root="10506b4d-c30a-4220-8bec-97bff9568fd1" />
  <code code="75323-6"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Condition" />
  <!-- The statusCode reflects the status of the observation itself -->
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value reflects the date of onset -->
    <!-- Based on patient symptoms, presumed onset is Mar 10, 1998 -->
    <low value="19980310" />
    <!-- The high value reflects when the problem was known to be resolved -->
    <high value="19980316" />
  </effectiveTime>
  <value xsi:type="CD"
    code="233604007"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Pneumonia">
    <qualifier>
      <name code="363698007" displayName="Finding site" />
      <value code="41224006" displayName="Left lower lobe of lung" />
    </qualifier>
  </value>
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    <time value="199803161030-0800" />
    <assignedAuthor>
      <id extension="555555555" root="2.16.840.1.113883.4.6" />
      <code code="207QA0505X"
        displayName="Adult Medicine"
        codeSystem="2.16.840.1.113883.6.101"
        codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
    </assignedAuthor>
  </author>
</observation>
```

4.27 Problem Observation (V2) - Cancer IG Specific Constraints - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.23:2014-08-08 (open)]

Table 143: Problem Observation (V2) - Cancer IG Specific Constraints Contexts

Contained By:	Contains:
Problem Concern Act (V2) - Cancer IG Specific Constraints (required)	

This template defines Cancer Event Report-specific constraints to the C-CDA R2.0 Problem Observation (V2). It further defines value sets that should be used to represent the problem.

Table 144: Problem Observation (V2) - Cancer IG Specific Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.23:2014-08-08)					
@classCode	1..1	SHALL		1126-33261	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1126-33262	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1126-33263	
@root	1..1	SHALL		1126-33264	2.16.840.1.113883.10.13.23
@extension	1..1	SHALL		1126-33964	2014-08-08
value	1..1	SHALL	CD	1126-33265	
@code	1..1	SHALL		1126-33267	
@codeSystem	1..1	SHALL		1126-33269	
@displayName	1..1	SHALL		1126-33270	
@sdct:valueSet	0..1	MAY		1126-34005	

1. Conforms to [Problem Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33261).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33262).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33263) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.23" (CONF:1126-33264).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33964).
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1126-33265).
 - a. This value **SHALL** contain exactly one [1..1] **@code** (CONF:1126-33267).
 - i. **@code** in a problem observation **SHALL** be selected from:
 - (a) **Problem Value Set** (Value Set OID: 2.16.840.1.113883.3.88.12.3221.7.4) or
 - (b) **ICD-10-CM** (CodeSystem: 2.16.840.1.113883.6.90) or
 - (c) **ICD-9-CM** (CodeSystem: 2.16.840.1.113883.6.103) (CONF:1126-33268).

Note: Problem Value Set a subset of SNOMED CT CodeSystem: 2.16.840.1.113883.6.96).

- b. This value **SHALL** contain exactly one [1..1] @**codeSystem** (CONF:1126-33269).
 - i. @**codeSystem** associated with the code for problem **SHALL** be selected from:
 - (a) **SNOMED-CT** (Code System: 2.16.840.1.113883.6.96) or
 - (b) **ICD-10-CM** (CodeSystem: 2.16.840.1.113883.6.90) or
 - (c) **ICD-9-CM** (CodeSystem: 2.16.840.1.113883.6.103) (CONF:1126-33601).Note: Problem Value Set a subset of SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96).
- c. This value **SHALL** contain exactly one [1..1] @**displayName** (CONF:1126-33270).
 - i. @**displayName** associated with the code for problem **SHALL** be selected from:
 - (a) **Problem Value Set** (Value Set OID: 2.16.840.1.113883.3.88.12.3221.7.4) or
 - (b) **ICD-10-CM** (CodeSystem: 2.16.840.1.113883.6.90) or
 - (c) **ICD-9-CM** (CodeSystem: 2.16.840.1.113883.6.103) (CONF:1126-33271).
- d. This value **MAY** contain zero or one [0..1] @**sdct:valueSet** (CONF:1126-34005).

Figure 71: Problem Observation (V2) - Cancer IG Specific Constraints example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Problem observation ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
  <templateId root="2.16.840.1.113883.10.13.23" extension="2014-08-08" />
  <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
  <code code="64572001" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"
  displayName="Condition" />
  <!-- The statusCode reflects the status of the observation itself -->
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value reflects the date of onset -->
    <low value="20080814" />
    <!-- The high value reflects when the problem was known to be resolved -->
    <high value="20130703" />
  </effectiveTime>
  <value xsi:type="CD" code="408643008" codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT" displayName="Infiltrating duct carcinoma of breast" />
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    <time value="201307061145-0800" />
    <assignedAuthor>
      <id extension="555555555" root="2.16.840.1.113883.19" />
    </assignedAuthor>...
  </author>
</observation>
```

4.28 Problem Status (DEPRECATED) - Deprecated

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09 (open)]

Table 145: Problem Status (DEPRECATED) Contexts

Contained By:	Contains:
Problem Observation (V2) (optional)	

The Problem Status records whether the indicated problem is active, inactive, or resolved.

THIS TEMPLATE HAS BEEN DEPRECATED IN C-CDA R2 AND MAY BE DELETED FROM A FUTURE RELEASE OF THIS IMPLEMENTATION GUIDE. USE OF THIS TEMPLATE IS NOT RECOMMENDED.

Reason for deprecation: Per the explanation in Consolidated CDA R2, Volume 1, Section 3.2 "Determining a Clinical Statement's Status", the status of a problem is determined based on attributes of the Problem Observation.

Table 146: Problem Status (DEPRECATED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09)					
@classCode	1..1	SHALL		1098-7357	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7358	urn:oid:2.16.840.1.113883.5.100 1 (ActMood) = EVN
templateId	1..1	SHALL		1098-7359	
@root	1..1	SHALL		1098-10518	2.16.840.1.113883.10.20.22.4.6
@extension	1..1	SHALL		1098-32581	2014-06-09
code	1..1	SHALL		1098-19162	
@code	1..1	SHALL		1098-19163	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 33999-4
statusCode	1..1	SHALL		1098-7364	
@code	1..1	SHALL		1098-19113	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1098-7365	urn:oid:2.16.840.1.113883.3.88.1 2.80.68 (Problem Status)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7357).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7358).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7359) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.6" (CONF:1098-10518).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32581).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1098-19162).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="33999-4" Status (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:1098-19163).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7364).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19113).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [Problem Status](#) urn:oid:2.16.840.1.113883.3.88.12.80.68 **DYNAMIC** (CONF:1098-7365).

Table 147: Problem Status

Value Set: Problem Status urn:oid:2.16.840.1.113883.3.88.12.80.68 A value set of SNOMED-CT codes reflecting state of existence. Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
55561003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Active
73425007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Inactive
413322009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Resolved

4.29 Procedure Activity Procedure (V2) - Published

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09 (open)]

Table 148: Procedure Activity Procedure (V2) Contexts

Contained By:	Contains:
Procedures Section (entries required) (V2) (optional)	Author Participation Indication (V2) Medication Activity (V2) Service Delivery Location

The common notion of "procedure" is broader than that specified by the HL7 Version 3 Reference Information Model (RIM). Therefore procedure templates can be represented with

various RIM classes: act (e.g., dressing change), observation (e.g., EEG), procedure (e.g., splenectomy).

This template represents procedures whose immediate and primary outcome (post-condition) is the alteration of the physical condition of the patient. Examples of these procedures are an appendectomy, hip replacement, and a creation of a gastrostomy.

This template can be used with a contained Product Instance template to represent a device in or on a patient. In this case, targetSiteCode is used to record the location of the device in or on the patient's body. Equipment supplied to the patient (e.g., pumps, inhalers, wheelchairs) is represented by the Non-Medicinal Supply Activity (V2) template.

Table 149: Procedure Activity Procedure (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09)					
@classCode	1..1	SHALL		1098-7652	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		1098-7653	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7654	
@root	1..1	SHALL		1098-10521	2.16.840.1.113883.10.20.22.4.14
@extension	1..1	SHALL		1098-32506	2014-06-09
id	1..*	SHALL		1098-7655	
code	1..1	SHALL		1098-7656	
originalText	0..1	SHOULD		1098-19203	
reference	0..1	SHOULD		1098-19204	
@value	0..1	SHOULD		1098-19205	
statusCode	1..1	SHALL		1098-7661	
@code	1..1	SHALL		1098-32366	urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode)
effectiveTime	0..1	SHOULD		1098-7662	
priorityCode	0..1	MAY		1098-7668	urn:oid:2.16.840.1.113883.1.11.16866 (Act Priority)
methodCode	0..1	MAY		1098-7670	
targetSiteCode	0..*	SHOULD		1098-7683	
@code	1..1	SHALL		1098-16082	urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
specimen	0..*	MAY		1098-7697	
specimenRole	1..1	SHALL		1098-7704	
id	0..*	SHOULD		1098-7716	
performer	0..*	SHOULD		1098-7718	

assignedEntity	1..1	SHALL		1098-7720	
id	1..*	SHALL		1098-7722	
addr	1..*	SHALL		1098-7731	
telecom	1..*	SHALL		1098-7732	
representedOrganization	0..1	SHOULD		1098-7733	
id	0..*	SHOULD		1098-7734	
name	0..*	MAY		1098-7735	
telecom	1..1	SHALL		1098-7737	
addr	1..1	SHALL		1098-7736	
author	1..*	SHOULD		1098-32479	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..*	MAY		1098-7751	
@typeCode	1..1	SHALL		1098-7752	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DEV
participantRole	1..1	SHALL		1098-15911	Product Instance (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37)
participant	0..*	MAY		1098-7765	
@typeCode	1..1	SHALL		1098-7766	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		1098-15912	Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32)
entryRelationship	0..*	MAY		1098-7768	
@typeCode	1..1	SHALL		1098-7769	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
@inversionInd	1..1	SHALL		1098-8009	true
encounter	1..1	SHALL		1098-7770	
@classCode	1..1	SHALL		1098-7771	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC

@moodCode	1..1	SHALL		1098-7772	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
id	1..1	SHALL		1098-7773	
entryRelationship	0..1	MAY		1098-7775	
@typeCode	1..1	SHALL		1098-7776	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-7777	true
act	1..1	SHALL		1098-31395	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)
entryRelationship	0..*	MAY		1098-7779	
@typeCode	1..1	SHALL		1098-7780	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-15914	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..*	MAY		1098-7886	
@typeCode	1..1	SHALL		1098-7887	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
substanceAdministration	1..1	SHALL		1098-15915	Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09)
entryRelationship	0..*	MAY		1098-32473	
@typeCode	1..1	SHALL		1098-32474	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1098-32475	Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7652).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7653).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-7654) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.14" (CONF:1098-10521).

- b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32506).
- 4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7655).
- 5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-7656).
 - a. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1098-19203).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1098-19204).
 - 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-19205).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1098-19206).
 - b. This **@code** **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (CodeSystem: 2.16.840.1.113883.6.12) or ICD10 PCS (CodeSystem: 2.16.840.1.113883.6.4) or CDT-2 (Code System: 2.16.840.1.113883.6.13) (CONF:1098-19207).
- 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7661).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ProcedureAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.22 **STATIC** 2014-04-23 (CONF:1098-32366).
- 7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7662).
- 8. **MAY** contain zero or one [0..1] **priorityCode**, which **SHALL** be selected from ValueSet [Act Priority](#) urn:oid:2.16.840.1.113883.1.11.16866 **DYNAMIC** (CONF:1098-7668).
- 9. **MAY** contain zero or one [0..1] **methodCode** (CONF:1098-7670).
 - a. MethodCode **SHALL NOT** conflict with the method inherent in Procedure / code (CONF:1098-7890).

In the case of an implanted medical device, targetSiteCode is used to record the location of the device, in or on the patient's body.

- 10. **SHOULD** contain zero or more [0..*] **targetSiteCode** (CONF:1098-7683).
 - a. The targetSiteCode, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Body Site](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-16082).
- 11. **MAY** contain zero or more [0..*] **specimen** (CONF:1098-7697).
 - a. The specimen, if present, **SHALL** contain exactly one [1..1] **specimenRole** (CONF:1098-7704).
 - i. This specimenRole **SHOULD** contain zero or more [0..*] **id** (CONF:1098-7716).
 - 1. If you want to indicate that the Procedure and the Results are referring to the same specimen, the Procedure/specimen/specimenRole/id **SHOULD** be set to equal an Organizer/specimen/ specimenRole/id (CONF:1098-29744).

- b. This specimen is for representing specimens obtained from a procedure (CONF:1098-16842).
- 12. **SHOULD** contain zero or more [0..*] **performer** (CONF:1098-7718) such that it
 - a. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-7720).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-7722).
 - ii. This assignedEntity **SHALL** contain at least one [1..*] **addr** (CONF:1098-7731).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1098-7732).
 - iv. This assignedEntity **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:1098-7733).
 - 1. The representedOrganization, if present, **SHOULD** contain zero or more [0..*] **id** (CONF:1098-7734).
 - 2. The representedOrganization, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-7735).
 - 3. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **telecom** (CONF:1098-7737).
 - 4. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **addr** (CONF:1098-7736).
- 13. **SHOULD** contain at least one [1..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32479).
- 14. **MAY** contain zero or more [0..*] **participant** (CONF:1098-7751) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="DEV"** Device (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7752).
 - b. **SHALL** contain exactly one [1..1] Product Instance (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37) (CONF:1098-15911).
- 15. **MAY** contain zero or more [0..*] **participant** (CONF:1098-7765) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-7766).
 - b. **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1098-15912).
- 16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7768) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7769).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-8009).
 - c. **SHALL** contain exactly one [1..1] **encounter** (CONF:1098-7770).
 - i. This encounter **SHALL** contain exactly one [1..1] **@classCode="ENC"** Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7771).

- ii. This encounter **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7772).
 - iii. This encounter **SHALL** contain exactly one [1..1] id (CONF:1098-7773).
 - 1. Set the encounter ID to the ID of an encounter in another section to signify they are the same encounter (CONF:1098-16843).
- 17. **MAY** contain zero or one [0..1] entryRelationship (CONF:1098-7775) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="SUBJ" Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7776).
 - b. **SHALL** contain exactly one [1..1] @inversionInd="true" true (CONF:1098-7777).
 - c. **SHALL** contain exactly one [1..1] Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31395).
- 18. **MAY** contain zero or more [0..*] entryRelationship (CONF:1098-7779) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7780).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-15914).
- 19. **MAY** contain zero or more [0..*] entryRelationship (CONF:1098-7886) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" Has Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7887).
 - b. **SHALL** contain exactly one [1..1] [Medication Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:1098-15915).
- 20. **MAY** contain zero or more [0..*] entryRelationship (CONF:1098-32473) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" Has Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32474).
 - b. **SHALL** contain exactly one [1..1] Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1098-32475).

Table 150: Act Priority

Value Set: Act Priority urn:oid:2.16.840.1.113883.1.11.16866			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.htm			
Code	Code System	Code System OID	Print Name
A	ActPriority	urn:oid:2.16.840.1.113883.5.7	ASAP
CR	ActPriority	urn:oid:2.16.840.1.113883.5.7	Callback results
CS	ActPriority	urn:oid:2.16.840.1.113883.5.7	Callback for scheduling
CSP	ActPriority	urn:oid:2.16.840.1.113883.5.7	Callback placer for scheduling
CSR	ActPriority	urn:oid:2.16.840.1.113883.5.7	Contact recipient for scheduling
EL	ActPriority	urn:oid:2.16.840.1.113883.5.7	Elective
EM	ActPriority	urn:oid:2.16.840.1.113883.5.7	Emergency
P	ActPriority	urn:oid:2.16.840.1.113883.5.7	Preoperative
PRN	ActPriority	urn:oid:2.16.840.1.113883.5.7	As needed
R	ActPriority	urn:oid:2.16.840.1.113883.5.7	Routine
...			

Table 151: ProcedureAct statusCode

Value Set: ProcedureAct statusCode urn:oid:2.16.840.1.113883.11.20.9.22			
Code System: ActStatus 2.16.840.1.113883.5.14			
A ValueSet of HL7 actStatus codes for use with a procedure activity			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
completed	ActStatus	urn:oid:2.16.840.1.113883.5.14	Completed
active	ActStatus	urn:oid:2.16.840.1.113883.5.14	Active
aborted	ActStatus	urn:oid:2.16.840.1.113883.5.14	Aborted
cancelled	ActStatus	urn:oid:2.16.840.1.113883.5.14	Cancelled

Figure 72: Procedure Activity Procedure (V2) Example

```
<procedure classCode="PROC" moodCode="EVN">
  <!-- Procedure Activity Procedure V2-->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09" />
  <id root="d5b614bd-01ce-410d-8726-e1fd01dcc72a" />
  <code code="103716009" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"
displayName="Stent Placement">
    <originalText>
      <reference value="#Proc1" />
    </originalText>
  </code>
  <statusCode code="completed" />
  <effectiveTime value="20130512" />
  <targetSiteCode code="28273000" displayName="bile duct"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
  <specimen typeCode="SPC">
    <specimenRole classCode="SPEC">
      <id root="a6d7b927-2b70-43c7-bdf3-0e7c4133062c" />
      <specimenPlayingEntity>
        <code code="57259009" codeSystem="2.16.840.1.113883.6.96"
displayName="gallbladder bile" />
      </specimenPlayingEntity>
    </specimenRole>
  </specimen>
  <performer>
    ...
  </performer>
</procedure>
```

4.30 Procedure Activity Procedure (V2) - Cancer IG Specific Constraints - Published

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.13.15:2014-08-08
(open)]

Table 152: Procedure Activity Procedure (V2) - Cancer IG Specific Constraints Contexts

Contained By:	Contains:
Procedures Section (entries required) (V2) - Cancer IG Specific Constraints (required)	Indication (V2) - Cancer IG Specific Constraints Service Delivery Location US Realm Address (AD.US.FIELDDED) US Realm Person Name (PN.US.FIELDDED)

This template defines Cancer Event Report-specific constraints to the C-CDA R2 template "Procedure Activity Procedure (V2)". Conformance has been changed to "SHALL" for Participant/Service Delivery Location and Indication Observation.

Table 153: Procedure Activity Procedure (V2) - Cancer IG Specific Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.13.15:2014-08-08)					
templateId	1..1	SHALL		1126-33068	
@root	1..1	SHALL		1126-33069	2.16.840.1.113883.10.13.15
@extension	1..1	SHALL		1126-33965	2014-08-08
effectiveTime	1..1	SHALL		1126-33248	
low	1..1	SHALL		1126-33249	
performer	0..*	SHOULD		1126-33927	
assignedEntity	1..1	SHALL		1126-33928	
id	1..*	SHALL		1126-33929	
@root	0..1	SHOULD		1126-33932	2.16.840.1.113883.4.6
id	0..*	SHOULD		1126-33933	
addr	0..*	SHOULD		1126-33934	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	0..*	SHOULD		1126-33930	
assignedPerson	0..1	SHOULD		1126-33931	
name	0..*	SHOULD		1126-33936	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
participant	1..*	SHALL		1126-32672	
@typeCode	1..1	SHALL		1126-32673	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		1126-33024	Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32)
entryRelationship	1..*	SHALL		1126-33212	

@typeCode	1..1	SHALL		1126-33213	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1126-33214	Indication (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08)

1. Conforms to [Procedure Activity Procedure \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33068) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.15" (CONF:1126-33069).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33965).
3. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1126-33248).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1126-33249).
4. **SHOULD** contain zero or more [0..*] **performer** (CONF:1126-33927) such that it
 - a. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1126-33928).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1126-33929) such that it
 1. **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1126-33932).
 - ii. This assignedEntity **SHOULD** contain zero or more [0..*] **id** (CONF:1126-33933).
Note: Local Cancer Registry approved provider identifier
 - iii. This assignedEntity **SHOULD** contain zero or more [0..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1126-33934).
 - iv. This assignedEntity **SHOULD** contain zero or more [0..*] **telecom** (CONF:1126-33930).
 - v. This assignedEntity **SHOULD** contain zero or one [0..1] **assignedPerson** (CONF:1126-33931).
 1. The assignedPerson, if present, **SHOULD** contain zero or more [0..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1126-33936).
5. **SHALL** contain at least one [1..*] **participant** (CONF:1126-32672) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1126-32673).
 - b. **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1126-33024).
6. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1126-33212) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1126-33213).

- b. **SHALL** contain exactly one [1..1] Indication (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08) (CONF:1126-33214).

Figure 73: Procedure Activity Procedure (V2) - Cancer IG Specific Constraints example

```

<procedure classCode="PROC" moodCode="EVN">
  <!-- Procedure Activity Procedure V2-->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09" />
  <!-- Procedure Activity Procedure (V2) - Cancer IG Specific Constraints-->
  <templateId root="2.16.840.1.113883.10.13.15" extension="2014-08-08" />
  <id root="d5b614bd-01ce-410d-8726-e1fd01dcc72a" />
  <code code="392021009" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"
displayName="Lumpectomy of breast ">
    <originalText>
      <reference value="#Proc1" />
    </originalText>
  </code>
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20130512"></low>
  </effectiveTime>
  <targetSiteCode code="181131000" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Entire breast"
sdtc:valueSet="2.16.840.1.113883.3.88.12.3221.8.9" />
  <specimen typeCode="SPC">
    <specimenRole classCode="SPEC">
      <id root="a6d7b927-2b70-43c7-bdf3-0e7c4133062c" />
      <specimenPlayingEntity>
        <code code="258416002" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Breast tissue sample" />
      </specimenPlayingEntity>
    </specimenRole>
  </specimen>
  <performer typeCode="PRF">
    <assignedEntity classCode="ASSIGNED">
      <id root="2.16.840.1.113883.4.6" extension="22222222" />
      <addr>
        <streetAddressLine>1000 Hospital Lane</streetAddressLine>
        <city>Ann Arbor</city>
        <state>MI</state>
        <postalCode>99999</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel:+1(555)555-5000" />
      <assignedPerson>
        <name>
          <first>Harold</first>
          <last>Hippocrates</last>
          <suffix>MD</suffix>
        </name>
      </assignedPerson>
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <templateId root="2.16.840.1.113883.10.20.22.4.32" />
      <code code="1200-5" codeSystem="2.16.840.1.113883.6.259"
codeSystemName="HealthcareServiceLocation" displayName="Hematology/oncology clinic" />
      <addr>
        <streetAddressLine>1000 Hospital Lane</streetAddressLine>

```

```

        <city>Ann Arbor</city>
        <state>MI</state>
        <postalCode>99999</postalCode>
        <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-5000" />
    <playingEntity classCode="PLC">
        <name>Good Health Hospital</name>
    </playingEntity>
</participantRole>
</participant>
<entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
        <templateId root="2.16.840.1.113883.10.13.19" extension="2014-08-08" />
        <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
        <code code="29308-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Diagnosis"/>
        <statusCode code="completed" />
        <effectiveTime value="20140731124200" />
        <value xsi:type="CD" code="408643008" codeSystem="2.16.840.1.113883.6.96"
displayName="Infiltrating duct carcinoma of breast"
sdtc:valueSet="2.16.840.1.113883.3.88.12.3221.7.4" />
    </observation>
</entryRelationship>
</procedure>

```

4.31 Radiation Boost Dose - cGy - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.28:2014-08-08
(open)]

Table 154: Radiation Boost Dose - cGy Contexts

Contained By:	Contains:
Radiation Boost Modality Procedure (optional)	

Records the additional dose delivered to that part of the treatment volume encompassed by the boost fields or devices. The unit of measure is centiGray (cGy).

To evaluate patterns of radiation oncology care, it is necessary to describe the boost radiation dose. Outcomes are strongly related to the dose delivered.

Table 155: Radiation Boost Dose - cGy Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.28:2014-08-08)					
@classCode	1..1	SHALL		1126-33629	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1126-33630	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1126-33621	
@root	1..1	SHALL		1126-33622	2.16.840.1.113883.10.13.28
@extension	1..1	SHALL		1126-33966	2014-08-08
code	1..1	SHALL		1126-33626	
@code	0..1	MAY		1126-33631	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 42119-8
@codeSystem	1..1	SHALL		1126-33632	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	0..1	MAY		1126-33627	
@code	1..1	SHALL		1126-33633	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	PQ	1126-33628	
@value	1..1	SHALL		1126-33634	
@unit	1..1	SHALL		1126-33635	urn:oid:2.16.840.1.113883.6.8 (UCUM) = cGy

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33629).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33630).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33621).
 - a. This templateId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.28" (CONF:1126-33622).
 - b. This templateId **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33966).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1126-33626).
 - a. This code **MAY** contain zero or one [0..1] **@code**="42119-8" Boost radiation dose [Energy/mass] (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33631).

- b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" LOINC (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33632).
5. **MAY** contain zero or one [0..1] **statusCode** (CONF:1126-33627).
 - a. The statusCode, if present, **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1126-33633).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:1126-33628).
 - a. This value **SHALL** contain exactly one [1..1] **@value** (CONF:1126-33634).
 - b. This value **SHALL** contain exactly one [1..1] **@unit**="cGy" centiGray (CodeSystem: UCUM urn:oid:2.16.840.1.113883.6.8) (CONF:1126-33635).

Figure 74: Radiation Boost Dose - cGy example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.28" extension="2014-08-08" />
  <code code="42119-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Boost radiation dose [Energy/mass]" />
  <statusCode code="completed" />
  <value xsi:type="PQ" value="5500" unit="cGy" />
</observation>
```

4.32 Radiation Boost Modality Organizer - Published

```
[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.13.30:2014-08-08
(open)]
```

Table 156: Radiation Boost Modality Organizer Contexts

Contained By:	Contains:
Radiation Oncology Section (required)	Radiation Boost Modality Procedure

Organizer for radiation boost modality procedures.

Table 157: Radiation Boost Modality Organizer Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.13.30:2014-08-08)					
@classCode	1..1	SHALL		1126-33642	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1126-33643	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1126-33967	
@root	1..1	SHALL		1126-33968	2.16.840.1.113883.10.13.30
@extension	1..1	SHALL		1126-33969	2014-08-08
code	1..1	SHALL		1126-33640	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1126-33644	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 42128-9
@codeSystem	1..1	SHALL		1126-33645	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
component	1..*	SHALL		1126-33641	
@typeCode	1..1	SHALL		1126-33646	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
procedure	1..1	SHALL		1126-33647	Radiation Boost Modality Procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.13.26:2014-08-08)

1. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33642).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33643).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33967).
 - a. This templateId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.30" (CONF:1126-33968).
 - b. This templateId **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33969).
4. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33640).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="42128-9" Boost radiation treatment modality Radiation treatment (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33644).

- b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" LOINC (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33645).
5. **SHALL** contain at least one [1..*] **component** (CONF:1126-33641).
 - a. Such components **SHALL** contain exactly one [1..1] @typeCode="COMP" component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33646).
 - b. Such components **SHALL** contain exactly one [1..1] [Radiation Boost Modality Procedure](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.26:2014-08-08) (CONF:1126-33647).

Figure 75: Radiation Boost Modality Organizer example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <!-- Radiation Boost Modality Organizer Constraints -->
  <templateId root="2.16.840.1.113883.10.13.30" extension="2014-08-08" />
  <code code="42128-9" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Boost radiation treatment modality Radiation treatment" />
  <statusCode code="active" />
  <component typeCode="COMP">
    <procedure classCode="PROC" moodCode="EVN">
      <!-- Radiation Boost Modality Procedure Constraints -->
      <templateId root="2.16.840.1.113883.10.13.26" extension="2014-08-08" />
      <id root="87cb6d8e-b33f-4b8b-a19e-443db01bde15" />
      <code code="77404" codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4"
      displayName="Radiation treatment delivery, single treatment area, single port or parallel
      opposed ports, simple blocks or no blocks; 11-19 MeV" /> ...
    </procedure>
  </component>
  ...
</organizer>
```

4.33 Radiation Boost Modality Procedure - Published

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.13.26:2014-08-08
(open)]

Table 158: Radiation Boost Modality Procedure Contexts

Contained By:	Contains:
Radiation Boost Modality Organizer (required)	Indication (V2) - Cancer IG Specific Constraints Radiation Boost Dose - cGy Service Delivery Location US Realm Person Name (PN.US.FIELDDED)

Records the radiation treatment—boost modality used to deliver the most clinically significant dose to the primary volume of interest during the first course of treatment. This is accomplished with external beam fields of reduced size (relative to the regional treatment fields), implants, stereotactic radiosurgery, conformal therapy, or intensity-modulated radiation

therapy. External beam boosts may consist of two or more successive phases with progressively smaller fields, and they are generally coded as a single entity.

Table 159: Radiation Boost Modality Procedure Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.13.26:2014-08-08)					
@classCode	1..1	SHALL		1126-33339	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		1126-33340	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1126-33328	
@root	1..1	SHALL		1126-33341	2.16.840.1.113883.10.13.26
@extension	1..1	SHALL		1126-33970	2014-08-08
id	1..*	SHALL		1126-33342	
code	1..1	SHALL		1126-33329	
@code	1..1	SHALL		1126-33587	urn:oid:2.16.840.1.113883.3.520.4.23 (Radiation Regional Treatment and Boost Radiation Grouping)
@codeSystem	1..1	SHALL		1126-33588	
@displayName	1..1	SHALL		1126-33661	urn:oid:2.16.840.1.113883.3.520.4.23 (Radiation Regional Treatment and Boost Radiation Grouping)
@sdct:valueSet	1..1	SHALL		1126-33724	2.16.840.1.113883.3.520.4.23
originalText	0..1	SHOULD		1126-33330	
reference	0..1	SHOULD		1126-33331	
@value	0..1	SHOULD		1126-33332	
statusCode	1..1	SHALL		1126-33345	
@code	1..1	SHALL		1126-33591	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	SHOULD		1126-33346	
low	1..1	SHALL		1126-33592	
targetSiteCode	0..*	SHOULD		1126-33333	
@code	1..1	SHALL		1126-	urn:oid:2.16.840.1.113883.3.88.1

				33347	2.3221.8.9 (Body Site)
@codeSystem	1..1	SHALL		1126-33593	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
@displayName	1..1	SHOULD		1126-33656	urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
@sdtc:valueSet	1..1	SHALL		1126-33721	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.3.88.12.3221.8.9
performer	0..*	SHOULD		1126-33334	
assignedEntity	1..1	SHALL		1126-33335	
id	1..*	SHALL		1126-33348	
addr	1..1	SHALL		1126-33349	
telecom	1..1	SHALL		1126-33350	
assignedPerson	0..1	MAY		1126-33581	
name	0..1	MAY		1126-33582	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
representedOrganization	0..1	SHOULD		1126-33336	
id	1..*	SHALL		1126-33351	
name	0..*	MAY		1126-33352	
telecom	1..1	SHALL		1126-33353	
addr	1..1	SHALL		1126-33354	
participant	0..*	MAY		1126-33337	
@typeCode	1..1	SHALL		1126-33355	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		1126-33356	Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32)
entryRelationship	0..1	MAY		1126-33338	
@typeCode	1..1	SHALL		1126-33358	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ

@inversionInd	1..1	SHALL		1126-33359	true
observation	1..1	SHALL		1126-33360	Radiation Boost Dose - cGy (identifier: urn:hl7ii:2.16.840.1.113883.10.13.28:2014-08-08)
entryRelationship	1..1	SHALL		1126-33392	
@typeCode	1..1	SHALL		1126-33393	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1126-33394	Indication (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08)

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33339).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1126-33340).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33328).
 - a. This templateId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.26" (CONF:1126-33341).
 - b. This templateId **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33970).
4. **SHALL** contain at least one [1..*] **id** (CONF:1126-33342).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1126-33329).

Note: Procedure code that identifies the radiation treatment—boost modality used to deliver the most clinically significant dose to the primary volume of interest during the first course of treatment.

- a. This code **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Radiation Regional Treatment and Boost Radiation Grouping](#) urn:oid:2.16.840.1.113883.3.520.4.23 (CONF:1126-33587).
- b. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CONF:1126-33588).
 - i. This codeSystem in a Radiation Regional Treatment Modality **SHOULD** be selected from HCPCS (CodeSystem: 2.16.840.1.113883.6.14) and **MAY** be selected from SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) or ICD10 PCS (CodeSystem: 2.16.840.1.113883.6.4) (CONF:1126-33590).
- c. This code **SHALL** contain exactly one [1..1] **@displayName**, which **SHALL** be selected from ValueSet [Radiation Regional Treatment and Boost Radiation Grouping](#) urn:oid:2.16.840.1.113883.3.520.4.23 (CONF:1126-33661).
- d. This code **SHALL** contain exactly one [1..1] **@sdct:valueSet**="2.16.840.1.113883.3.520.4.23" (CONF:1126-33724).
- e. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1126-33330).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1126-33331).

1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1126-33332).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33343).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1126-33345).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1126-33591).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1126-33346).
 - a. The **effectiveTime**, if present, **SHALL** contain exactly one [1..1] **low** (CONF:1126-33592).
8. **SHOULD** contain zero or more [0..*] **targetSiteCode** (CONF:1126-33333).
 - a. The **targetSiteCode**, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet Body Site urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1126-33347).
 - b. The **targetSiteCode**, if present, **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.96"** (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:1126-33593).
 - c. The **targetSiteCode**, if present, **SHOULD** contain exactly one [1..1] **@displayName**, which **SHALL** be selected from ValueSet Body Site urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (CONF:1126-33656).
 - d. The **targetSiteCode**, if present, **SHALL** contain exactly one [1..1] **@sdct:valueSet="2.16.840.1.113883.3.88.12.3221.8.9"** (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:1126-33721).
9. **SHOULD** contain zero or more [0..*] **performer** (CONF:1126-33334).
 - a. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1126-33335).
 - i. This **assignedEntity** **SHALL** contain at least one [1..*] **id** (CONF:1126-33348).
 - ii. This **assignedEntity** **SHALL** contain exactly one [1..1] **addr** (CONF:1126-33349).
 - iii. This **assignedEntity** **SHALL** contain exactly one [1..1] **telecom** (CONF:1126-33350).
 - iv. This **assignedEntity** **MAY** contain zero or one [0..1] **assignedPerson** (CONF:1126-33581).
 1. The **assignedPerson**, if present, **MAY** contain zero or one [0..1] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1126-33582).
 - v. This **assignedEntity** **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:1126-33336).
 1. The **representedOrganization**, if present, **SHALL** contain at least one [1..*] **id** (CONF:1126-33351).
 2. The **representedOrganization**, if present, **MAY** contain zero or more [0..*] **name** (CONF:1126-33352).

3. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **telecom** (CONF:1126-33353).
 4. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **addr** (CONF:1126-33354).
10. **MAY** contain zero or more [0..*] **participant** (CONF:1126-33337).
- a. The participant, if present, **SHALL** contain exactly one [1..1] **@typeCode="LOC"** location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1126-33355).
 - b. The participant, if present, **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1126-33356).
11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1126-33338) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33358).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:1126-33359).
 - c. **SHALL** contain exactly one [1..1] [Radiation Boost Dose - cGy](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.28:2014-08-08) (CONF:1126-33360).
12. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1126-33392) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33393).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\) - Cancer IG Specific Constraints](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08) (CONF:1126-33394).

Table 160: Radiation Regional Treatment and Boost Radiation Grouping

Value Set: Radiation Regional Treatment and Boost Radiation Grouping urn:oid:2.16.840.1.113883.3.520.4.23
This value set grouping lists all value sets that contain the codes for Radiation Regional Treatment and Boost Radiation Modality. The codes from these value sets SHALL be selected in the following order:

The code SHOULD be selected from "Radiation Regional Treatment and Boost Radiation HCPCS codes" (ValueSet OID: 2.16.840.1.113883.3.520.4.24) and MAY be selected from "Radiation Regional Treatment and Boost Radiation SNOMED CT codes" (ValueSet OID: 2.16.840.1.113883.3.520.4.26) or "Radiation Regional Treatment and Boost Radiation ICD10-PCS codes" (ValueSet OID: 2.16.840.1.113883.3.520.4.25).

Note:

"Radiation Regional Treatment and Boost Radiation HCPCS codes" consist of HCPCS Level I and Level II codes. Level I codes are a subset of CPT-4 codes (see codes 55860 and 55862 in below table) and Level II codes are alphanumeric HCPCS codes. (see codes C1715 and G0173 in below table).

"Radiation Regional Treatment and Boost Radiation SNOMED CT codes" Value Set consist of SNOMED CT code 108290001 (Radiation oncology AND/OR radiotherapy (procedure)) and all descendants.

"Radiation Regional Treatment and Boost Radiation ICD10-PCS codes" Value Set consists of ICD10-PCS codes beginning with letter "D".

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Value Set Source:

<https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.23>

Code	Code System	Code System OID	Print Name
55860	HCPCS	urn:oid:2.16.840.1.113883.6.14	SURGICAL EXPOSURE, PROSTATE
55862	HCPCS	urn:oid:2.16.840.1.113883.6.14	EXTENSIVE PROSTATE SURGERY.....
D0000ZZ	ICD10PCS	urn:oid:2.16.840.1.113883.6.4	Beam Radiation of Brain using Photons <1 MeV
D0001ZZ	ICD10PCS	urn:oid:2.16.840.1.113883.6.4	Beam Radiation of Brain using Photons 1 - 10 MeV
33356009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Betatron teleradiotherapy
445232009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Boost radiation therapy
C1715	HCPCS	urn:oid:2.16.840.1.113883.6.14	Brachytherapy needle
G0173	HCPCS	urn:oid:2.16.840.1.113883.6.14	Linear acc stereo radsur com
...			

Figure 76: Radiation Boost Modality Procedure example

```
<procedure classCode="PROC" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.26" extension="2014-08-08" />
  <id root="87cb6d8e-b33f-4b8b-a19e-443db01bde15" />
  <code code="77404" codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4"
  displayName="Radiation treatment delivery, single treatment area, single port or parallel
  opposed ports, simple blocks or no blocks; 11-19 MeV"
  sdtc:valueSet="2.16.840.1.113883.3.520.4.23">
    <originalText>
      <reference value="#a1" />
    </originalText>
  </code>
  <statusCode code="complete" />
  <effectiveTime>
    <low value="20140725161343" />
  </effectiveTime>
  <targetSiteCode code="49668003" codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT" displayName="Bone structure of L5"
  sdtc:valueSet="2.16.840.1.113883.3.88.12.3221.8.9"/>
  <performer>
    <assignedEntity>
      <id extension="5555555555" root="2.16.840.1.113883.19" />
      <addr>
        <streetAddressLine>1004 Healthcare Drive</streetAddressLine>
        <city>Ann Arbor</city>
        <state>MI</state>
        <postalCode>99999</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel:+1(555)555-1004" />
      <assignedPerson>
        <name>
          <given>Christine</given>
          <family>Curie</family>
          <suffix qualifier="AC">M.D.</suffix>
        </name>
      </assignedPerson>
      <representedOrganization>
        <id extension="219BX" root="2.16.840.1.113883.19" />
        <name>Good Health Hospital Radiology</name>
        <telecom use="WP" value="tel:+1(555)555-3010" />
        <addr>
          <streetAddressLine>1000 Hospital Lane</streetAddressLine>
          <city>Ann Arbor</city>
          <state>MI</state>
          <postalCode>99999</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <templateId root="2.16.840.1.113883.10.20.22.4.32" />
    </participantRole>
  </participant>
</procedure>
```

```

        <code code="1008-2" codeSystem="2.16.840.1.113883.6.259"
codeSystemName="HealthcareServiceLocation" displayName="Radiology diagnostics or
therapeutics unit" />
        <addr>
            <streetAddressLine>1000 Hospital Lane</streetAddressLine>
            <city>Ann Arbor</city>
            <state>MI</state>
            <postalCode>99999</postalCode>
            <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-5000" />
        <playingEntity classCode="PLC">
            <name>Good Health Hospital</name>
        </playingEntity>
    </participantRole>
</participant>
<entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.28" extension="2014-08-08" />
        <code code="21958-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Regional radiation treatment Dose" />
        <statusCode code="complete" />
        <value xsi:type="PQ" value="5500" unit="cGy" />
    </observation>
</entryRelationship>
<entryRelationship typeCode="RSON"> ... </entryRelationship>
</procedure>

```

4.34 Radiation Regional Dose - cGy - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.27:2014-08-08
(open)]

Table 161: Radiation Regional Dose - cGy Contexts

Contained By:	Contains:
Radiation Regional Treatment Modality Procedure (optional)	

The dominant or most clinically significant total dose of regional radiation therapy delivered to the patient during the first course of treatment. The unit of measure is centiGray (cGy).

To evaluate patterns of radiation oncology care, it is necessary to describe the regional radiation dose. Outcomes are strongly related to the dose delivered.

Table 162: Radiation Regional Dose - cGy Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.27:2014-08-08)					
@classCode	1..1	SHALL		1126-33321	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1126-33322	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1126-33317	
@root	1..1	SHALL		1126-33323	2.16.840.1.113883.10.13.27
@extension	1..1	SHALL		1126-33971	2014-08-08
code	1..1	SHALL		1126-33318	
@code	1..1	SHALL		1126-33324	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21958-4
@codeSystem	1..1	SHALL		1126-33325	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	0..1	MAY		1126-33583	
@code	1..1	SHALL		1126-33584	completed
value	1..1	SHALL	PQ	1126-33319	
@value	1..1	SHALL		1126-33326	
@unit	0..1	SHALL		1126-33327	urn:oid:2.16.840.1.113883.6.8 (UCUM) = cGy

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33321).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33322).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33317).
 - a. This templateId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.27" (CONF:1126-33323).
 - b. This templateId **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33971).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1126-33318).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="21958-4" Regional radiation treatment Dose (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33324).

- b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33325).
- 5. **MAY** contain zero or one [0..1] **statusCode** (CONF:1126-33583).
 - a. The statusCode, if present, **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CONF:1126-33584).
- 6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:1126-33319).
 - a. This value **SHALL** contain exactly one [1..1] **@value** (CONF:1126-33326).
 - b. This value **SHALL** contain zero or one [0..1] **@unit**="cGy" centiGray (CodeSystem: UCUM urn:oid:2.16.840.1.113883.6.8) (CONF:1126-33327).

Figure 77: Regional Dose – cGy example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.27" extension="2014-08-08" />
  <code code="21958-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Regional radiation treatment Dose" />
  <statusCode code="completed" />
  <value xsi:type="PQ" value="5500" unit="cGy" />
</observation>
```

4.35 Radiation Regional Treatment Modality Organizer - Published

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.13.29:2014-08-08
(open)]

Table 163: Radiation Regional Treatment Modality Organizer Contexts

Contained By:	Contains:
Radiation Oncology Section (required)	Radiation Regional Treatment Modality Procedure

Organizer for radiation regional treatment procedures.

Table 164: Radiation Regional Treatment Modality Organizer Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.13.29:2014-08-08)					
@classCode	1..1	SHALL		1126-33637	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1126-33638	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1126-33972	
@root	1..1	SHALL		1126-33973	2.16.840.1.113883.10.13.29
@extension	1..1	SHALL		1126-33974	2014-08-08
code	1..1	SHALL		1126-33648	
@code	1..1	SHALL		1126-33649	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21964-2
@codeSystem	1..1	SHALL		1126-33650	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
component	1..*	SHALL		1126-33636	
@typeCode	1..1	SHALL		1126-33651	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
procedure	1..1	SHALL		1126-33639	Radiation Regional Treatment Modality Procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.13.25:2014-08-08)

1. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33637).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33638).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33972).
 - a. This templateId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.29" (CONF:1126-33973).
 - b. This templateId **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33974).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1126-33648).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="21964-2" Modality Radiation treatment (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33649).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" LOINC (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33650).

5. **SHALL** contain at least one [1..*] **component** (CONF:1126-33636).
 - a. Such components **SHALL** contain exactly one [1..1] **@typeCode="COMP"** component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33651).
 - b. Such components **SHALL** contain exactly one [1..1] [Radiation Regional Treatment Modality Procedure](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.25:2014-08-08) (CONF:1126-33639).

Figure 78: Radiation Regional Treatment Modality Organizer example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.29" extension="2014-08-08" />
  <!-- Radiation Regional Treatment Modality Organizer Constraints -->
  <code code="21964-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Modality Radiation treatment" />
  <statusCode code="completed" />
  <component typeCode="COMP">
    <procedure classCode="PROC" moodCode="EVN">
      <!-- Radiation Regional Treatment Modality Procedure Constraints -->
      <templateId root="2.16.840.1.113883.10.13.25" extension="2014-08-08" />
      <id root="4a7eed3b-d1d4-4f67-80fa-4972c563606c" />
      <code code="77404" codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4"
      displayName="Radiation treatment delivery, single treatment area, single port or parallel
      opposed ports, simple blocks or no blocks; 11-19 MeV" /> ...
    </procedure>
    ...
  </component>
</organizer>
```

4.36 Radiation Regional Treatment Modality Procedure - Published

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.13.25:2014-08-08
(open)]

Table 165: Radiation Regional Treatment Modality Procedure Contexts

Contained By:	Contains:
Radiation Regional Treatment Modality Organizer (required)	Indication (V2) - Cancer IG Specific Constraints Radiation Regional Dose - cGy Service Delivery Location US Realm Person Name (PN.US.FIELDDED)

Records the dominant modality of radiation therapy used to deliver the clinically most significant regional dose to the primary volume of interest during the first course of treatment.

Table 166: Radiation Regional Treatment Modality Procedure Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.13.25:2014-08-08)					
@classCode	1..1	SHALL		1126-33372	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		1126-33373	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1126-33361	
@root	1..1	SHALL		1126-33374	2.16.840.1.113883.10.13.25
@extension	1..1	SHALL		1126-33975	2014-08-08
id	1..*	SHALL		1126-33375	
code	1..1	SHALL		1126-33362	
@code	1..1	SHALL		1126-33594	urn:oid:2.16.840.1.113883.3.520.4.23 (Radiation Regional Treatment and Boost Radiation Grouping)
@codeSystem	1..1	SHALL		1126-33595	
@displayName	1..1	SHALL		1126-33662	urn:oid:2.16.840.1.113883.3.520.4.23 (Radiation Regional Treatment and Boost Radiation Grouping)
@sdct:valueSet	1..1	SHALL		1126-33723	2.16.840.1.113883.3.520.4.23
originalText	0..1	SHOULD		1126-33363	
reference	0..1	SHOULD		1126-33364	
@value	0..1	SHOULD		1126-33365	
statusCode	1..1	SHALL		1126-33378	
@code	1..1	SHALL		1126-33598	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	SHOULD		1126-33379	
low	1..1	SHALL		1126-33599	
targetSiteCode	0..*	SHOULD		1126-33366	
@code	1..1	SHALL		1126-	urn:oid:2.16.840.1.113883.3.88.1

				33380	2.3221.8.9 (Body Site)
@codeSystem	1..1	SHALL		1126-33600	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
@displayName	1..1	SHOULD		1126-33655	urn:oid:2.16.840.1.113883.3.88.1 2.3221.8.9 (Body Site)
@sdtc:valueSet	1..1	SHALL		1126-33722	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.3.88.12.3221.8.9
performer	0..*	SHOULD		1126-33367	
assignedEntity	1..1	SHALL		1126-33368	
id	1..*	SHALL		1126-33381	
addr	1..1	SHALL		1126-33382	
telecom	1..1	SHALL		1126-33383	
assignedPerson	0..1	SHOULD		1126-33585	
name	0..1	SHOULD		1126-33586	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
representedOrganization	0..1	SHOULD		1126-33369	
id	1..*	SHALL		1126-33384	
name	0..*	MAY		1126-33385	
telecom	1..1	SHALL		1126-33386	
addr	1..1	SHALL		1126-33387	
participant	0..*	MAY		1126-33370	
@typeCode	1..1	SHALL		1126-33388	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		1126-33389	Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32)
entryRelationship	1..*	SHALL		1126-33371	
@typeCode	1..1	SHALL		1126-33390	urn:oid:2.16.840.1.113883.5.100 2 (HL7ActRelationshipType) = RSON

observation	1..1	SHALL		1126-33391	Indication (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.1.3.19:2014-08-08)
entryRelationship	1..*	SHOULD		1126-33624	
observation	1..1	SHALL		1126-33625	Radiation Regional Dose - cGy (identifier: urn:hl7ii:2.16.840.1.113883.10.1.3.27:2014-08-08)

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33372).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1126-33373).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1126-33361).

- a. This templateId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.25" (CONF:1126-33374).
- b. This templateId **SHALL** contain exactly one [1..1] **@extension**="2014-08-08" (CONF:1126-33975).

4. **SHALL** contain at least one [1..*] **id** (CONF:1126-33375).

5. **SHALL** contain exactly one [1..1] **code** (CONF:1126-33362).

Note: Procedure code that identifies the dominant modality of radiation therapy used to deliver the clinically most significant regional dose to the primary volume of interest during the first course of treatment.

- a. This code **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Radiation Regional Treatment and Boost Radiation Grouping](#) urn:oid:2.16.840.1.113883.3.520.4.23 (CONF:1126-33594).
- b. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CONF:1126-33595).
 - i. This codeSystem in a Radiation Regional Treatment Modality **SHOULD** be selected from CPT-4 (CodeSystem: 2.16.840.1.113883.6.12) **MAY** be selected from SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) or ICD10 PCS (CodeSystem: 2.16.840.1.113883.6.4) (CONF:1126-33597).
- c. This code **SHALL** contain exactly one [1..1] **@displayName**, which **SHALL** be selected from ValueSet [Radiation Regional Treatment and Boost Radiation Grouping](#) urn:oid:2.16.840.1.113883.3.520.4.23 (CONF:1126-33662).
- d. This code **SHALL** contain exactly one [1..1] **@sdtc:valueSet**="2.16.840.1.113883.3.520.4.23" (CONF:1126-33723).
- e. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1126-33363).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1126-33364).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1126-33365).
 - a. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33376).

6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1126-33378).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1126-33598).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1126-33379).
 - a. The **effectiveTime**, if present, **SHALL** contain exactly one [1..1] **low** (CONF:1126-33599).
8. **SHOULD** contain zero or more [0..*] **targetSiteCode** (CONF:1126-33366).
 - a. The **targetSiteCode**, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Body Site](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1126-33380).
 - b. The **targetSiteCode**, if present, **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.96"** (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:1126-33600).
 - c. The **targetSiteCode**, if present, **SHOULD** contain exactly one [1..1] **@displayName**, which **SHALL** be selected from ValueSet [Body Site](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (CONF:1126-33655).
 - d. The **targetSiteCode**, if present, **SHALL** contain exactly one [1..1] **@sdct:valueSet="2.16.840.1.113883.3.88.12.3221.8.9"** (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:1126-33722).
9. **SHOULD** contain zero or more [0..*] **performer** (CONF:1126-33367).
 - a. The **performer**, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1126-33368).
 - i. This **assignedEntity** **SHALL** contain at least one [1..*] **id** (CONF:1126-33381).
 - ii. This **assignedEntity** **SHALL** contain exactly one [1..1] **addr** (CONF:1126-33382).
 - iii. This **assignedEntity** **SHALL** contain exactly one [1..1] **telecom** (CONF:1126-33383).
 - iv. This **assignedEntity** **SHOULD** contain zero or one [0..1] **assignedPerson** (CONF:1126-33585).
 1. The **assignedPerson**, if present, **SHOULD** contain zero or one [0..1] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1126-33586).
 - v. This **assignedEntity** **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:1126-33369).
 1. The **representedOrganization**, if present, **SHALL** contain at least one [1..*] **id** (CONF:1126-33384).
 2. The **representedOrganization**, if present, **MAY** contain zero or more [0..*] **name** (CONF:1126-33385).
 3. The **representedOrganization**, if present, **SHALL** contain exactly one [1..1] **telecom** (CONF:1126-33386).
 4. The **representedOrganization**, if present, **SHALL** contain exactly one [1..1] **addr** (CONF:1126-33387).
10. **MAY** contain zero or more [0..*] **participant** (CONF:1126-33370).

- a. The participant, if present, **SHALL** contain exactly one [1..1] **@typeCode="LOC"** location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1126-33388).
 - b. The participant, if present, **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1126-33389).
- 11. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1126-33371) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33390).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\) - Cancer IG Specific Constraints](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08) (CONF:1126-33391).
- 12. **SHOULD** contain at least one [1..*] **entryRelationship** (CONF:1126-33624) such that it
 - a. **SHALL** contain exactly one [1..1] [Radiation Regional Dose - cGy](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.27:2014-08-08) (CONF:1126-33625).

Figure 79: Radiation Regional Treatment Modality Procedure example

```
<procedure classCode="PROC" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.25" extension="2014-08-08" />
  <id root="4a7eed3b-d1d4-4f67-80fa-4972c563606c" />
  <code code="77404" codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4"
  displayName="Radiation treatment delivery, single treatment area, single port or parallel
  opposed ports, simple blocks or no blocks; 11-19 MeV"
  sdtc:valueSet="2.16.840.1.113883.3.520.4.23">
    <originalText>
      <reference value="#a1" />
    </originalText>
  </code>
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20140725161343" />
  </effectiveTime>
  <targetSiteCode code="49668003" codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT" displayName="Bone structure of L5"
  sdtc:valueSet="2.16.840.1.113883.3.88.12.3221.8.9" />
  <performer>
    <assignedEntity>
      <id extension="5555555555" root="2.16.840.1.113883.19" />
      <addr>
        <streetAddressLine>1004 Healthcare Drive</streetAddressLine>
        <city>Ann Arbor</city>
        <state>MI</state>
        <postalCode>99999</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel:+1(555)555-1004" />
      <assignedPerson>
        <name>
          <given>Christine</given>
          <family>Curie</family>
          <suffix qualifier="AC">M.D.</suffix>
        </name>
      </assignedPerson>
      <representedOrganization>
        <id extension="219BX" root="2.16.840.1.113883.19" />
        <name>Good Health Hospital Radiology</name>
        <telecom use="WP" value="tel:+1(555)555-3010" />
        <addr>
          <streetAddressLine>1000 Hospital Lane</streetAddressLine>
          <city>Ann Arbor</city>
          <state>MI</state>
          <postalCode>99999</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <templateId root="2.16.840.1.113883.10.20.22.4.32" />
    </participantRole>
  </participant>
</procedure>
```

```

        <code code="1008-2" codeSystem="2.16.840.1.113883.6.259"
codeSystemName="HealthcareServiceLocation" displayName="Radiology diagnostics or
therapeutics unit" />
        <addr>
            <streetAddressLine>1000 Hospital Lane</streetAddressLine>
            <city>Ann Arbor</city>
            <state>MI</state>
            <postalCode>99999</postalCode>
            <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-5000" />
        <playingEntity classCode="PLC">
            <name>Good Health Hospital</name>
        </playingEntity>
    </participantRole>
</participant>
<entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
        <templateId root="2.16.840.1.113883.10.13.19" extension="2014-08-
08"></templateId>
        <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
        <code code="75323-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Condition HL7.CCDAR2" />
        <statusCode code="completed" />
    </observation>
</entryRelationship>
<entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.27" extension="2014-08-08" />
        <code code="21958-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Regional radiation treatment Dose" />
        <statusCode code="completed" />
        <value xsi:type="PQ" value="5500" unit="cGy" />
    </observation>
</entryRelationship>
    ...
</procedure>

```

4.37 Regional Lymph Nodes Clinical - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.37:2015-02-05
(open)]

Table 167: Regional Lymph Nodes Clinical Contexts

Contained By:	Contains:
TNM Clinical Stage Group (required)	

This template records the results of evaluating whether regional lymph nodes are involved by tumor and if so, to what extent.

Table 168: Regional Lymph Nodes Clinical Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.37:2015-02-05)					
@classCode	1..1	SHALL		1169-34100	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-34101	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1169-34099	
@root	1..1	SHALL		1169-34102	2.16.840.1.113883.10.13.37
@extension	1..1	SHALL		1169-34103	2015-02-05
code	1..1	SHALL		1169-34104	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34105	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21906-3
@codeSystem	1..1	SHALL		1169-34106	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL	CD	1169-34107	
@code	1..1	SHALL		1169-34111	urn:oid:2.16.840.1.113883.3.520.4.7 (TNM Clinical Node)
@codeSystem	1..1	SHALL		1169-34112	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.15.6
@sdtc:valueSet	1..1	SHALL		1169-34113	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.3.520.4.7
originalText	0..1	SHOULD		1169-34108	
reference	0..1	SHOULD		1169-34109	
@value	0..1	SHOULD		1169-34110	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1169-34100).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1169-34101).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-34099) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.37" (CONF:1169-34102).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-02-05" (CONF:1169-34103).

4. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34104).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="21906-3" Regional lymph nodes.clinical [Class] Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34105).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34106).
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1169-34107).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [TNM Clinical Node](#) urn:oid:2.16.840.1.113883.3.520.4.7 (CONF:1169-34111).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34112).
 - c. This value **SHALL** contain exactly one [1..1] **@sdct:valueSet**="2.16.840.1.113883.3.520.4.7" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34113).
 - d. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-34108).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-34109).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1169-34110).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-34114).

Table 169: TNM Clinical Node

Value Set: TNM Clinical Node urn:oid:2.16.840.1.113883.3.520.4.7			
Detailed site-specific codes for the clinical tumor (N) as defined by AJCC and recorded by the physician.			
Note: The AJCC Staging Manual TNM system is proprietary and its definitions cannot be included in other documents without permission.			
Value Set Source:			
http://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.7			
Code	Code System	Code System OID	Print Name
N1A	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	Site specific descriptions prevent listing of text equivalents.
N0	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N2B	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N3C	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N3B	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N3A	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N2C	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N2A	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N2	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N1B	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
...			

Figure 80: Regional Lymph Nodes Clinical example

<pre> <observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.13.37" extension="2015-02-05" /> <code code="21906-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Regional lymph nodes.clinical [Class] Cancer" /> <value xsi:type="CD" code="N1" codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" displayName="Metastases to movable ipsilateral level I, II axillary lymph node(s)" sdtc:valueSet="2.16.840.1.113883.3.520.4.7"> <originalText> <reference value="#ClinicalNode_1" /> </originalText> </value> </observation> </pre>

4.38 Regional Lymph Nodes Pathologic - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.42:2015-02-05
(open)]

Table 170: Regional Lymph Nodes Pathologic Contexts

Contained By:	Contains:
TNM Pathologic Stage Group (required)	

This template records the results of evaluating whether regional lymph nodes are involved by tumor and if so, to what extent.

Table 171: Regional Lymph Nodes Pathologic Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.42:2015-02-05)					
@classCode	1..1	SHALL		1169-34203	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-34204	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1169-34202	
@root	1..1	SHALL		1169-34205	2.16.840.1.113883.10.13.42
@extension	1..1	SHALL		1169-34206	2015-02-05
code	1..1	SHALL		1169-34207	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34208	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21900-6
@codeSystem	1..1	SHALL		1169-34209	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL	CD	1169-34210	
@code	1..1	SHALL		1169-34211	urn:oid:2.16.840.1.113883.3.520.4.18 (TNM Pathologic Node)
@codeSystem	1..1	SHALL		1169-34212	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.15.6
@sdtc:valueSet	1..1	SHALL		1169-34216	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.3.520.4.18
originalText	0..1	SHOULD		1169-34213	
reference	0..1	SHOULD		1169-34214	
@value	0..1	SHOULD		1169-34215	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1169-34203).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1169-34204).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1169-34202) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.13.42" (CONF:1169-34205).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-02-05" (CONF:1169-34206).

4. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34207).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="21900-6" Regional lymph
nodes.pathology [Class] Cancer (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34208).
 - b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34209).
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1169-34210).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from
ValueSet [TNM Pathologic Node](#) urn:oid:2.16.840.1.113883.3.520.4.18
(CONF:1169-34211).
 - b. This value **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition
urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34212).
 - c. This value **SHALL** contain exactly one [1..1]
@sdct:valueSet="2.16.840.1.113883.3.520.4.18" (CodeSystem: TNM 7.
Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34216).
 - d. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-34213).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference**
(CONF:1169-34214).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value**
(CONF:1169-34215).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point
to its corresponding narrative (using the approach defined in
CDA Release 2, section 4.3.5.1) (CONF:1169-34217).

Table 172: TNM Pathologic Node

Value Set: TNM Pathologic Node urn:oid:2.16.840.1.113883.3.520.4.18 Detailed site-specific codes for the pathologic node (N) as defined by AJCC and recorded by the physician. Note: The AJCC Staging Manual TNM system is proprietary and its definitions cannot be included in other documents without permission. Value Set Source: http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.18			
Code	Code System	Code System OID	Print Name
NX	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	Site specific descriptions prevent listing of text equivalents.
N0	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N0I-	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N0I+	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N0M-	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N0M+	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N0a	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N0b	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N1	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
N1b	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
...			

Figure 81: Regional Lymph Nodes Pathologic example

<pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.13.42" extension="2015-02-05" /> <code code="21900-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Regional lymph nodes.pathology [Class] Cancer" /> <value xsi:type="CD" code="N1" codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" displayName="Micrometastases; or metastases in 1 to 3 axillary lymph nodes; and/or in internal mammary nodes with metastases detected by sentinel lymph node biopsy but not clinically detected." sdctc:valueSet="2.16.840.1.113883.3.520.4.18" /> </observation></pre>

4.39 Result Observation (V2) - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09
(open)]

Table 173: Result Observation (V2) Contexts

Contained By:	Contains:
Result Organizer (V2) (required)	Author Participation

This template represents the results of a laboratory, radiology, or other study performed on a patient.

The result observation includes a statusCode to allow recording the status of an observation. “Pending” results (e.g., a test has been run but results have not been reported yet) should be represented as “active” ActStatus.

Table 174: Result Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09)					
@classCode	1..1	SHALL		1098-7130	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7131	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7136	
@root	1..1	SHALL		1098-9138	2.16.840.1.113883.10.20.22.4.2
@extension	1..1	SHALL		1098-32575	2014-06-09
id	1..*	SHALL		1098-7137	
code	1..1	SHALL		1098-7133	urn:oid:2.16.840.1.113883.6.1 (LOINC)
statusCode	1..1	SHALL		1098-7134	
@code	1..1	SHALL		1098-14849	urn:oid:2.16.840.1.113883.11.20.9.39 (Result Status)
effectiveTime	1..1	SHALL		1098-7140	
value	0..1	SHOULD		1098-7143	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT)
interpretationCode	0..*	SHOULD		1098-7147	
@code	1..1	SHALL		1098-32476	urn:oid:2.16.840.1.113883.1.11.78 (Observation Interpretation (HL7))
methodCode	0..1	MAY	SET<CE>	1098-7148	
targetSiteCode	0..1	MAY	SET<CD>	1098-7153	
author	0..*	SHOULD		1098-7149	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
referenceRange	0..*	SHOULD		1098-7150	
observationRange	1..1	SHALL		1098-7151	
code	0..0	SHALL NOT		1098-7152	
value	1..1	SHALL		1098-32175	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7130).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7131).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7136) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.2"** (CONF:1098-9138).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32575).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7137).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from CodeSystem LOINC (urn:oid:2.16.840.1.113883.6.1) (CONF:1098-7133).
 - a. This code **SHOULD** be a code from the LOINC that identifies the result observation. If an appropriate LOINC code does not exist, then the local code for this result **SHALL** be sent (CONF:1098-19212).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7134).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Result Status](#) urn:oid:2.16.840.1.113883.11.20.9.39 **STATIC** 2013-08-09 (CONF:1098-14849).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-7140).
Note: Represents the biologically relevant time of the measurement (e.g., the time a blood pressure reading is obtained, the time the blood sample was obtained for a chemistry test).
8. **SHOULD** contain zero or one [0..1] **value**, which **SHOULD** be selected from CodeSystem SNOMED CT (urn:oid:2.16.840.1.113883.6.96) (CONF:1098-7143).
 - a. If Observation/value is a physical quantity (**xsi:type="PQ"**), the unit of measure **SHALL** be selected from ValueSet UnitsOfMeasureCaseSensitive 2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-31484).
 - b. A coded value **MAY** contain zero or more [0..*] translations, which can be used to represent the original results as output by the lab (CONF:1098-31866).
 - c. If Observation/value is a CD (**xsi:type="CD"**) the value **SHOULD** be SNOMED-CT (CONF:1098-32610).
9. **SHOULD** contain zero or more [0..*] **interpretationCode** (CONF:1098-7147).
 - a. The interpretationCode, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Observation Interpretation \(HL7\)](#) urn:oid:2.16.840.1.113883.1.11.78 **STATIC** 2014-09-01 (CONF:1098-32476).
10. **MAY** contain zero or one [0..1] **methodCode** (CONF:1098-7148).
11. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:1098-7153).
12. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-7149).
13. **SHOULD** contain zero or more [0..*] **referenceRange** (CONF:1098-7150).
 - a. The referenceRange, if present, **SHALL** contain exactly one [1..1] **observationRange** (CONF:1098-7151).
 - i. This observationRange **SHALL NOT** contain [0..0] **code** (CONF:1098-7152).

- ii. This observationRange **SHALL** contain exactly one [1..1] **value** (CONF:1098-32175).

Table 175: Result Status

Value Set: Result Status urn:oid:2.16.840.1.113883.11.20.9.39			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
aborted	ActStatus	urn:oid:2.16.840.1.113883.5.14	aborted
active	ActStatus	urn:oid:2.16.840.1.113883.5.14	active
cancelled	ActStatus	urn:oid:2.16.840.1.113883.5.14	cancelled
completed	ActStatus	urn:oid:2.16.840.1.113883.5.14	completed
held	ActStatus	urn:oid:2.16.840.1.113883.5.14	held
suspended	ActStatus	urn:oid:2.16.840.1.113883.5.14	suspended

Table 176: Observation Interpretation (HL7)

Value Set: Observation Interpretation (HL7) urn:oid:2.16.840.1.113883.1.11.78			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.htm			
Code	Code System	Code System OID	Print Name
A	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	abnormal
B	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	better
Carrier	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	carrier
D	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	decreased
HX	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	above high threshold
I	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	intermediate
IND	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	indeterminate
LX	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	below low threshold
MS	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	moderately susceptible
N	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	normal
...			

Figure 82: Result Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2014-06-09" />
  <id root="7c0704bb-9c40-41b5-9c7d-26b2d59e234f" />
  <code code="4544-3" displayName="Hematocrit" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
  <statusCode code="completed" />
  <effectiveTime value="200803190830-0800" />
  <value xsi:type="PQ" value="35.3" unit="%" />
  <interpretationCode code="L" codeSystem="2.16.840.1.113883.5.83" />
  <author>
    <time value="200803190830-0800" />
    <assignedAuthor>
      <id extension="333444444" root="1.1.1.1.1.1.4" />
      <addr>
        <streetAddressLine>1017 Health Drive</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel:+1(555)555-1017" />
      <assignedPerson>
        <name>
          <given>William</given>
          <given qualifier="CL">Bill</given>
          <family>Beaker</family>
        </name>
      </assignedPerson>
      <representedOrganization>
        <name>Good Health Laboratory</name>
      </representedOrganization>
    </assignedAuthor>
  </author>
  <referenceRange>
    <observationRange>
      <value xsi:type="IVL_PQ">
        <low value="34.9" unit="%" />
        <high value="44.5" unit="%" />
      </value>
    </observationRange>
  </referenceRange>
</observation>
```

Figure 83: Pending Result Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Result observation ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2014-06-09" />
  <id root="aed821af-3330-4138-97f0-e84dfe5f3c35" />
  <code code="3094-0" displayName="Urea nitrogen, Serum"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <statusCode code="active" />
  <effectiveTime value="200803200930-0800" />
  <value xsi:type="PQ" nullFlavor="NI" />
</observation>
```

Figure 84: Original Lab Units in <translation> Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Result observation ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2014-06-09" />
  <id root="a69b3d60-2ffd-4440-958b-72b3335ff35f" />
  <code code="6690-2" displayName="Leukocytes" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
  <statusCode code="completed" />
  <effectiveTime value="200803190830-0800" />
  <value xsi:type="PQ" value="6.7" unit="10*9/L">
    <translation>
      <originalText>6.7 billion per liter</originalText>
    </translation>
  </value>
  <interpretationCode code="N" codeSystem="2.16.840.1.113883.5.83" />
  <author typeCode="AUT">
    <time value="200803190830-0800" />
    <assignedAuthor>
      <id extension="333444444" root="1.1.1.1.1.1.4" />
    </assignedAuthor>
  </author>
  <referenceRange>
    <observationRange>
      <value xsi:type="IVL_PQ">
        <low value="4.3" unit="10*9/L" />
        <high value="10.8" unit="10*9/L" />
      </value>
    </observationRange>
  </referenceRange>
</observation>
```

4.40 Result Organizer (V2) - Published

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09
(open)]

Table 177: Result Organizer (V2) Contexts

Contained By:	Contains:
Results Section (entries required) (V2) (required)	Author Participation Result Observation (V2)

This template provides a mechanism for grouping result observations. It contains information applicable to all of the contained result observations. The Result Organizer code categorizes the contained results into one of several commonly accepted values (e.g., “Hematology”, “Chemistry”, “Nuclear Medicine”).

If any Result Observation within the organizer has a statusCode of "active", the Result Organizer must also have a statusCode of "active".

Table 178: Result Organizer (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09)					
@classCode	1..1	SHALL		1098-7121	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass)
@moodCode	1..1	SHALL		1098-7122	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7126	
@root	1..1	SHALL		1098-9134	2.16.840.1.113883.10.20.22.4.1
@extension	1..1	SHALL		1098-32588	2014-06-09
id	1..*	SHALL		1098-7127	
code	1..1	SHALL		1098-7128	
statusCode	1..1	SHALL		1098-7123	
@code	1..1	SHALL		1098-14848	urn:oid:2.16.840.1.113883.11.20.9.39 (Result Status)
effectiveTime	0..1	MAY		1098-31865	
low	1..1	SHALL		1098-32488	
high	1..1	SHALL		1098-32489	
author	0..*	SHOULD		1098-31149	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
component	1..*	SHALL		1098-7124	
observation	1..1	SHALL		1098-14850	Result Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7121).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7122).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7126) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.1" (CONF:1098-9134).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32588).

4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7127).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-7128).
 - a. **SHOULD** be selected from LOINC (codeSystem 2.16.840.1.113883.6.1) **OR** SNOMED CT (codeSystem 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (codeSystem 2.16.840.1.113883.6.12) (CONF:1098-19218).
 - b. Laboratory results **SHOULD** be from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or other constrained terminology named by the US Department of Health and Human Services Office of National Coordinator or other federal agency (CONF:1098-19219).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7123).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Result Status](#) urn:oid:2.16.840.1.113883.11.20.9.39 **STATIC** 2013-08-09 (CONF:1098-14848).
7. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:1098-31865).
 Note: The effectiveTime is an interval that spans the effectiveTimes of the contained result observations. Because all contained result observations have a required time stamp, it is not required that this effectiveTime be populated.
 - a. The effectiveTime, if present, **SHALL** contain exactly one [1..1] **low** (CONF:1098-32488).
 - b. The effectiveTime, if present, **SHALL** contain exactly one [1..1] **high** (CONF:1098-32489).
8. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31149).
9. **SHALL** contain at least one [1..*] **component** (CONF:1098-7124) such that it
 - a. **SHALL** contain exactly one [1..1] [Result Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09) (CONF:1098-14850).

Figure 85: Result Organizer (V2) Example

```
<organizer classCode="BATTERY" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.1" extension="2014-06-09" />
  <id root="7d5a02b0-67a4-11db-bd13-0800200c9a66" />
  <code code="57021-8" displayName="CBC W Auto Differential panel in Blood"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="200803190830-0800" />
    <high value="200803190830-0800" />
  </effectiveTime>
  <author>
    . . .
  </author>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Result observation ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2014-06-09" />
      . . .
    </observation>
  </component>
</organizer>
```

4.41 Service Delivery Location - Published

[participantRole: identifier urn:oid:2.16.840.1.113883.10.20.22.4.32 (open)]

Table 179: Service Delivery Location Contexts

Contained By:	Contains:
Procedure Activity Procedure (V2) (optional) Planned Encounter (V2) (optional) Procedure Activity Procedure (V2) - Cancer IG Specific Constraints (required) Planned Encounter (V2) - Cancer IG Specific Constraints (required) Radiation Boost Modality Procedure (optional) Radiation Regional Treatment Modality Procedure (optional)	

This clinical statement represents the location of a service event where an act, observation or procedure took place.

Table 180: Service Delivery Location Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
participantRole (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32)					
@classCode	1..1	SHALL		81-7758	urn:oid:2.16.840.1.113883.5.111 (RoleCode) = SDLOC
templateId	1..1	SHALL		81-7635	
@root	1..1	SHALL		81-10524	2.16.840.1.113883.10.20.22.4.32
code	1..1	SHALL		81-16850	urn:oid:2.16.840.1.113883.1.11.20275 (HealthcareServiceLocation)
addr	0..*	SHOULD		81-7760	
telecom	0..*	SHOULD		81-7761	
playingEntity	0..1	MAY		81-7762	
@classCode	1..1	SHALL		81-7763	urn:oid:2.16.840.1.113883.5.41 (EntityClass) = PLC
name	0..1	MAY		81-16037	

1. **SHALL** contain exactly one [1..1] **@classCode**="SDLOC" (CodeSystem: RoleCode urn:oid:2.16.840.1.113883.5.111 **STATIC**) (CONF:81-7758).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7635) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.32" (CONF:81-10524).
3. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [HealthcareServiceLocation](#) urn:oid:2.16.840.1.113883.1.11.20275 **STATIC** (CONF:81-16850).
4. **SHOULD** contain zero or more [0..*] **addr** (CONF:81-7760).
5. **SHOULD** contain zero or more [0..*] **telecom** (CONF:81-7761).
6. **MAY** contain zero or one [0..1] **playingEntity** (CONF:81-7762).
 - a. The playingEntity, if present, **SHALL** contain exactly one [1..1] **@classCode**="PLC" (CodeSystem: EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:81-7763).
 - b. The playingEntity, if present, **MAY** contain zero or one [0..1] **name** (CONF:81-16037).

Table 181: HealthcareServiceLocation

Value Set: HealthcareServiceLocation urn:oid:2.16.840.1.113883.1.11.20275 A comprehensive classification of locations and settings where healthcare services are provided. This value set is based on the National Healthcare Safety Network (NHSN) location code system that has been developed over a number of years through CDC's interaction with a variety of healthcare facilities and is intended to serve a variety of reporting needs where coding of healthcare service locations is required. Value Set Source: http://phinvads.cdc.gov/vads/SearchAllVocab_search.action?searchOptions.searchText=Healthcare+Service+Location+%28NHSN%29			
Code	Code System	Code System OID	Print Name
1162-7	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	24-Hour observation area
1184-1	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Administrative area
1210-4	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Adult Mixed Acuity Unit
1099-1	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Adult step down unit [post-critical care]
1110-6	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Allergy clinic
1166-8	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Ambulatory surgical setting
1212-0	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Any Age Mixed Acuity Unit
1106-4	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Assisted living area
1145-2	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Behavioral health clinic
1185-8	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Blood bank
...			

Figure 86: Service Delivery Location Example

```
<participantRole classCode="SDLOC">
  <templateId root="2.16.840.1.113883.10.20.22.4.32"/>
  <code code="1160-1" codeSystem="2.16.840.1.113883.6.259"
    codeSystemName="HealthcareServiceLocation" displayName="Urgent Care Center"/>
  <addr>
    <streetAddressLine>17 Daws Rd.</streetAddressLine>
    <city>Blue Bell</city>
    <state>MA</state>
    <postalCode>02368</postalCode>
    <country>US</country>
  </addr>
  <telecom use="WP" value="tel:+1(555)555-5000"/>
  <playingEntity classCode="PLC">
    <name>Community Health and Hospitals</name>
  </playingEntity>
</participantRole>
```

4.42 Smoking Status - Meaningful Use (V2) - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09
(open)]

Table 182: Smoking Status - Meaningful Use (V2) Contexts

Contained By:	Contains:
Social History Section (V2) (optional)	Author Participation

This template represents the current smoking status of the patient as specified in Meaningful Use (MU) Stage 2 requirements. Historic smoking status observations as well as details about the smoking habit (e.g., how many per day) would be represented in the Tobacco Use template.

This template represents a “snapshot in time” observation, simply reflecting what the patient’s current smoking status is at the time of the observation. As a result, the effectiveTime is constrained to a time stamp, and will approximately correspond with the author/time. Details regarding the time period when the patient is/was smoking would be recorded in the Tobacco Use template.

If the patient's current smoking status is unknown, the value element must be populated with SNOMED CT code 266927001 to communicate "Unknown if ever smoked" from the Current Smoking Status Value Set.

Table 183: Smoking Status - Meaningful Use (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09)					
@classCode	1..1	SHALL		1098-14806	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-14807	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-14815	
@root	1..1	SHALL		1098-14816	2.16.840.1.113883.10.20.22.4.78
@extension	1..1	SHALL		1098-32573	2014-06-09
id	1..*	SHALL		1098-32401	
code	1..1	SHALL		1098-19170	
@code	1..1	SHALL		1098-31039	72166-2
@codeSystem	1..1	SHALL		1098-32157	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-14809	
@code	1..1	SHALL		1098-19116	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-31928	
value	1..1	SHALL	CD	1098-14810	
@code	1..1	SHALL		1098-14817	urn:oid:2.16.840.1.113883.11.20.9.38 (Current Smoking Status)
author	0..*	SHOULD		1098-31148	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-14806).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-14807).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-14815) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.78" (CONF:1098-14816).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32573).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-32401).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-19170).

- a. This code **SHALL** contain exactly one [1..1] @code="72166-2" Tobacco smoking status NHIS (CONF:1098-31039).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-32157).
6. **SHALL** contain exactly one [1..1] statusCode (CONF:1098-14809).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19116).
7. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1098-31928).
 Note: This template represents a “snapshot in time” observation, simply reflecting what the patient’s current smoking status is at the time of the observation. As a result, the effectiveTime is constrained to just a time stamp, and will approximately correspond with the author/time.
8. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:1098-14810).
 - a. This value **SHALL** contain exactly one [1..1] @code, which **SHALL** be selected from ValueSet [Current Smoking Status](#) urn:oid:2.16.840.1.113883.11.20.9.38 **STATIC** 2014-09-01 (CONF:1098-14817).
 - b. If the patient's current smoking status is unknown, @code **SHALL** contain '266927001' (Unknown if ever smoked) from ValueSet Current Smoking Status (2.16.840.1.113883.11.20.9.38 **STATIC** 2014-09-01) (CONF:1098-31019).
9. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31148).

Table 184: Current Smoking Status

Value Set: Current Smoking Status urn:oid:2.16.840.1.113883.11.20.9.38			
This value set indicates the current smoking status of a patient.			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
449868002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Current every day smoker
428041000124106	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Current some day smoker
8517006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Former smoker
266919005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Never smoker (Never Smoked)
77176002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Smoker, current status unknown
266927001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Unknown if ever smoked
428071000124103	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Heavy tobacco smoker
428061000124105	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Light tobacco smoker

Figure 87: Smoking Status - Meaningful Use (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.78" extension="2014-06-09" />
  <id extension="123456789" root="2.16.840.1.113883.19" />
  <code code="72166-2" codeSystem="2.16.840.1.113883.6.1" displayName="Tobacco smoking
status NHIS" />
  <statusCode code="completed" />
  <!-- The effectiveTime reflects when the current smoking status was observed. -->
  <effectiveTime value="20120910" />
  <!-- The value represents the patient's smoking status currently observed. -->
  <value xsi:type="CD" code="8517006" displayName="Former smoker"
codeSystem="2.16.840.1.113883.6.96" />
  <author typeCode="AUT">
    <time value="199803161030-0800" />
    <assignedAuthor>
      <id extension="555555555" root="1.1.1.1.1.1.2" />
    </assignedAuthor>
  </author>
</observation>
```

4.43 Social History Observation (V2) - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09
(open)]

Table 185: Social History Observation (V2) Contexts

Contained By:	Contains:
Social History Section (V2) (optional) Social History Section (V2) - Cancer IG Specific Constraints (V1.1) (optional)	Author Participation

This template represents a patient's occupations, lifestyle, and environmental health risk factors. Demographic data (e.g., marital status, race, ethnicity, religious affiliation) are captured in the header. Though tobacco use and exposure may be represented with a Social History Observation, it is recommended to use the Current Smoking Status template or the Tobacco Use template instead, to represent smoking or tobacco habits.

Table 186: Social History Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09)					
@classCode	1..1	SHALL		1098-8548	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-8549	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-8550	
@root	1..1	SHALL		1098-10526	2.16.840.1.113883.10.20.22.4.38
@extension	1..1	SHALL		1098-32495	2014-06-09
id	1..*	SHALL		1098-8551	
code	1..1	SHALL		1098-8558	urn:oid:2.16.840.1.113883.6.1 (LOINC)
originalText	0..1	SHOULD		1098-19221	
reference	0..1	SHOULD		1098-19222	
@value	0..1	SHOULD		1098-19223	
statusCode	1..1	SHALL		1098-8553	
@code	1..1	SHALL		1098-19117	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-31868	
value	0..1	SHOULD		1098-8559	
author	0..*	SHOULD		1098-31869	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8548).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8549).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8550) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.38" (CONF:1098-10526).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32495).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8551).

5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from CodeSystem LOINC (urn:oid:2.16.840.1.113883.6.1) **DYNAMIC** (CONF:1098-8558).
 - a. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1098-19221).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1098-19222).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-19223).
 - a. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1098-19224).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-8553).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19117).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-31868).
8. **SHOULD** contain zero or one [0..1] **value** (CONF:1098-8559).
 - a. If Observation/value is a physical quantity (xsi:type="PQ"), the unit of measure **SHALL** be selected from ValueSet UnitsOfMeasureCaseSensitive (2.16.840.1.113883.1.11.12839) **DYNAMIC** (CONF:1098-8555).
9. **SHOULD** contain zero or more [0..*] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31869).

Figure 88: Social History Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.38"
    extension="2014-06-09" />
  <id root="37f76c51-6411-4e1d-8a37-957fd49d2cef" />
  <code code="74013-4"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Alcoholic drinks per day" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20120215" />
  </effectiveTime>
  <value xsi:type="PQ" value="12" />
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    ...
  </author>
</observation>
```


4.44 Stager Clinical Cancer - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.39:2015-02-05
(open)]

Table 187: Stager Clinical Cancer Contexts

Contained By:	Contains:
TNM Clinical Stage Group (required)	

This template identifies the person who recorded the clinical AJCC staging elements and stage group in the patient's medical record.

Table 188: Stager Clinical Cancer Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.39:2015-02-05)					
@classCode	1..1	SHALL		1169-34129	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-34130	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1169-34128	
@root	1..1	SHALL		1169-34131	2.16.840.1.113883.10.13.39
@extension	1..1	SHALL		1169-34132	2015-02-05
code	1..1	SHALL		1169-34133	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34134	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21910-5
@codeSystem	1..1	SHALL		1169-34135	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL	CD	1169-34136	
@code	1..1	SHALL		1169-34137	urn:oid:2.16.840.1.113883.3.520.4.4 (NAACCR TNM Clinical Staged By)
@codeSystem	1..1	SHALL		1169-34138	2.16.840.1.113883.3.520.3.4
@sdtc:valueSet	1..1	SHALL		1169-34139	2.16.840.1.113883.3.520.4.4
originalText	0..1	SHOULD		1169-34140	
reference	0..1	SHOULD		1169-34141	
@value	0..1	SHOULD		1169-34142	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1169-34129).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1169-34130).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-34128) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.39" (CONF:1169-34131).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-02-05" (CONF:1169-34132).
4. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34133).

- a. This code **SHALL** contain exactly one [1..1] **@code**="21910-5" Stager.clinical Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34134).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34135).
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1169-34136).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet NAACCR TNM Clinical Staged By urn:oid:2.16.840.1.113883.3.520.4.4 **DYNAMIC** (CONF:1169-34137).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.3.520.3.4" NAACCR TNM Clinical Staged By (CONF:1169-34138).
 - c. This value **SHALL** contain exactly one [1..1] **@sdtc:valueSet**="2.16.840.1.113883.3.520.4.4" NAACCR TNM Clinical Staged By (CONF:1169-34139).
 - d. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-34140).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-34141).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1169-34142).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-34143).

Table 189: NAACCR TNM Clinical Staged By

Value Set: NAACCR TNM Clinical Staged By urn:oid:2.16.840.1.113883.3.520.4.4 Identifies the person who recorded the clinical AJCC staging elements and the stage group in the patient's medical record. Value Set Source: https://phinivads.cdc.gov/vads/ViewValueSet.action?id=6336A7B1-E404-E011-9273-00188B39829B			
Code	Code System	Code System OID	Print Name
0	NAACCR TNM Clinical Staged By	urn:oid:2.16.840.1.113883.3.520.3.4	Not Staged
1	NAACCR TNM Clinical Staged By	urn:oid:2.16.840.1.113883.3.520.3.4	Managing physician
2	NAACCR TNM Clinical Staged By	urn:oid:2.16.840.1.113883.3.520.3.4	Pathologist
...			

Figure 89: Stager Clinical Cancer example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.39" extension="2015-02-05" />
  <code code="21910-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Stager.clinical Cancer " />
  <value xsi:type="CD" code="3" codeSystem="2.16.840.1.113883.3.520.3.4"
codeSystemName="NAACCR TNM Clinical Staged By " displayName="Pathologist and managing
physician" sdct:valueSet="2.16.840.1.113883.3.520.4.4">
    <originalText>
      <reference value="#ClinicalStagedBy_1" />
    </originalText>
  </value>
</observation>
```

4.45 Stager Pathologic Cancer - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.44:2015-02-05
(open)]

Table 190: Stager Pathologic Cancer Contexts

Contained By:	Contains:
TNM Pathologic Stage Group (required)	

This template identifies the person who recorded the pathologic AJCC staging elements and stage group in the patient's medical record.

Table 191: Stager Pathologic Cancer Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.44:2015-02-05)					
@classCode	1..1	SHALL		1169-34235	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-34236	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1169-34234	
@root	1..1	SHALL		1169-34237	2.16.840.1.113883.10.13.44
@extension	1..1	SHALL		1169-34238	2015-02-05
code	1..1	SHALL		1169-34239	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34241	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21904-8
@codeSystem	1..1	SHALL		1169-34242	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL	CD	1169-34240	
@code	1..1	SHALL		1169-34243	urn:oid:2.16.840.1.113883.3.520.4.27 (NAACCR TNM Pathologic Staged By)
@codeSystem	1..1	SHALL		1169-34244	urn:oid:2.16.840.1.113883.3.520.3.17 (NAACCR TNM Pathologic Staged By) = 2.16.840.1.113883.3.520.3.17
@sdtc:valueSet	1..1	SHALL		1169-34245	2.16.840.1.113883.3.520.4.27
originalText	0..1	SHOULD		1169-34246	
reference	0..1	SHOULD		1169-34247	
@value	0..1	SHOULD		1169-34248	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1169-34235).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1169-34236).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-34234) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.44" (CONF:1169-34237).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-02-05" (CONF:1169-34238).

4. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34239).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="21904-8" Stager.pathology Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34241).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34242).
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1169-34240).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [NAACCR TNM Pathologic Staged By](#) urn:oid:2.16.840.1.113883.3.520.4.27 **DYNAMIC** (CONF:1169-34243).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.3.520.3.17" NAACCR TNM Pathologic Staged By (CodeSystem: NAACCR TNM Pathologic Staged By urn:oid:2.16.840.1.113883.3.520.3.17) (CONF:1169-34244).
 - c. This value **SHALL** contain exactly one [1..1] **@sdtc:valueSet**="2.16.840.1.113883.3.520.4.27" NAACCR TNM Pathologic Staged By (CONF:1169-34245).
 - d. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-34246).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-34247).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1169-34248).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-34249).

Table 192: NAACCR TNM Pathologic Staged By

Value Set: NAACCR TNM Pathologic Staged By urn:oid:2.16.840.1.113883.3.520.4.27			
Value Set Source: https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.27			
Code	Code System	Code System OID	Print Name
0	NAACCR TNM Pathologic Staged By	urn:oid:2.16.840.1.113883.3.520.3.17	Not Staged
1	NAACCR TNM Pathologic Staged By	urn:oid:2.16.840.1.113883.3.520.3.17	Managing physician
2	NAACCR TNM Pathologic Staged By	urn:oid:2.16.840.1.113883.3.520.3.17	Pathologist
...			

Figure 90: Stager Pathologic Cancer example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.44" extension="2015-02-05" />
  <code code="21904-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Stager.pathology Cancer" />
  <value xsi:type="CD" code="3" codeSystem="2.16.840.1.113883.3.520.3.17"
codeSystemName="NAACCR TNM Pathologic Staged By" displayName="Pathologist and managing
physician" sdtc:valueSet="2.16.840.1.113883.3.520.4.27" />
</observation>
```

4.46 TNM Clinical Stage Group - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.35:2015-02-05
(open)]

Table 193: TNM Clinical Stage Group Contexts

Contained By:	Contains:
TNM Clinical Stage Observation (V1.1) (required)	Distant Metastases Clinical Primary Tumor Clinical Regional Lymph Nodes Clinical Stager Clinical Cancer

This template records the combined extent of disease results into a single value, represented by Roman numerals I – IV. A clinical stage group encompasses diagnostic/assessment information prior to the start of treatment.

Table 194: TNM Clinical Stage Group Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.35:2015-02-05)					
@classCode	1..1	SHALL		1169-34047	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-34048	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1169-34254	
@root	1..1	SHALL		1169-34255	2.16.840.1.113883.10.13.35
@extension	1..1	SHALL		1169-34256	2015-02-05
code	1..1	SHALL		1169-34049	
@code	1..1	SHALL		1169-34050	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21908-9
@codeSystem	1..1	SHALL		1169-34051	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1169-34052	
@code	1..1	SHALL		1169-34053	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1169-34054	
@code	1..1	SHALL		1169-34055	urn:oid:2.16.840.1.113883.3.520.4.9 (TNM Clinical Stage Group)
@codeSystem	1..1	SHALL		1169-34056	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.15.6
@sdtc:valueSet	1..1	SHALL		1169-34057	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.3.520.4.9
originalText	0..1	SHOULD		1169-34058	
reference	0..1	SHOULD		1169-34059	
@value	0..1	SHOULD		1169-34060	
qualifier	1..1	SHALL		1169-34062	
name	1..1	SHALL		1169-34063	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34064	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21909-7
@codeSystem	1..1	SHALL		1169-	urn:oid:2.16.840.1.113883.6.1

				34065	(LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL		1169-34066	
@code	1..1	SHALL		1169-34067	urn:oid:2.16.840.1.113883.3.520.4.10 (TNM Clinical Stage Descriptor)
@codeSystem	1..1	SHALL		1169-34068	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.15.6
@displayName	0..1	SHOULD		1169-34069	
@sdtc:valueSet	1..1	SHALL		1169-34070	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.3.520.4.10
originalText	0..1	SHOULD		1169-34257	
reference	0..1	SHOULD		1169-34258	
@value	0..1	SHOULD		1169-34259	
entryRelationship	1..1	SHALL		1169-34071	
@typeCode	1..1	SHALL		1169-34072	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1169-34073	Primary Tumor Clinical (identifier: urn:hl7ii:2.16.840.1.113883.10.13.36:2015-02-05)
entryRelationship	1..1	SHALL		1169-34090	
@typeCode	1..1	SHALL		1169-34091	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1169-34092	Regional Lymph Nodes Clinical (identifier: urn:hl7ii:2.16.840.1.113883.10.13.37:2015-02-05)
entryRelationship	1..1	SHALL		1169-34093	
@typeCode	1..1	SHALL		1169-34094	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1169-34097	Distant Metastases Clinical (identifier: urn:hl7ii:2.16.840.1.113883.10.13.38:2015-02-05)
entryRelationship	1..1	SHALL		1169-34095	

@typeCode	1..1	SHALL		1169-34096	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1169-34098	Stager Clinical Cancer (identifier: urn:hl7ii:2.16.840.1.113883.10.13.39:2015-02-05)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1169-34047).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1169-34048).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-34254) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.35" (CONF:1169-34255).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-02-05" (CONF:1169-34256).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1169-34049).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="21908-9" Stage group.clinical (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34050).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34051).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1169-34052).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1169-34053).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1169-34054).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [TNM Clinical Stage Group](#) urn:oid:2.16.840.1.113883.3.520.4.9 **DYNAMIC** (CONF:1169-34055).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34056).
 - c. This value **SHALL** contain exactly one [1..1] **@sdct:valueSet**="2.16.840.1.113883.3.520.4.9" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34057).
 - d. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-34058).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-34059).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1169-34060).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-34061).
 - e. This value **SHALL** contain exactly one [1..1] **qualifier** (CONF:1169-34062).

- i. This qualifier **SHALL** contain exactly one [1..1] **name** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34063).
 1. This name **SHALL** contain exactly one [1..1] **@code**="21909-7" Descriptor.clinical Cancer Narrative (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34064).
 2. This name **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34065).
- ii. This qualifier **SHALL** contain exactly one [1..1] **value** (CONF:1169-34066).
 1. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [TNM Clinical Stage Descriptor](#) urn:oid:2.16.840.1.113883.3.520.4.10 **DYNAMIC** (CONF:1169-34067).
 2. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34068).
 3. This value **SHOULD** contain zero or one [0..1] **@displayName** (CONF:1169-34069).
 4. This value **SHALL** contain exactly one [1..1] **@sdtc:valueSet**="2.16.840.1.113883.3.520.4.10" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34070).
 5. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-34257).
 - a. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-34258).
 - i. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1169-34259).
 1. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-34260).
7. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1169-34071) such that it
Note: This entryRelationship provides information on the TNM Clinical Stage Tumor (T).
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1169-34072).
 - b. **SHALL** contain exactly one [1..1] [Primary Tumor Clinical](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.36:2015-02-05) (CONF:1169-34073).
8. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1169-34090) such that it
Note: This entryRelationship provides information on the TNM Clinical Stage Node (N).
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1169-34091).

- b. **SHALL** contain exactly one [1..1] [Regional Lymph Nodes Clinical](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.37:2015-02-05) (CONF:1169-34092).
- 9. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1169-34093) such that it
 Note: This entryRelationship provides information on the TNM Clinical Stage Metastasis (M).
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1169-34094).
 - b. **SHALL** contain exactly one [1..1] [Distant Metastases Clinical](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.38:2015-02-05) (CONF:1169-34097).
- 10. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1169-34095) such that it
 Note: Identifies the role of the person who recorded the staging elements.
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1169-34096).
 - b. **SHALL** contain exactly one [1..1] [Stager Clinical Cancer](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.39:2015-02-05) (CONF:1169-34098).

Table 195: TNM Clinical Stage Group

Value Set: TNM Clinical Stage Group urn:oid:2.16.840.1.113883.3.520.4.9 Detailed site-specific code for the clinical stage group as defined by AJCC and recorded by the ambulatory healthcare provider (physician). Note: The AJCC Staging Manual TNM system is proprietary and its definitions cannot be included in other documents without permission. Value Set Source: http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.9			
Code	Code System	Code System OID	Print Name
IVB	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	No display name applicable.
IVB	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IVA	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IV	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IIIC	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IIIB	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IIIA	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
III	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IIC	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IIB	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
99	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
...			

Table 196: TNM Clinical Stage Descriptor

Value Set: TNM Clinical Stage Descriptor urn:oid:2.16.840.1.113883.3.520.4.10			
Identify special cases that need separate data analysis.			
Value Set Source: https://phinvads.cdc.gov/vads/ViewValueSet.action?id=37448BA8-3006-E011-9273-00188B39829B			
Code	Code System	Code System OID	Print Name
0	TNM 7. Edition	urn:oid:2.16.840.1.113883.3.15.6	None
1	TNM 7. Edition	urn:oid:2.16.840.1.113883.3.15.6	E (Extranodal, lymphomas only)
2	TNM 7. Edition	urn:oid:2.16.840.1.113883.3.15.6	S (Spleen, lymphomas only)
...			

Figure 91: TNM Clinical Stage Group example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.35" extension="2015-02-05" />
  <code code="21908-9" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Stage group.clinical" />
  <statusCode code="completed" />
  <value xsi:type="CD" code="IIB" codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM
7. Edition" sdct:valueSet="2.16.840.1.113883.3.520.4.9">
    <originalText>
      <reference value="#ClinicalStageGroup_1" />
    </originalText>
    <qualifier>
      <name code="21909-7" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Descriptor.clinical Cancer Narrative" />
      <value code="0" codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7.
Edition" displayName="None" sdct:valueSet="2.16.840.1.113883.3.520.4.10">
        <originalText>
          <reference value="#ClinicalNarrative_1" />
        </originalText>
      </value>
    </qualifier>
  </value>
  <entryRelationship typeCode="COMP">
    ...
  </observation>

```

4.47 TNM Clinical Stage Observation (V1.1) - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.5:2015-02-05
(open)]

Table 197: TNM Clinical Stage Observation (V1.1) Contexts

Contained By:	Contains:
Cancer Diagnosis Observation (V1.1) (required)	TNM Clinical Stage Group

Note: This template is modeled based on C-CDA R2 "Problem Observation (V2)" template.

TNM Clinical Stage describes detailed site-specific information on the progression of disease for the cancer/tumor as defined by AJCC and recorded by the ambulatory healthcare provider (physician).

The AJCC Staging Manual TNM system is proprietary and its definitions cannot be included in this IG or in other documents without permission.

This template is used to record TNM stage when the stage values are known, including situations when, after staging workup, the stage group and/or TNM component(s) are found to be unknown (e.g., Stage Group= 9, and/or TX, and/or NX).

Table 198: TNM Clinical Stage Observation (V1.1) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.5:2015-02-05)					
@nullFlavor	0..0	SHALL NOT		1169-33188	
@classCode	1..1	SHALL		1169-32505	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-32506	urn:oid:2.16.840.1.113883.5.100 1 (ActMood) = EVN
templateId	1..1	SHALL		1169-32494	
@root	1..1	SHALL		1169-32508	2.16.840.1.113883.10.13.5
@extension	1..1	SHALL		1169-33976	2015-02-05
id	1..*	SHALL		1169-32509	
code	1..1	SHALL		1169-32510	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-33659	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 75620-5
@codeSystem	1..1	SHALL		1169-33660	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1169-32498	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
@code	1..1	SHALL		1169-32512	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1169-32499	
low	1..1	SHALL		1169-32513	
@nullFlavor	0..1	MAY		1169-32640	
entryRelationship	1..1	SHALL		1169-33399	
@typeCode	1..1	SHALL		1169-33470	urn:oid:2.16.840.1.113883.5.100 2 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1169-33400	TNM Clinical Stage Group (identifier: urn:hl7ii:2.16.840.1.113883.10.13.35:2015-02-05)

1. **SHALL NOT** contain [0..0] @nullFlavor (CONF:1169-33188).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1169-32505).

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1169-32506).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-32494) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.5" (CONF:1169-32508).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-02-05" (CONF:1169-33976).
5. **SHALL** contain at least one [1..*] **id** (CONF:1169-32509).
6. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-32510).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75620-5" TNM clinical staging before treatment panel Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33659).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33660).
7. **SHALL** contain exactly one [1..1] **statusCode**="completed" (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1169-32498).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1169-32512).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1169-32499).
 The effectiveTime/low documents when detailed site-specific information on the progression of disease for the cancer/tumor was recorded.
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1169-32513).
 - i. This low **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1169-32640).
9. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1169-33399).
 Note: This entryRelationship provides information on the TNM Clinical Stage Group.
 - a. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1169-33470).
 - b. This entryRelationship **SHALL** contain exactly one [1..1] **TNM Clinical Stage Group** (identifier: urn:hl7ii:2.16.840.1.113883.10.13.35:2015-02-05) (CONF:1169-33400).

Figure 92: TNM Clinical Stage Observation example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.5" extension="2015-02-05"/>
  <id root="91473759-6678-48a2-a0d5-084c5ded5afc"/>
  <code code="75620-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="TNM clinical staging before treatment panel Cancer"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="20140801112102"/>
  </effectiveTime>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.13.35" extension="2015-02-05"/>
      <code code="21908-9" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Stage group.clinical"/>
      <statusCode code="completed"/>
      <value xsi:type="CD" code="IIB" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" sdtc:valueSet="2.16.840.1.113883.3.520.4.9">
        <originalText>
          <reference value="#ClinicalStageGroup_1"/>
        </originalText>
        <qualifier>
          <name code="21909-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Descriptor.clinical Cancer Narrative"/>
          <value code="0" codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM
7. Edition" displayName="None" sdtc:valueSet="2.16.840.1.113883.3.520.4.10">
            <originalText>
              <reference value="#ClinicalNarrative_1"/>
            </originalText>
          </value>
        </qualifier>
      </value>
    </entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.36" extension="2015-02-05"/>
        <code code="21905-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Primary tumor.clinical [Class] Cancer"/>
        <value xsi:type="CD" code="T2" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" displayName="Tumor &gt; 20 mm but &lt;= to 50 mm in
greatest dimension" sdtc:valueSet="2.16.840.1.113883.3.520.4.6">
          <originalText>
            <reference value="#ClinicalPrimaryTumor_1"/>
          </originalText>
        </value>
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.37" extension="2015-02-05"/>
        <code code="21906-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Regional lymph nodes.clinical [Class] Cancer"/>
        <value xsi:type="CD" code="N1" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" displayName="Metastases to movable ipsilateral level I, II
axillary lymph node(s)" sdtc:valueSet="2.16.840.1.113883.3.520.4.7">
          <originalText>
            <reference value="#ClinicalNode 1"/>
          </originalText>
        </value>
      </observation>
    </entryRelationship>
  </entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.13.38" extension="2015-02-05"/>
      <code code="21907-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Tumor size and extent.clinical [Class] Cancer"/>
      <statusCode code="completed"/>
      <value xsi:type="CD" code="T2" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" displayName="Tumor &gt; 20 mm but &lt;= to 50 mm in
greatest dimension" sdtc:valueSet="2.16.840.1.113883.3.520.4.6">
        <originalText>
          <reference value="#ClinicalTumorSize_1"/>
        </originalText>
        <qualifier>
          <name code="21909-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Descriptor.clinical Cancer Narrative"/>
          <value code="0" codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM
7. Edition" displayName="None" sdtc:valueSet="2.16.840.1.113883.3.520.4.10">
            <originalText>
              <reference value="#ClinicalNarrative_1"/>
            </originalText>
          </value>
        </qualifier>
      </value>
    </entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.39" extension="2015-02-05"/>
        <code code="21908-9" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Stage group.clinical"/>
        <statusCode code="completed"/>
        <value xsi:type="CD" code="IIB" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" sdtc:valueSet="2.16.840.1.113883.3.520.4.9">
          <originalText>
            <reference value="#ClinicalStageGroup_1"/>
          </originalText>
        </value>
      </observation>
    </entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.40" extension="2015-02-05"/>
        <code code="21909-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Descriptor.clinical Cancer Narrative"/>
        <statusCode code="completed"/>
        <value xsi:type="CD" code="0" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" displayName="None" sdtc:valueSet="2.16.840.1.113883.3.520.4.10">
          <originalText>
            <reference value="#ClinicalNarrative_1"/>
          </originalText>
        </value>
      </observation>
    </entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.41" extension="2015-02-05"/>
        <code code="21910-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Tumor size and extent.clinical [Class] Cancer"/>
        <statusCode code="completed"/>
        <value xsi:type="CD" code="T2" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" displayName="Tumor &gt; 20 mm but &lt;= to 50 mm in
greatest dimension" sdtc:valueSet="2.16.840.1.113883.3.520.4.6">
          <originalText>
            <reference value="#ClinicalTumorSize_1"/>
          </originalText>
        </value>
      </observation>
    </entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.42" extension="2015-02-05"/>
        <code code="21911-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Regional lymph nodes.clinical [Class] Cancer"/>
        <statusCode code="completed"/>
        <value xsi:type="CD" code="N1" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" displayName="Metastases to movable ipsilateral level I, II
axillary lymph node(s)" sdtc:valueSet="2.16.840.1.113883.3.520.4.7">
          <originalText>
            <reference value="#ClinicalNode 1"/>
          </originalText>
        </value>
      </observation>
    </entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.43" extension="2015-02-05"/>
        <code code="21912-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Tumor size and extent.clinical [Class] Cancer"/>
        <statusCode code="completed"/>
        <value xsi:type="CD" code="T2" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" displayName="Tumor &gt; 20 mm but &lt;= to 50 mm in
greatest dimension" sdtc:valueSet="2.16.840.1.113883.3.520.4.6">
          <originalText>
            <reference value="#ClinicalTumorSize_1"/>
          </originalText>
        </value>
      </observation>
    </entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.44" extension="2015-02-05"/>
        <code code="21913-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Regional lymph nodes.clinical [Class] Cancer"/>
        <statusCode code="completed"/>
        <value xsi:type="CD" code="N1" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" displayName="Metastases to movable ipsilateral level I, II
axillary lymph node(s)" sdtc:valueSet="2.16.840.1.113883.3.520.4.7">
          <originalText>
            <reference value="#ClinicalNode 1"/>
          </originalText>
        </value>
      </observation>
    </entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.45" extension="2015-02-05"/>
        <code code="21914-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Tumor size and extent.clinical [Class] Cancer"/>
        <statusCode code="completed"/>
        <value xsi:type="CD" code="T2" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" displayName="Tumor &gt; 20 mm but &lt;= to 50 mm in
greatest
```

```

        </originalText>
      </value>
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.13.38" extension="2015-02-05"/>
      <code code="21907-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Distant metastases.clinical [Class] Cancer"/>
      <value xsi:type="CD" code="M0" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" displayName="No clinical or radiographic evidence of
distant metastases" sdtc:valueSet="2.16.840.1.113883.3.520.4.8">
        <originalText>
          <reference value="#ClinicalMetasases_1"/>
        </originalText>
      </value>
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.13.39" extension="2015-02-05"/>
      <code code="21910-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Stager.clinical Cancer "/>
      <value xsi:type="CD" code="3" codeSystem="2.16.840.1.113883.3.520.3.4"
codeSystemName="NAACCR TNM Clinical Staged By " displayName="Pathologist and managing
physician" sdtc:valueSet="2.16.840.1.113883.3.520.4.4">
        <originalText>
          <reference value="#ClinicalStagedBy_1"/>
        </originalText>
      </value>
    </observation>
  </entryRelationship>
</observation>

```

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[observation: identifier urn:h17ii:2.16.840.1.113883.10.13.40:2015-02-05
(open)]

Table 199: TNM Pathologic Stage Group Contexts

Contained By:	Contains:
TNM Pathologic Stage Observation (V1.1) (required)	Distant Metastases Pathologic Primary Tumor Pathologic Regional Lymph Nodes Pathologic Stager Pathologic Cancer

This template records the combined extent of disease results into a single value, represented by Roman numerals I – IV. A pathologic stage group encompasses diagnostic/assessment information and information obtained histologic examination of the surgical specimens.

Table 200: TNM Pathologic Stage Group Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.40:2015-02-05)					
@classCode	1..1	SHALL		1169-34146	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-34147	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1169-34261	
@root	1..1	SHALL		1169-34262	2.16.840.1.113883.10.13.40
@extension	1..1	SHALL		1169-34263	2015-02-05
code	1..1	SHALL		1169-34148	
@code	1..1	SHALL		1169-34149	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21902-2
@codeSystem	1..1	SHALL		1169-34150	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1169-34151	
@code	1..1	SHALL		1169-34152	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1169-34153	
@code	1..1	SHALL		1169-34154	urn:oid:2.16.840.1.113883.3.520.4.20 (TNM Pathologic Stage Group)
@codeSystem	1..1	SHALL		1169-34155	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.15.6
@sdct:valueSet	1..1	SHALL		1169-34156	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.3.520.4.20
originalText	0..1	SHOULD		1169-34157	
reference	0..1	SHOULD		1169-34158	
@value	0..1	SHOULD		1169-34159	
qualifier	1..1	SHALL		1169-34161	
name	1..1	SHALL		1169-34162	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34163	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21903-0

@codeSystem	1..1	SHALL		1169-34164	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL		1169-34165	
@code	1..1	SHALL		1169-34168	urn:oid:2.16.840.1.113883.3.520.4.21 (TNM Pathologic Stage Descriptor)
@codeSystem	1..1	SHALL		1169-34169	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.15.6
@displayName	0..1	SHOULD		1169-34170	
@sdtc:valueSet	1..1	SHALL		1169-34171	urn:oid:2.16.840.1.113883.15.6 (TNM 7. Edition) = 2.16.840.1.113883.3.520.4.21
originalText	0..1	SHOULD		1169-34166	
reference	0..1	SHOULD		1169-34167	
@value	0..1	SHOULD		1169-34172	
entryRelationship	1..1	SHALL		1169-34174	
@typeCode	1..1	SHALL		1169-34175	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1169-34176	Primary Tumor Pathologic (identifier: urn:hl7ii:2.16.840.1.113883.10.13.41:2015-02-05)
entryRelationship	1..1	SHALL		1169-34177	
@typeCode	1..1	SHALL		1169-34178	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1169-34179	Regional Lymph Nodes Pathologic (identifier: urn:hl7ii:2.16.840.1.113883.10.13.42:2015-02-05)
entryRelationship	1..1	SHALL		1169-34180	
@typeCode	1..1	SHALL		1169-34181	urn:oid:2.16.840.1.113883.5.1060 (HL7EntityType) = COMP
observation	1..1	SHALL		1169-34182	Distant Metastases Pathologic (identifier: urn:hl7ii:2.16.840.1.113883.10.13.43:2015-02-05)
entryRelationship	1..1	SHALL		1169-34183	

@typeCode	1..1	SHALL		1169-34184	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1169-34185	Stager Pathologic Cancer (identifier: urn:hl7ii:2.16.840.1.113883.10.13.44:2015-02-05)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1169-34146).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1169-34147).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-34261) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.40" (CONF:1169-34262).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-02-05" (CONF:1169-34263).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1169-34148).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="21902-2" Stage group.pathology Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34149).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34150).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1169-34151).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1169-34152).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1169-34153).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [TNM Pathologic Stage Group](#) urn:oid:2.16.840.1.113883.3.520.4.20 **DYNAMIC** (CONF:1169-34154).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34155).
 - c. This value **SHALL** contain exactly one [1..1] **@sdct:valueSet**="2.16.840.1.113883.3.520.4.20" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34156).
 - d. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-34157).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-34158).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1169-34159).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-34160).

- e. This value **SHALL** contain exactly one [1..1] **qualifier** (CONF:1169-34161).
 - i. This qualifier **SHALL** contain exactly one [1..1] **name** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34162).
 - 1. This name **SHALL** contain exactly one [1..1] **@code**="21903-0" Descriptor.pathology Cancer Narrative (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34163).
 - 2. This name **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34164).
 - ii. This qualifier **SHALL** contain exactly one [1..1] **value** (CONF:1169-34165).
 - 1. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [TNM Pathologic Stage Descriptor](#) urn:oid:2.16.840.1.113883.3.520.4.21 (CONF:1169-34168).
 - 2. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34169).
 - 3. This value **SHOULD** contain zero or one [0..1] **@displayName** (CONF:1169-34170).
 - 4. This value **SHALL** contain exactly one [1..1] **@sdtc:valueSet**="2.16.840.1.113883.3.520.4.21" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1169-34171).
 - 5. This value **SHOULD** contain zero or one [0..1] **originalText** (CONF:1169-34166).
 - a. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1169-34167).
 - i. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1169-34172).
 - 1. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-34173).
- 7. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1169-34174) such that it
Note: This entryRelationship provides information on the TNM Pathologic Stage Tumor (T).
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1169-34175).
 - b. **SHALL** contain exactly one [1..1] [Primary Tumor Pathologic](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.41:2015-02-05) (CONF:1169-34176).
- 8. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1169-34177) such that it
Note: This entryRelationship provides information on the TNM Pathologic Stage Node (N).
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1169-34178).

- b. **SHALL** contain exactly one [1..1] [Regional Lymph Nodes Pathologic](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.42:2015-02-05) (CONF:1169-34179).
- 9. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1169-34180) such that it
Note: This entryRelationship provides information on the TNM Pathologic Stage Metastasis (M).
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component (CodeSystem: HL7EntityCode urn:oid:2.16.840.1.113883.5.1060) (CONF:1169-34181).
 - b. **SHALL** contain exactly one [1..1] [Distant Metastases Pathologic](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.43:2015-02-05) (CONF:1169-34182).
- 10. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1169-34183) such that it
Note: Identifies the role of the person who recorded the staging elements.
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1169-34184).
 - b. **SHALL** contain exactly one [1..1] [Stager Pathologic Cancer](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.44:2015-02-05) (CONF:1169-34185).

Table 201: TNM Pathologic Stage Group

Value Set: TNM Pathologic Stage Group urn:oid:2.16.840.1.113883.3.520.4.20 Detailed site-specific code for the pathologic stage group as defined by AJCC and recorded by the ambulatory healthcare provider (physician). Note: The AJCC Staging Manual TNM system is proprietary and its definitions cannot be included in other documents without permission. Value Set Source: http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.20			
Code	Code System	Code System OID	Print Name
IVB	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	No display name applicable.
IVB	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IVA	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IV	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IIIC	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IIIB	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IIIA	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
III	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IIC	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
IIB	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
99	TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6	""
...			

Table 202: TNM Pathologic Stage Descriptor

Value Set: TNM Pathologic Stage Descriptor urn:oid:2.16.840.1.113883.3.520.4.21 Identify special cases that need separate data analysis. Value Set Source: https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.21			
Code	Code System	Code System OID	Print Name
0	TNM 7. Edition	urn:oid:2.16.840.1.113883.3.15.6	None
3	TNM 7. Edition	urn:oid:2.16.840.1.113883.3.15.6	M (Multiple primary tumors in a single site)
9	TNM 7. Edition	urn:oid:2.16.840.1.113883.3.15.6	Unknown, not stated in patient record
...			

Figure 93: TNM Pathologic Stage Group example

<pre> <observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.13.40" extension="2015-02-05" /> <code code="21902-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Stage group.pathology Cancer" /> <statusCode code="completed" /> <value xsi:type="CD" code="IIB" codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" sdtc:valueSet="2.16.840.1.113883.3.520.4.20"> <originalText> <reference value="#PathologicStageGroup_1" /> </originalText> <qualifier> <name code="21903-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Descriptor.pathology Cancer Narrative " /> <value code="0" codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM 7. Edition" sdtc:valueSet="2.16.840.1.113883.3.520.4.21" /> </qualifier> </value> <entryRelationship typeCode="COMP"> ... </entryRelationship> </observation> </pre>

4.49 TNM Pathologic Stage Observation (V1.1) - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.7:2015-02-06
(open)]

Table 203: TNM Pathologic Stage Observation (V1.1) Contexts

Contained By:	Contains:
Cancer Diagnosis Observation (V1.1) (required)	TNM Pathologic Stage Group

Note: This template is modeled based on C-CDA R2 "Problem Observation (V2)" template.

TNM Pathologic Stage describes detailed site-specific information on the progression of disease for the cancer/tumor as defined by AJCC and recorded by the ambulatory healthcare provider (physician).

The AJCC Staging Manual TNM system is proprietary and its definitions cannot be included in this IG or in other documents without permission.

This template is used to record TNM stage when the stage values are known, including situations when, after staging workup, the stage group and/or TNM component(s) are found to be unknown (e.g., Stage Group= 9, and/or TX, and/or NX).

Table 204: TNM Pathologic Stage Observation (V1.1) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.7:2015-02-06)					
@nullFlavor	0..0	SHALL NOT		1169-33189	
@classCode	1..1	SHALL		1169-33167	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1169-33168	urn:oid:2.16.840.1.113883.5.100 1 (ActMood) = EVN
templateId	1..1	SHALL		1169-33117	
@root	1..1	SHALL		1169-33149	2.16.840.1.113883.10.13.7
@extension	1..1	SHALL		1169-33977	2015-02-06
id	1..*	SHALL		1169-33169	
code	1..1	SHALL		1169-33170	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-33657	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 75621-3
@codeSystem	1..1	SHALL		1169-33658	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1169-33121	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
@code	1..1	SHALL		1169-33151	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1169-33122	
low	1..1	SHALL		1169-33123	
@nullFlavor	0..1	MAY		1169-33152	
entryRelationship	1..1	SHALL		1169-33468	
@typeCode	1..1	SHALL		1169-33471	urn:oid:2.16.840.1.113883.5.100 2 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1169-33469	TNM Pathologic Stage Group (identifier: urn:hl7ii:2.16.840.1.113883.10.13.40:2015-02-05)

1. **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1169-33189).
2. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1169-33167).

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1169-33168).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-33117) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.7" (CONF:1169-33149).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-02-06" (CONF:1169-33977).
5. **SHALL** contain at least one [1..*] **id** (CONF:1169-33169).
6. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33170).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75621-3" TNM pathologic staging after surgery panel Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33657).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-33658).
7. **SHALL** contain exactly one [1..1] **statusCode**="completed" (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1169-33121).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1169-33151).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1169-33122).
 The effectiveTime/low documents when detailed site-specific information on the progression of disease for the cancer/tumor was recorded.
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1169-33123).
 - i. This low **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1169-33152).
9. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1169-33468).
 Note: This entryRelationship provides information on the TNM Pathologic Stage Group.
 - a. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1169-33471).
 - b. This entryRelationship **SHALL** contain exactly one [1..1] **TNM Pathologic Stage Group** (identifier: urn:hl7ii:2.16.840.1.113883.10.13.40:2015-02-05) (CONF:1169-33469).

Figure 94: TNM Pathologic Stage Observation example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.7" extension="2015-02-06"/>
  <id root="6d064a91-fdae-4acf-9eb8-e1695cf301c9"/>
  <code code="75621-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="TNM pathologic staging after surgery panel"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="20140801112253"/>
  </effectiveTime>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.13.40" extension="2015-02-05"/>
      <code code="21902-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Stage group.pathology Cancer"/>
      <statusCode code="completed"/>
      <value xsi:type="CD" code="IIB" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" sdtc:valueSet="2.16.840.1.113883.3.520.4.20">
        <originalText>
          <reference value="#PathologicStageGroup_1"/>
        </originalText>
        <qualifier>
          <name code="21903-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Descriptor.pathology Cancer Narrative "/>
          <value code="0" codeSystem="2.16.840.1.113883.15.6" codeSystemName="TNM
7. Edition" sdtc:valueSet="2.16.840.1.113883.3.520.4.21"/>
        </qualifier>
      </value>
    </entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.41" extension="2015-02-05"/>
        <code code="21899-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Primary tumor.pathology Cancer"/>
        <value xsi:type="CD" code="T2" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" displayName="Tumor &gt; 20 mm but &lt;= to 50 mm in
greatest dimension" sdtc:valueSet="2.16.840.1.113883.3.520.4.17"/>
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.42" extension="2015-02-05"/>
        <code code="21900-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Regional lymph nodes.pathology [Class] Cancer"/>
        <value xsi:type="CD" code="N1" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" displayName="Micrometastases; or metastases in 1 to 3
axillary lymph nodes; and/or in internal mammary nodes with metastases detected by sentinel
lymph node biopsy but not clinically detected."
sdtc:valueSet="2.16.840.1.113883.3.520.4.18"/>
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.43" extension="2015-02-05"/>
        <code code="21901-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Distant metastases.pathology [Class] Cancer"/>

```

```

        <value xsi:type="CD" code="MX" codeSystem="2.16.840.1.113883.15.6"
codeSystemName="TNM 7. Edition" sdtc:valueSet="2.16.840.1.113883.3.520.4.19"/>
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.13.44" extension="2015-02-05"/>
        <code code="21904-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Stager.pathology Cancer"/>
        <value xsi:type="CD" code="3" codeSystem="2.16.840.1.113883.3.520.3.17"
codeSystemName="NAACCR TNM Pathologic Staged By" displayName="Pathologist and managing
physician" sdtc:valueSet="2.16.840.1.113883.3.520.4.27"/>
      </observation>
    </entryRelationship>
  </observation>
</entryRelationship>
</observation>

```

4.50 Tobacco Use (V2) - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09
(open)]

Table 205: Tobacco Use (V2) Contexts

Contained By:	Contains:
Social History Section (V2) (optional)	Author Participation

This template represents a patient's tobacco use.

All the types of tobacco use are represented using the codes from the tobacco use and exposure-finding hierarchy in SNOMED CT, including codes required for recording smoking status in Meaningful Use Stage 2.

The effectiveTime element is used to describe dates associated with the patient's tobacco use. Whereas the Smoking Status - Meaningful Use (V2) template (2.16.840.1.113883.10.20.22.4.78:2014-06-09) represents a "snapshot in time" observation, simply reflecting what the patient's current smoking status is at the time of the observation, this Tobacco Use template uses effectiveTime to represent the biologically relevant time of the observation. Thus, to record a former smoker, an observation of "cigarette smoker" will have an effectiveTime/low defining the time the patient started to smoke cigarettes and an effectiveTime/high defining the time the patient ceased to smoke cigarettes. To record a current smoker, the effectiveTime/low will define the time the patient started smoking and will have no effectiveTime/high to indicated that the patient is still smoking.

Table 206: Tobacco Use (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09)					
@classCode	1..1	SHALL		1098-16558	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-16559	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-16566	
@root	1..1	SHALL		1098-16567	2.16.840.1.113883.10.20.22.4.85
@extension	1..1	SHALL		1098-32589	2014-06-09
id	1..*	SHALL		1098-32400	
code	1..1	SHALL		1098-19174	
@code	1..1	SHALL		1098-19175	11367-0
@codeSystem	1..1	SHALL		1098-32172	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-16561	
@code	1..1	SHALL		1098-19118	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-16564	
low	1..1	SHALL		1098-16565	
high	0..1	MAY		1098-31431	
value	1..1	SHALL	CD	1098-16562	
@code	1..1	SHALL		1098-16563	urn:oid:2.16.840.1.113883.11.20.9.41 (Tobacco Use)
author	0..*	SHOULD		1098-31152	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-16558).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-16559).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-16566) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.85" (CONF:1098-16567).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32589).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-32400).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-19174).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11367-0" History of tobacco use (CONF:1098-19175).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-32172).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-16561).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19118).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-16564).
 Note: The effectiveTime represents the biologically relevant time of the observation. Thus, an observation of “former smoker” will have an effectiveTime defining the time during which the patient has been a former smoker; an observation of “current smoker” will have an effectiveTime defining the time during which the patient has been a current smoker.
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1098-16565).
 - b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1098-31431).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1098-16562).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet Tobacco Use urn:oid:2.16.840.1.113883.11.20.9.41 **DYNAMIC** (CONF:1098-16563).
9. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31152).

Table 207: Tobacco Use

Value Set: Tobacco Use urn:oid:2.16.840.1.113883.11.20.9.41 Contains values descending from the SNOMED CT® Finding of tobacco use and exposure (finding) (365980008) hierarchy. Value Set Source: http://vts1.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=365980008			
Code	Code System	Code System OID	Print Name
81703003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Chews tobacco
228494002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Snuff user
59978006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Cigar smoker
43381005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Passive smoker
228524006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Exposed to tobacco smoke at home
427189007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Maternal tobacco use
394871007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Thinking about stopping smoking
65568007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Cigarette smoker
160619003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Rolls own cigarettes
266927001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Pipe smoker
...			

Figure 95: Tobacco Use (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Tobacco use ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.85" extension="2014-06-09" />
  <id root="45efb604-7049-4a2e-ad33-d38556c9636c" />
  <code code="11367-0" codeSystem="2.16.840.1.113883.6.1" displayName="History of tobacco
use" />
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value reflects the start date of the observation/value (moderate
smoker) -->
    <low value="20090214" />
    <!-- The high value reflects the end date of the observation/value (moderate
smoker) -->
    <high value="20110215" />
  </effectiveTime>
  <value xsi:type="CD" code="160604004" displayName="Moderate cigarette smoker, 10-
19/day" codeSystem="2.16.840.1.113883.6.96" />
  <author typeCode="AUT">
    <time value="201209101145-0800" />
    <assignedAuthor>
      <id extension="555555555" root="1.1.1.1.1.1.2" />
    </assignedAuthor>
  </author>
</observation>
```

4.51 Usual Industry History - Published

[observation: identifier urn:h17ii:2.16.840.1.113883.10.13.33:2015-01-29
(open)]

Table 208: Usual Industry History Contexts

Contained By:	Contains:
Employment History Observation Organizer (V1.1) (required)	

This template records the business/industry associated with the patient's usual occupation.

Table 209: Usual Industry History Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.33:2015-01-29)					
@classCode	1..1	SHALL		1169-34006	OBS
@moodCode	1..1	SHALL		1169-34007	EVN
templateId	1..1	SHALL		1169-34377	
@root	1..1	SHALL		1169-34378	2.16.840.1.113883.10.13.33
@extension	1..1	SHALL		1169-34379	2015-01-29
code	1..1	SHALL		1169-34005	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34008	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21844-6
@codeSystem	1..1	SHALL		1169-34009	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
effectiveTime	1..1	SHALL		1169-34010	
low	0..1	SHOULD		1169-34011	
high	0..1	MAY		1169-34012	
value	1..1	SHALL	CD	1169-34013	
@nullFlavor	0..1	MAY		1169-34371	
@code	1..1	SHALL		1169-34014	urn:oid:2.16.840.1.114222.4.11.7187 (PHVS_Industry_CDC_Census2010)
@codeSystem	1..1	SHALL		1169-34015	urn:oid:2.16.840.1.114222.4.5.315 (Industry CDC Census 2010) = 2.16.840.1.114222.4.5.315
@displayName	1..1	SHALL		1169-34016	urn:oid:2.16.840.1.114222.4.11.7187 (PHVS_Industry_CDC_Census2010)
@sdct:valueSet	1..1	SHALL		1169-34017	urn:oid:2.16.840.1.114222.4.5.315 (Industry CDC Census 2010) = 2.16.840.1.114222.4.11.7187
originalText	1..1	SHOULD		1169-34018	
reference	1..1	SHOULD		1169-34019	

@value	1..1	SHOULD		1169-34020	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CONF:1169-34006).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CONF:1169-34007).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-34377) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.33" (CONF:1169-34378).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-01-29" (CONF:1169-34379).
4. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34005).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="21844-6" Usual Industry Hx (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34008).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34009).
5. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1169-34010).
 - a. This effectiveTime **SHOULD** contain zero or one [0..1] **low** (CONF:1169-34011).
 - b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1169-34012).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1169-34013).
 - a. This value **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1169-34371).

If value/**@nullFlavor** is not present then

- b. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [PHVS Industry CDC Census2010](#) urn:oid:2.16.840.1.114222.4.11.7187 **STATIC** (CONF:1169-34014).

If value/**@nullFlavor** is not present then

- c. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.114222.4.5.315" Industry CDC Census 2010 (CodeSystem: Industry CDC Census 2010 urn:oid:2.16.840.1.114222.4.5.315) (CONF:1169-34015).

If value/**@nullFlavor** is not present then

- d. This value **SHALL** contain exactly one [1..1] **@displayName**, which **SHALL** be selected from ValueSet [PHVS Industry CDC Census2010](#) urn:oid:2.16.840.1.114222.4.11.7187 **STATIC** (CONF:1169-34016).

If value/**@nullFlavor** is not present then

- e. This value **SHALL** contain exactly one [1..1] **@sdct:valueSet**="2.16.840.1.114222.4.11.7187" (CodeSystem: Industry CDC Census 2010 urn:oid:2.16.840.1.114222.4.5.315) (CONF:1169-34017).

If value/**@nullFlavor** is not present then

- f. This value **SHOULD** contain exactly one [1..1] **originalText** (CONF:1169-34018).

- i. This originalText **SHOULD** contain exactly one [1..1] **reference** (CONF:1169-34019).
 1. This reference **SHOULD** contain exactly one [1..1] **@value** (CONF:1169-34020).
 - a. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-34021).

Figure 96: Usual Industry History example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.33" extension="2015-01-29" />
  <code code="21844-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Usual industry Hx" />
  <effectiveTime>
    <low value="20010101" />
  </effectiveTime>
  <value xsi:type="CD" code="7280" codeSystem="2.16.840.1.114222.4.5.315"
  codeSystemName="Industry CDC Census 2010" displayName="Accounting, tax preparation,
  bookkeeping, and payroll services" sdct:valueSet="2.16.840.1.114222.4.11.7187">
    <originalText>
      <reference value="#Industry_1" />
    </originalText>
  </value>
</observation>
```

4.52 Usual Occupation History - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.13.34:2015-01-29
(open)]

Table 210: Usual Occupation History Contexts

Contained By:	Contains:
Employment History Observation Organizer (V1.1) (required)	

This template records the kind of work (occupation) performed during most of the patient's working life before diagnosis of this tumor.

Table 211: Usual Occupation History Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.34:2015-01-29)					
@classCode	1..1	SHALL		1169-34022	OBS
@moodCode	1..1	SHALL		1169-34023	EVN
templateId	1..1	SHALL		1169-34380	
@root	1..1	SHALL		1169-34381	2.16.840.1.113883.10.13.34
@extension	1..1	SHALL		1169-34382	2015-01-29
code	1..1	SHALL		1169-34024	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1169-34025	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 21843-8
@codeSystem	1..1	SHALL		1169-34026	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
effectiveTime	1..1	SHALL		1169-34027	
low	0..1	SHOULD		1169-34028	
high	0..1	MAY		1169-34029	
value	1..1	SHALL	CD	1169-34030	
@nullFlavor	0..1	MAY		1169-34372	
@code	1..1	SHALL		1169-34031	urn:oid:2.16.840.1.114222.4.11.7186 (PHVS_Occupation_CDC_Census 2010)
@codeSystem	1..1	SHALL		1169-34032	urn:oid:2.16.840.1.114222.4.5.314 (Occupation CDC Census 2010) = 2.16.840.1.114222.4.5.314
@displayName	1..1	SHALL		1169-34033	urn:oid:2.16.840.1.114222.4.11.7186 (PHVS_Occupation_CDC_Census 2010)
@sdtc:valueSet	1..1	SHALL		1169-34034	urn:oid:2.16.840.1.114222.4.5.314 (Occupation CDC Census 2010) = 2.16.840.1.114222.4.11.7186
originalText	1..1	SHOULD		1169-34035	
reference	1..1	SHOULD		1169-34036	

@value	1..1	SHOULD		1169-34037	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CONF:1169-34022).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CONF:1169-34023).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1169-34380) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.13.34" (CONF:1169-34381).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-01-29" (CONF:1169-34382).
4. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34024).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="21843-8" Usual occupation Hx (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34025).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34026).
5. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1169-34027).
 - a. This effectiveTime **SHOULD** contain zero or one [0..1] **low** (CONF:1169-34028).
 - b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1169-34029).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1169-34030).
 - a. This value **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1169-34372).

If value/**@nullFlavor** is not present then

- b. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [PHVS Occupation CDC Census2010](#) urn:oid:2.16.840.1.114222.4.11.7186 **STATIC** (CONF:1169-34031).

If value/**@nullFlavor** is not present then

- c. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.114222.4.5.314" Occupation CDC Census 2010 (CodeSystem: Occupation CDC Census 2010 urn:oid:2.16.840.1.114222.4.5.314) (CONF:1169-34032).

If value/**@nullFlavor** is not present then

- d. This value **SHALL** contain exactly one [1..1] **@displayName**, which **SHALL** be selected from ValueSet [PHVS Occupation CDC Census2010](#) urn:oid:2.16.840.1.114222.4.11.7186 **STATIC** (CONF:1169-34033).

If value/**@nullFlavor** is not present then

- e. This value **SHALL** contain exactly one [1..1] **@sdct:valueSet**="2.16.840.1.114222.4.11.7186" (CodeSystem: Occupation CDC Census 2010 urn:oid:2.16.840.1.114222.4.5.314) (CONF:1169-34034).

If value/**@nullFlavor** is not present then

- f. This value **SHOULD** contain exactly one [1..1] **originalText** (CONF:1169-34035).

- i. This originalText **SHOULD** contain exactly one [1..1] **reference** (CONF:1169-34036).
 1. This reference **SHOULD** contain exactly one [1..1] **@value** (CONF:1169-34037).
 - a. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1169-34038).

Figure 97: Usual Occupation History example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.13.34" extension="2015-01-29" />
  <code code="21843-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Usual occupation Hx" />
  <effectiveTime>
    <low value="20010101" />
  </effectiveTime>
  <value xsi:type="CD" code="0800" codeSystem="2.16.840.1.114222.4.5.314"
  codeSystemName="Occupation CDC Census 2010" displayName="Accountants and auditors"
  sdtc:valueSet="2.16.840.1.114222.4.11.7186">
    <originalText>
      <reference value="#Occupation_1" />
    </originalText>
  </value>
</observation>
```

4.53 Vital Sign Observation (V2) - Published

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09
(open)]

Table 212: Vital Sign Observation (V2) Contexts

Contained By:	Contains:
Vital Signs Organizer (V2) (required)	Author Participation

This template represents measurement of common vital signs. Vital signs are represented with additional vocabulary constraints for type of vital sign and unit of measure.

The following is a list of recommended units for common types of vital sign measurements:

Name	Unit
PulseOx	%
Height/Head Circumf	cm
Weight	kg
Temp	Cel
BP	mm[Hg]
Pulse/Resp Rate	/min
BMI	kg/m2

Name	Unit
BSA	m2

Table 213: Vital Sign Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09)					
@classCode	1..1	SHALL		1098-7297	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7298	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7299	
@root	1..1	SHALL		1098-10527	2.16.840.1.113883.10.20.22.4.27
@extension	1..1	SHALL		1098-32574	2014-06-09
id	1..*	SHALL		1098-7300	
code	1..1	SHALL		1098-7301	urn:oid:2.16.840.1.113883.3.88.12.80.62 (Vital Sign Result)
statusCode	1..1	SHALL		1098-7303	
@code	1..1	SHALL		1098-19119	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-7304	
value	1..1	SHALL	PQ	1098-7305	
@unit	1..1	SHALL		1098-31579	urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
interpretationCode	0..1	MAY		1098-7307	
@code	1..1	SHALL		1098-32886	urn:oid:2.16.840.1.113883.1.11.78 (Observation Interpretation (HL7))
methodCode	0..1	MAY	SET<CE>	1098-7308	
targetSiteCode	0..1	MAY	SET<CD>	1098-7309	
author	0..*	SHOULD		1098-7310	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7297).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7298).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7299) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.27" (CONF:1098-10527).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32574).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7300).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Vital Sign Result](#) urn:oid:2.16.840.1.113883.3.88.12.80.62 **DYNAMIC** (CONF:1098-7301).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7303).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19119).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-7304).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:1098-7305).
 - a. This value **SHALL** contain exactly one [1..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-31579).
9. **MAY** contain zero or one [0..1] **interpretationCode** (CONF:1098-7307).
 - a. The interpretationCode, if present, **SHALL** contain exactly one [1..1] **@code** (ValueSet: [Observation Interpretation \(HL7\)](#) urn:oid:2.16.840.1.113883.1.11.78 **STATIC** 2014-09-01) (CONF:1098-32886).
10. **MAY** contain zero or one [0..1] **methodCode** (CONF:1098-7308).
11. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:1098-7309).
12. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-7310).

Table 214: Vital Sign Result

Value Set: Vital Sign Result urn:oid:2.16.840.1.113883.3.88.12.80.62 This identifies the vital sign result type. Specific URL Pending Value Set Source: http://www.loinc.org/			
Code	Code System	Code System OID	Print Name
8310-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Body Temperature
8462-4	LOINC	urn:oid:2.16.840.1.113883.6.1	BP Diastolic
8480-6	LOINC	urn:oid:2.16.840.1.113883.6.1	BP Systolic
8287-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Head Circumference
8867-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Heart Rate
8302-2	LOINC	urn:oid:2.16.840.1.113883.6.1	Height
39156-5	LOINC	urn:oid:2.16.840.1.113883.6.1	BMI (Body Mass Index)
2710-2	LOINC	urn:oid:2.16.840.1.113883.6.1	O2 % BldC Oximetry
9279-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Respiratory Rate
3141-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Weight Measured
...			

Figure 98: Vital Sign Observation (V2) Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.27" extension="2014-06-09" />
  <!-- Vital Sign Observation template -->
  <id root="c6f88321-67ad-11db-bd13-0800200c9a66" />
  <code code="8302-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Height" />
  <statusCode code="completed" />
  <effectiveTime value="20121114" />
  <value xsi:type="PQ" value="177" unit="cm" />
  ....
</observation>

```

4.54 Vital Signs Organizer (V2) - Published

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09
(open)]

Table 215: Vital Signs Organizer (V2) Contexts

Contained By:	Contains:
Vital Signs Section (entries required) (V2) (required)	Author Participation Vital Sign Observation (V2)

This template provides a mechanism for grouping vital signs (e.g., grouping systolic blood pressure and diastolic blood pressure).

Table 216: Vital Signs Organizer (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09)					
@classCode	1..1	SHALL		1098-7279	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1098-7280	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7281	
@root	1..1	SHALL		1098-10528	2.16.840.1.113883.10.20.22.4.26
@extension	1..1	SHALL		1098-32582	2014-06-09
id	1..*	SHALL		1098-7282	
code	0..1	MAY		1098-32740	
@code	1..1	SHALL		1098-32741	74728-7
@codeSystem	1..1	SHALL		1098-32742	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-7284	
@code	1..1	SHALL		1098-19120	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	MAY		1098-7288	
author	0..*	SHOULD		1098-31153	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
component	1..*	SHALL		1098-7285	
observation	1..1	SHALL		1098-15946	Vital Sign Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" CLUSTER (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7279).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7280).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7281) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.26" (CONF:1098-10528).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32582).

4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7282).
5. **MAY** contain zero or one [0..1] **code** (CONF:1098-32740).
 - a. The code, if present, **SHALL** contain exactly one [1..1] **@code**="74728-7" Vital signs, weight, height, head circumference, oximetry, BMI, and BSA panel - HL7.CCDAr1.1 (CONF:1098-32741).
 - b. The code, if present, **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1 " LOINC (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-32742).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7284).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19120).
7. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:1098-7288).
 Note: The effectiveTime is an interval that spans the effectiveTimes of the contained vital signs observations. Because all contained vital signs observations have a required time stamp, it is not required that this effectiveTime be populated.
8. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31153).
9. **SHALL** contain at least one [1..*] **component** (CONF:1098-7285) such that it
 - a. **SHALL** contain exactly one [1..1] Vital Sign Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09) (CONF:1098-15946).

Figure 99: Vital Signs Organizer (V2) Example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <!-- ** Vital signs organizer ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.26" extension="2014-06-09" />
  <id root="24f6ad18-c512-40fc-82bd-1e131aa9e52b" />
  <code code="46680005" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED -CT"
displayName="Vital signs" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20120910" />
    <high value="20120910" />
  </effectiveTime>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.27" extension="2014-06-09" />
      <!-- Vital Sign Observation template -->
      ...
    </observation>
  </component>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.27" extension="2014-06-09" />
      <!-- Vital Sign Observation template -->
      ...
    </observation>
  </component>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.27" extension="2014-06-09" />
      <!-- Vital Sign Observation template -->
      ...
    </observation>
  </component>
</organizer>
```


5 PARTICIPATION AND OTHER TEMPLATES

The participation and other templates chapter contains templates for CDA participations (e.g. author, performer), and other fielded items (e.g. address, name) that cannot stand on their own without being nested in another template .

5.1 Author Participation - Published

[author: identifier urn:oid:2.16.840.1.113883.10.20.22.4.119 (open)]

Table 217: Author Participation Contexts

Contained By:	Contains:
Social History Observation (V2) (optional) Medication Activity (V2) (optional) Procedure Activity Procedure (V2) (optional) Problem Observation (V2) (optional) Problem Concern Act (V2) (optional) Planned Encounter (V2) (optional) Planned Procedure (V2) (optional) Planned Medication Activity (V2) (optional) Smoking Status - Meaningful Use (V2) (optional) Vital Sign Observation (V2) (optional) Result Observation (V2) (optional) Vital Signs Organizer (V2) (optional) Result Organizer (V2) (optional) Tobacco Use (V2) (optional)	

This template represents the Author Participation (including the author timestamp). CDA R2 requires that Author and Author timestamp be asserted in the document header. From there, authorship propagates to contained sections and contained entries, unless explicitly overridden.

The Author Participation template was added to those templates in scope for analysis in R2. Although it is not explicitly stated in all templates the Author Participation template can be used in any template.

Table 218: Author Participation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
author (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)					
templateId	1..1	SHALL		1098-32017	
@root	1..1	SHALL		1098-32018	2.16.840.1.113883.10.20.22.4.119
time	1..1	SHALL		1098-31471	
assignedAuthor	1..1	SHALL		1098-31472	
id	1..*	SHALL		1098-31473	
code	0..1	SHOULD		1098-31671	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
assignedPerson	0..1	MAY		1098-31474	
name	0..*	MAY		1098-31475	
representedOrganization	0..1	MAY		1098-31476	
@classCode	1..1	SHALL		1098-31477	ORG
id	0..*	MAY		1098-31478	
name	0..*	MAY		1098-31479	
telecom	0..*	MAY		1098-31480	
addr	0..*	MAY		1098-31481	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-32017) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.119" (CONF:1098-32018).
2. **SHALL** contain exactly one [1..1] **time** (CONF:1098-31471).
3. **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:1098-31472).
 - a. This assignedAuthor **SHALL** contain at least one [1..*] **id** (CONF:1098-31473).
 Note: This id may be set equal to (a pointer to) an id on a participant elsewhere in the document (header or entries) or a new author participant can be described here. If the id is pointing to a participant already described elsewhere in the document, assignedAuthor/id is sufficient to identify this participant and none of the remaining details of assignedAuthor are required to be set. Application Software must be responsible for resolving the identifier back to its original object and then

rendering the information in the correct place in the containing section's narrative text. This id must be a pointer to another author participant.

- i. If the ID isn't referencing an author described elsewhere in the document, then the author components required in US Realm Header are required here as well (CONF:1098-32628).
- b. This assignedAuthor **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#)
urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-31671).
 - i. If the content is patient authored the code **SHOULD** be selected from Personal And Legal Relationship Role Type (2.16.840.1.113883.11.20.12.1) (CONF:1098-32315).
- c. This assignedAuthor **MAY** contain zero or one [0..1] **assignedPerson** (CONF:1098-31474).
 - i. The assignedPerson, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-31475).
- d. This assignedAuthor **MAY** contain zero or one [0..1] **representedOrganization** (CONF:1098-31476).
 - i. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **@classCode="ORG"** (CONF:1098-31477).
 - ii. The representedOrganization, if present, **MAY** contain zero or more [0..*] **id** (CONF:1098-31478).
 - iii. The representedOrganization, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-31479).
 - iv. The representedOrganization, if present, **MAY** contain zero or more [0..*] **telecom** (CONF:1098-31480).
 - v. The representedOrganization, if present, **MAY** contain zero or more [0..*] **addr** (CONF:1098-31481).

Figure 100: New Author Participant Example

```
<author>
  <templateId root="2.16.840.1.113883.10.20.22.4.119" />
  <time value="201308011235-0800" />
  <assignedAuthor>
    <id root="20cf14fb-b65c-4c8c-a54d-b0cca834c18c" />
    <code code="163W00000X" codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health
Care Provider Taxonomy" displayName="Registered nurse" />
    <assignedPerson>
      <name>
        <given>Nurse</given>
        <family>Nightingale</family>
        <suffix>RN</suffix>
      </name>
    </assignedPerson>
    <representedOrganization>
      <id root="2.16.840.1.113883.19.5" />
      <name>Good Health Hospital</name>
    </representedOrganization>
  </assignedAuthor>
</author>
```

Figure 101: Existing Author Reference Example

```
<author>
  <time value="201308011235-0800" />
  <assignedAuthor>
    <!--
      This id points to a participant already described
      elsewhere in the document
    -->
    <id root="20cf14fb-b65c-4c8c-a54d-b0cca834c18c" />
  </assignedAuthor>
</author>
```

5.2 US Realm Address (AD.US.FIELDDED) - Published

[addr: identifier urn:oid:2.16.840.1.113883.10.20.22.5.2 (open)]

Table 219: US Realm Address (AD.US.FIELDDED) Contexts

Contained By:	Contains:
US Realm Header (V2) (required) Policy Activity (V2) (optional) Procedure Activity Procedure (V2) - Cancer IG Specific Constraints (optional) Planned Encounter (V2) - Cancer IG Specific Constraints (optional) Cancer Event Report Document (V1.1) (required)	

Reusable address template, for use in US Realm CDA Header.

Table 220: US Realm Address (AD.US.FIELDDED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
addr (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)					
@use	0..1	SHOULD		81-7290	urn:oid:2.16.840.1.113883.1.11.10637 (PostalAddressUse)
country	0..1	SHOULD		81-7295	urn:oid:2.16.840.1.113883.3.88.12.80.63 (Country)
state	0..1	SHOULD	ST	81-7293	urn:oid:2.16.840.1.113883.3.88.12.80.1 (StateValueSet)
city	1..1	SHALL		81-7292	
postalCode	0..1	SHOULD		81-7294	urn:oid:2.16.840.1.113883.3.88.12.80.2 (PostalCode)
streetAddressLine	0..0	SHALL		81-7291	

1. **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [PostalAddressUse](#) urn:oid:2.16.840.1.113883.1.11.10637 **STATIC** 2005-05-01 (CONF:81-7290).
2. **SHOULD** contain zero or one [0..1] **country**, which **SHALL** be selected from ValueSet [Country](#) urn:oid:2.16.840.1.113883.3.88.12.80.63 **DYNAMIC** (CONF:81-7295).
3. **SHOULD** contain zero or one [0..1] **state** (ValueSet: [StateValueSet](#) urn:oid:2.16.840.1.113883.3.88.12.80.1 **DYNAMIC**) (CONF:81-7293).
 - a. State is required if the country is US. If country is not specified, it's assumed to be US. If country is something other than US, the state **MAY** be present but **MAY** be bound to different vocabularies (CONF:81-10024).
4. **SHALL** contain exactly one [1..1] **city** (CONF:81-7292).
5. **SHOULD** contain zero or one [0..1] **postalCode**, which **SHOULD** be selected from ValueSet [PostalCode](#) urn:oid:2.16.840.1.113883.3.88.12.80.2 **DYNAMIC** (CONF:81-7294).
 - a. PostalCode is required if the country is US. If country is not specified, it's assumed to be US. If country is something other than US, the postalCode **MAY** be present but **MAY** be bound to different vocabularies (CONF:81-10025).
6. **SHALL** contain [0..0] **streetAddressLine** (CONF:81-7291).
7. **SHALL NOT** have mixed content except for white space (CONF:81-7296).

Table 221: PostalAddressUse

Value Set: PostalAddressUse urn:oid:2.16.840.1.113883.1.11.10637			
A value set of HL7 Codes for address use.			
Value Set Source:			
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
BAD	AddressUse	urn:oid:2.16.840.1.113883.5.1119	bad address
CONF	AddressUse	urn:oid:2.16.840.1.113883.5.1119	confidential
DIR	AddressUse	urn:oid:2.16.840.1.113883.5.1119	direct
H	AddressUse	urn:oid:2.16.840.1.113883.5.1119	home address
HP	AddressUse	urn:oid:2.16.840.1.113883.5.1119	primary home
HV	AddressUse	urn:oid:2.16.840.1.113883.5.1119	vacation home
PHYS	AddressUse	urn:oid:2.16.840.1.113883.5.1119	physical visit address
PST	AddressUse	urn:oid:2.16.840.1.113883.5.1119	postal address
PUB	AddressUse	urn:oid:2.16.840.1.113883.5.1119	public
TMP	AddressUse	urn:oid:2.16.840.1.113883.5.1119	temporary
...			

Table 222: StateValueSet

Value Set: StateValueSet urn:oid:2.16.840.1.113883.3.88.12.80.1			
Identifies addresses within the United States are recorded using the FIPS 5-2 two-letter alphabetic codes for the State, District of Columbia, or an outlying area of the United States or associated area			
Value Set Source: http://www.census.gov/geo/reference/ansi_statetables.html			
Code	Code System	Code System OID	Print Name
AL	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Alabama
AK	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Alaska
AZ	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Arizona
AR	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Arkansas
CA	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	California
CO	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Colorado
CT	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Connecticut
DE	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Delaware
DC	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	District of Columbia
FL	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Florida
...			

Figure 102: US Realm Address Example

```

<addr use="HP">
  <streetAddressLine>22 Sample Street</streetAddressLine>
  <city>Beaverton</city>
  <state>OR</state>
  <postalCode>97867</postalCode>
  <country>US</country>
</addr>

```

5.3 US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints - Published

[addr: identifier urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08 (open)]

Table 223: US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	

This section describes further constraints to "US Realm Address (AD.US.FIELDDED) (V2)" that are specific for Cancer Implementation Guide. There are additional constraints for the following two elements:

- (1) city
- (2) usablePeriod

In order to provide an address history for a cancer patient, we expect ambulatory health care providers to maintain each of the addresses a cancer patient provides over time. Addresses should not be overwritten by newer addresses.

When an address is first collected for a patient, the date the patient began living at the address, if known, should be recorded and maintained as the start date for the address. If not known, the date of the encounter should be recorded and maintained as the start date for the address. When a new address is provided, the end date of the old address should be set to the day before the start date of the new address.

This template is intended for use only with the patient associated with the document.

Table 224: US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
addr (identifier: urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)					
country	1..1	SHALL		1126-33226	urn:oid:2.16.840.1.113883.3.88.12.80.63 (Country)
state	1..1	SHALL		1126-33228	urn:oid:2.16.840.1.113883.3.88.12.80.1 (StateValueSet)
city	1..1	SHALL		1126-202	urn:oid:2.16.840.1.114222.4.11.973 (City)
postalCode	1..1	SHALL		1126-33227	urn:oid:2.16.840.1.113883.3.88.12.80.2 (PostalCode)
useablePeriod	1..*	SHALL	IVL_TS	1126-206	
low	1..1	SHALL	IVL_TS	1126-207	
high	0..1	SHALL	IVL_TS	1126-208	
@nullFlavor	0..1	MAY		1126-209	

1. Conforms to [US Realm Address \(AD.US.FIELDDED\)](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2).
2. **SHALL** contain exactly one [1..1] **country**, which **SHALL** be selected from ValueSet [Country](#) urn:oid:2.16.840.1.113883.3.88.12.80.63 (CONF:1126-33226).
3. **SHALL** contain exactly one [1..1] **state**, which **SHOULD** be selected from ValueSet [StateValueSet](#) urn:oid:2.16.840.1.113883.3.88.12.80.1 (CONF:1126-33228).
4. **SHALL** contain exactly one [1..1] **city** (ValueSet: [City](#) urn:oid:2.16.840.1.114222.4.11.973 **DYNAMIC**) (CONF:1126-202).
Note: City is required if the country is US. If country is not specified, it's assumed to be US. If country is something other than US, the city MAY be present but MAY be bound to different vocabularies. The value for city element SHALL be the "display name", selected from "city" Value Set.
5. **SHALL** contain exactly one [1..1] **postalCode**, which **SHOULD** be selected from ValueSet [PostalCode](#) urn:oid:2.16.840.1.113883.3.88.12.80.2 (CONF:1126-33227).
Note: The expected format for the Postal Code is either NNNNN or NNNNN-NNNN
6. **SHALL** contain at least one [1..*] **useablePeriod** (CONF:1126-206).
Note: usablePeriod indicates patient's address history. For example, if patient had multiple prior addresses, then occupancy start (low) and end (high) date need to be provided for each address.
 - a. Such useablePeriods **SHALL** contain exactly one [1..1] **low** (CONF:1126-207).
Note: to indicate the time when the patient began living at the address.
 - b. Such useablePeriods **SHALL** contain zero or one [0..1] **high** (CONF:1126-208).
Note: to indicate the time when the patient stopped living at the address.

- i. The high, if present, **MAY** contain zero or one [0..1] @nullFlavor (CONF:1126-209).
 Note: If the patient is currently residing at the specified address then "high" element should use nullFlavor attribute (@nullFlavor) with the value "NA" (Not applicable. Known to have no proper value); this value, in the context of address, means that patient address is CURRENT.

Table 225: City

Value Set: City urn:oid:2.16.840.1.114222.4.11.973 US Geological Survey Geographic Names Information System - location codes. Value Set Source: https://phinivads.cdc.gov/vads/ViewValueSet.action?id=19D34BBC-617F-DD11-B38D-00188B398520			
Code	Code System	Code System OID	Print Name
975772	U.S. Board on Geographic Names (USGS - GNIS)	urn:oid:2.16.840.1.11388 3.6.245	New York
1512650	U.S. Board on Geographic Names (USGS - GNIS)	urn:oid:2.16.840.1.11388 3.6.245	Seattle
295004	U.S. Board on Geographic Names (USGS - GNIS)	urn:oid:2.16.840.1.11388 3.6.245	Miami
423587	U.S. Board on Geographic Names (USGS - GNIS)	urn:oid:2.16.840.1.11388 3.6.245	Chicago
531871	U.S. Board on Geographic Names (USGS - GNIS)	urn:oid:2.16.840.1.11388 3.6.245	Washington
...			

Figure 103: US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints example

<pre> <addr use="HP"> <streetAddressLine>2222 Home Street</streetAddressLine> <city>Ann Arbor</city> <state>MI</state> <postalCode>99999</postalCode> <country>US</country> <useablePeriod> <low value="19700722" /> <high value="20130117" /> </useablePeriod> </addr> <addr use="HP"> <streetAddressLine>5555 Home Street Court</streetAddressLine> <city>Ann Arbor</city> <state>MI</state> <postalCode>99999</postalCode> <country>US</country> <useablePeriod> <low value="20130117" /> <high nullFlavor="NA" /> </useablePeriod> </addr> </pre>

5.4 US Realm Date and Time (DTM.US.FIELDED) - Published

[effectiveTime: identifier urn:oid:2.16.840.1.113883.10.20.22.5.4 (open)]

Table 226: US Realm Date and Time (DTM.US.FIELDED) Contexts

Contained By:	Contains:
US Realm Header (V2) (required)	

The US Realm Clinical Document Date and Time datatype flavor records date and time information. If no time zone offset is provided, you can make no assumption about time, unless you have made a local exchange agreement.

This data type uses the same rules as US Realm Date and Time (DT.US.FIELDED), but is used with elements having a datatype of TS.

Table 227: US Realm Date and Time (DTM.US.FIELDED) Constraints Overview

X P a t h	Card.	Verb	Data Type	CONF#	Value
					effectiveTime (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)

1. **SHALL** be precise to the day (CONF:81-10127).
2. **SHOULD** be precise to the minute (CONF:81-10128).
3. **MAY** be precise to the second (CONF:81-10129).
4. If more precise than day, **SHOULD** include time-zone offset (CONF:81-10130).

Figure 104: US Realm Date and Time Example

<pre><!-- Common values for date/time elements would range in precision to the day YYYYMMDD to precision to the second with a time zone offset YYYYMMDDHHMMSS - ZZzz --> <!-- time element with TS data type precise to the day for a birthdate --> <time value="19800531"/> <!-- effectiveTime element with IVL<TS> data type precise to the second for an observation --> <effectiveTime> <low value='20110706122735-0800' /> <high value='20110706122815-0800' /> </effectiveTime></pre>

5.5 US Realm Patient Name (PTN.US.FIELDED) - Published

[name: identifier urn:oid:2.16.840.1.113883.10.20.22.5.1 (open)]

The US Realm Patient Name datatype flavor is a set of reusable constraints that can be used for the patient or any other person. It requires a first (given) and last (family) name. If a patient or person has only one name part (e.g., patient with first name only) place the name part in the

field required by the organization. Use the appropriate nullFlavor, "Not Applicable" (NA), in the other field.

For information on mixed content see the Extensible Markup Language reference (<http://www.w3c.org/TR/2008/REC-xml-20081126/>).

Table 228: US Realm Patient Name (PTN.US.FIELDED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
name (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1)					
@use	0..1	MAY		81-7154	urn:oid:2.16.840.1.113883.1.11.15913 (EntityNameUse)
family	1..1	SHALL	ST	81-7159	
@qualifier	0..1	MAY		81-7160	urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)
given	1..*	SHALL	ST	81-7157	
@qualifier	0..1	MAY		81-7158	urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)
prefix	0..*	MAY	ST	81-7155	
@qualifier	0..1	MAY		81-7156	urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)
suffix	0..1	MAY	ST	81-7161	
@qualifier	0..1	MAY		81-7162	urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)

1. **MAY** contain zero or one [0..1] @use, which **SHALL** be selected from ValueSet [EntityNameUse](#) urn:oid:2.16.840.1.113883.1.11.15913 **STATIC** 2005-05-01 (CONF:81-7154).
2. **SHALL** contain exactly one [1..1] family (CONF:81-7159).
 - a. This family **MAY** contain zero or one [0..1] @qualifier, which **SHALL** be selected from ValueSet [EntityPersonNamePartQualifier](#) urn:oid:2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7160).
3. **SHALL** contain at least one [1..*] given (CONF:81-7157).
 - a. Such givens **MAY** contain zero or one [0..1] @qualifier, which **SHALL** be selected from ValueSet [EntityPersonNamePartQualifier](#) urn:oid:2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7158).
 - b. The second occurrence of given (given2) if provided, **SHALL** include middle name or middle initial (CONF:81-7163).
4. **MAY** contain zero or more [0..*] prefix (CONF:81-7155).

- a. The prefix, if present, **MAY** contain zero or one [0..1] **@qualifier**, which **SHALL** be selected from ValueSet [EntityPersonNamePartQualifier](#)
urn:oid:2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7156).
5. **MAY** contain zero or one [0..1] **suffix** (CONF:81-7161).
 - a. The suffix, if present, **MAY** contain zero or one [0..1] **@qualifier**, which **SHALL** be selected from ValueSet [EntityPersonNamePartQualifier](#)
urn:oid:2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7162).
6. **SHALL NOT** have mixed content except for white space (CONF:81-7278).

Table 229: EntityNameUse

Value Set: EntityNameUse urn:oid:2.16.840.1.113883.1.11.15913			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.htm			
Code	Code System	Code System OID	Print Name
A	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Artist/Stage
ABC	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Alphabetic
ASGN	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Assigned
C	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	License
I	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Indigenous/Tribal
IDE	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Ideographic
L	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Legal
P	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Pseudonym
PHON	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Phonetic
R	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Religious
...			

Table 230: EntityPersonNamePartQualifier

Value Set: EntityPersonNamePartQualifier urn:oid:2.16.840.1.113883.11.20.9.26			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
AC	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	academic
AD	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	adopted
BR	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	birth
CL	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	callme
IN	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	initial
NB	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	nobility
PR	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	professional
SP	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	spouse
TITLE	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	title
VV	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	voorvoegsel

Figure 105: US Realm Patient Name Example

<pre> <name use="L"> <prefix qualifier="TITLE">Rep</suffix> <given>Evelyn</given> <given qualifier="CL">Eve</given> <family qualifier="BR">Everywoman</family> <suffix qualifier="AC">J.D.</suffix> </name> </pre>

5.6 US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints - Published

[name: identifier urn:hl7ii:2.16.840.1.113883.10.13.18:2014-08-08 (open)]

Table 231: US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints Contexts

Contained By:	Contains:
Cancer Event Report Document (V1.1) (required)	

Table 232: US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
name (identifier: urn:hl7ii:2.16.840.1.113883.10.13.18:2014-08-08)					
family	1..1	SHALL		1126-244	
@nullFlavor	0..0	SHALL NOT		1126-33032	
given	1..*	SHALL		1126-243	
@nullFlavor	0..0	SHALL NOT		1126-33033	
given	1..*	SHALL		1126-33240	
@nullFlavor	0..1	MAY		1126-33241	
suffix	1..1	SHOULD		1126-33242	

1. Conforms to [US Realm Patient Name \(PTN.US.FIELDDED\)](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1).
2. **SHALL** contain exactly one [1..1] **family** (CONF:1126-244).
 - a. This family **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1126-33032).
3. **SHALL** contain at least one [1..*] **given** (CONF:1126-243) such that it
Note: This (the first) occurrence of given is used for the first name.
 - a. **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:1126-33033).
4. **SHALL** contain at least one [1..*] **given** (CONF:1126-33240) such that it
Note: This (the second) occurrence of given is used for the middle name or middle initial.
 - a. **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1126-33241).
5. **SHOULD** contain exactly one [1..1] **suffix** (CONF:1126-33242).

Figure 106: US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints example

```

<name use="L">
  <prefix qualifier="TITLE">Rep</prefix>
  <given>Evelyn</given>
  <given qualifier="IN">E</given>
  <family qualifier="BR">Everywoman</family>
  <suffix qualifier="AC">J.D.</suffix>
</name>

```

5.7 US Realm Person Name (PN.US.FIELDED) - Published

[name: identifier urn:oid:2.16.840.1.113883.10.20.22.5.1.1 (open)]

Table 233: US Realm Person Name (PN.US.FIELDED) Contexts

Contained By:	Contains:
US Realm Header (V2) (required) Procedure Activity Procedure (V2) - Cancer IG Specific Constraints (optional) Planned Encounter (V2) - Cancer IG Specific Constraints (optional) Radiation Boost Modality Procedure (optional) Radiation Regional Treatment Modality Procedure (optional) Cancer Event Report Document (V1.1) (required)	

The US Realm Clinical Document Person Name datatype flavor is a set of reusable constraints that can be used for Persons.

Table 234: US Realm Person Name (PN.US.FIELDED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
name (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)					
name	1..1	SHALL		81-9368	

1. **SHALL** contain exactly one [1..1] **name** (CONF:81-9368).
 - a. The content of name **SHALL** be either a conformant Patient Name (PTN.US.FIELDED), or a string (CONF:81-9371).
 - b. The string **SHALL NOT** contain name parts (CONF:81-9372).

6 TEMPLATE IDS IN THIS GUIDE

Table 235: Template List

Template Title	Template Type	templateId
Cancer Event Report Document (V1.1)	document	urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29
US Realm Header (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09
Assessment Section	section	urn:oid:2.16.840.1.113883.10.20.2.2.8
Cancer Diagnosis Section (entries required) (V1.1)	section	urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05
Family History Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2014-06-09
Medications Administered Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09
Medications Administered Section (V2) - Cancer IG Specific Constraints	section	urn:hl7ii:2.16.840.1.113883.10.13.12:2014-08-08
Medications Section (entries required) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09
Medications Section (entries required) (V2) - Cancer IG Specific Constraints	section	urn:hl7ii:2.16.840.1.113883.10.13.13:2014-08-08
Payers Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09
Plan of Treatment Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09
Plan of Treatment Section (V2) - Cancer IG Specific Constraints	section	urn:hl7ii:2.16.840.1.113883.10.13.9:2014-08-08
Problem Section (entries required) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2014-06-09
Problem Section (entries required) (V2) - Cancer IG Specific Constraints	section	urn:hl7ii:2.16.840.1.113883.10.13.21:2014-08-08
Procedures Section (entries required) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.7.1:2014-06-09
Procedures Section (entries required) (V2) - Cancer IG Specific Constraints	section	urn:hl7ii:2.16.840.1.113883.10.13.10:2014-08-08
Radiation Oncology Section	section	urn:hl7ii:2.16.840.1.113883.10.13.24:2014-08-08
Results Section (entries required) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2014-06-09
Social History Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2014-06-09

Template Title	Template Type	templateId
Social History Section (V2) - Cancer IG Specific Constraints (V1.1)	section	urn:hl7ii:2.16.840.1.113883.10.13.11:2015-01-29
Vital Signs Section (entries required) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09
Cancer Diagnosis Concern Act (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.3:2015-02-05
Cancer Diagnosis Observation (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05
Coverage Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2014-06-09
Distant Metastases Clinical	entry	urn:hl7ii:2.16.840.1.113883.10.13.38:2015-02-05
Distant Metastases Pathologic	entry	urn:hl7ii:2.16.840.1.113883.10.13.43:2015-02-05
Employment History Observation Organizer (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29
Family History Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2014-06-09
Family History Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2014-06-09
Health Status Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Indication (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08
Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
Medication Activity (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.14:2014-08-08
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
No Known TNM Clinical Stage Observation (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.31:2015-04-02
No Known TNM Pathologic Stage Observation (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.32:2015-04-02
Planned Encounter (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09
Planned Encounter (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.20:2014-08-08
Planned Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09
Planned Procedure (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09
Policy Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09

Template Title	Template Type	templateId
Primary Tumor Clinical	entry	urn:hl7ii:2.16.840.1.113883.10.13.36:2015-02-05
Primary Tumor Pathologic	entry	urn:hl7ii:2.16.840.1.113883.10.13.41:2015-02-05
Problem Concern Act (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2014-06-09
Problem Concern Act (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.22:2014-08-08
Problem Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09
Problem Observation (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.23:2014-08-08
Problem Status (DEPRECATED)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09
Procedure Activity Procedure (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09
Procedure Activity Procedure (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.15:2014-08-08
Radiation Boost Dose - cGy	entry	urn:hl7ii:2.16.840.1.113883.10.13.28:2014-08-08
Radiation Boost Modality Organizer	entry	urn:hl7ii:2.16.840.1.113883.10.13.30:2014-08-08
Radiation Boost Modality Procedure	entry	urn:hl7ii:2.16.840.1.113883.10.13.26:2014-08-08
Radiation Regional Dose - cGy	entry	urn:hl7ii:2.16.840.1.113883.10.13.27:2014-08-08
Radiation Regional Treatment Modality Organizer	entry	urn:hl7ii:2.16.840.1.113883.10.13.29:2014-08-08
Radiation Regional Treatment Modality Procedure	entry	urn:hl7ii:2.16.840.1.113883.10.13.25:2014-08-08
Regional Lymph Nodes Clinical	entry	urn:hl7ii:2.16.840.1.113883.10.13.37:2015-02-05
Regional Lymph Nodes Pathologic	entry	urn:hl7ii:2.16.840.1.113883.10.13.42:2015-02-05
Result Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09
Result Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.22.4.32
Smoking Status - Meaningful Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09
Social History Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09
Stager Clinical Cancer	entry	urn:hl7ii:2.16.840.1.113883.10.13.39:2015-02-05

Template Title	Template Type	templateId
Stager Pathologic Cancer	entry	urn:hl7ii:2.16.840.1.113883.10.13.44:2015-02-05
TNM Clinical Stage Group	entry	urn:hl7ii:2.16.840.1.113883.10.13.35:2015-02-05
TNM Clinical Stage Observation (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.5:2015-02-05
TNM Pathologic Stage Group	entry	urn:hl7ii:2.16.840.1.113883.10.13.40:2015-02-05
TNM Pathologic Stage Observation (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.7:2015-02-06
Tobacco Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09
Usual Industry History	entry	urn:hl7ii:2.16.840.1.113883.10.13.33:2015-01-29
Usual Occupation History	entry	urn:hl7ii:2.16.840.1.113883.10.13.34:2015-01-29
Vital Sign Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09
Vital Signs Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2.4.119
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.2
US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints	unspecified	urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08
US Realm Date and Time (DTM.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.4
US Realm Patient Name (PTN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.1
US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints	unspecified	urn:hl7ii:2.16.840.1.113883.10.13.18:2014-08-08
US Realm Person Name (PN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.1.1

Table 236: Template Containments

Template Title	Template Type	templateId
Cancer Event Report Document (V1.1)	document	urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29
Assessment Section	section	urn:oid:2.16.840.1.113883.10.20.2.2.8
Cancer Diagnosis Section (entries required) (V1.1)	section	urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05
Cancer Diagnosis Concern Act (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.3:2015-02-05
Cancer Diagnosis Observation (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05
No Known TNM Clinical Stage Observation (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.31:2015-04-02
No Known TNM Pathologic Stage Observation (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.32:2015-04-02
TNM Clinical Stage Observation (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.5:2015-02-05
TNM Clinical Stage Group	entry	urn:hl7ii:2.16.840.1.113883.10.13.35:2015-02-05
Distant Metastases Clinical	entry	urn:hl7ii:2.16.840.1.113883.10.13.38:2015-02-05
Primary Tumor Clinical	entry	urn:hl7ii:2.16.840.1.113883.10.13.36:2015-02-05
Regional Lymph Nodes Clinical	entry	urn:hl7ii:2.16.840.1.113883.10.13.37:2015-02-05
Stager Clinical Cancer	entry	urn:hl7ii:2.16.840.1.113883.10.13.39:2015-02-05
TNM Pathologic Stage Observation (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.7:2015-02-06
TNM Pathologic Stage Group	entry	urn:hl7ii:2.16.840.1.113883.10.13.40:2015-02-05
Distant Metastases Pathologic	entry	urn:hl7ii:2.16.840.1.113883.10.13.43:2015-02-05
Primary Tumor Pathologic	entry	urn:hl7ii:2.16.840.1.113883.10.13.41:2015-02-05
Regional Lymph Nodes Pathologic	entry	urn:hl7ii:2.16.840.1.113883.10.13.42:2015-02-05
Stager Pathologic Cancer	entry	urn:hl7ii:2.16.840.1.113883.10.13.44:2015-02-05
Health Status Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09
Family History Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2014-06-09
Family History Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2014-06-09

Template Title	Template Type	templateId
Family History Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2014-06-09
Medications Administered Section (V2) - Cancer IG Specific Constraints	section	urn:hl7ii:2.16.840.1.113883.10.13.12:2014-08-08
Medication Activity (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.14:2014-08-08
Indication (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08
Medications Section (entries required) (V2) - Cancer IG Specific Constraints	section	urn:hl7ii:2.16.840.1.113883.10.13.13:2014-08-08
Medication Activity (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.14:2014-08-08
Indication (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08
Payers Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09
Coverage Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2014-06-09
Policy Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.2
Plan of Treatment Section (V2) - Cancer IG Specific Constraints	section	urn:hl7ii:2.16.840.1.113883.10.13.9:2014-08-08
Planned Encounter (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.20:2014-08-08
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.2.4.32
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.2
US Realm Person Name (PN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.1.1
Planned Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2.4.119
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Planned Procedure (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2.4.119

Template Title	Template Type	templateId
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Problem Section (entries required) (V2) - Cancer IG Specific Constraints	section	urn:hl7ii:2.16.840.1.113883.10.13.21:2014-08-08
Problem Concern Act (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.22:2014-08-08
Problem Observation (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.23:2014-08-08
Procedures Section (entries required) (V2) - Cancer IG Specific Constraints	section	urn:hl7ii:2.16.840.1.113883.10.13.10:2014-08-08
Procedure Activity Procedure (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.15:2014-08-08
Indication (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.22.4.32
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
US Realm Person Name (PN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1.1
Radiation Oncology Section	section	urn:hl7ii:2.16.840.1.113883.10.13.24:2014-08-08
Radiation Boost Modality Organizer	entry	urn:hl7ii:2.16.840.1.113883.10.13.30:2014-08-08
Radiation Boost Modality Procedure	entry	urn:hl7ii:2.16.840.1.113883.10.13.26:2014-08-08
Indication (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08
Radiation Boost Dose - cGy	entry	urn:hl7ii:2.16.840.1.113883.10.13.28:2014-08-08
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.22.4.32
US Realm Person Name (PN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1.1
Radiation Regional Treatment Modality Organizer	entry	urn:hl7ii:2.16.840.1.113883.10.13.29:2014-08-08
Radiation Regional Treatment Modality Procedure	entry	urn:hl7ii:2.16.840.1.113883.10.13.25:2014-08-08
Indication (V2) - Cancer IG Specific Constraints	entry	urn:hl7ii:2.16.840.1.113883.10.13.19:2014-08-08
Radiation Regional Dose - cGy	entry	urn:hl7ii:2.16.840.1.113883.10.13.27:2014-08-08

Template Title	Template Type	templateId
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.2.4.32
US Realm Person Name (PN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.1.1
Results Section (entries required) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2014-06-09
Result Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2.4.119
Result Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2.4.119
Social History Section (V2) - Cancer IG Specific Constraints (V1.1)	section	urn:hl7ii:2.16.840.1.113883.10.13.11:2015-01-29
Employment History Observation Organizer (V1.1)	entry	urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29
Usual Industry History	entry	urn:hl7ii:2.16.840.1.113883.10.13.33:2015-01-29
Usual Occupation History	entry	urn:hl7ii:2.16.840.1.113883.10.13.34:2015-01-29
Social History Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2.4.119
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.2
US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints	unspecified	urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08
US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints	unspecified	urn:hl7ii:2.16.840.1.113883.10.13.18:2014-08-08
US Realm Person Name (PN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.1.1
Vital Signs Section (entries required) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09
Vital Signs Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2.4.119
Vital Sign Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2

Template Title	Template Type	templateId
		2.4.119
US Realm Header (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.2
US Realm Date and Time (DTM.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.4
US Realm Person Name (PN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.1.1

7 VALUE SETS IN THIS GUIDE

Table 237: Value Sets

Name	OID	URL
Act Priority	urn:oid:2.16.840.1.113883.1.11.16866	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
ActStatus	urn:oid:2.16.840.1.113883.1.11.159331	http://www.hl7.org
AdministrableDrugForm	urn:oid:2.16.840.1.113883.1.11.14570	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Administrative Gender (HL7 V3)	urn:oid:2.16.840.1.113883.1.11.1	http://www.hl7.org
Body Site	urn:oid:2.16.840.1.113883.3.88.12.3221.8.9	https://vsac.nlm.nih.gov http://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.8.9
City	urn:oid:2.16.840.1.114222.4.11.973	https://phinivads.cdc.gov/vads/ViewValueSet.action?pid=19D34BBC-617F-DD11-B38D-00188B398520
Clinical Substance	urn:oid:2.16.840.1.113762.1.4.1010.2	https://vsac.nlm.nih.gov/
Country	urn:oid:2.16.840.1.113883.3.88.12.80.63	http://www.iso.org/iso/country_codes/iso_3166_code_lists.htm
Coverage Role Type	urn:oid:2.16.840.1.113883.1.11.18877	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Current Smoking Status	urn:oid:2.16.840.1.113883.11.20.9.38	https://vsac.nlm.nih.gov
Encounter Planned	urn:oid:2.16.840.1.113883.11.20.9.52	http://vtsl.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=308335008 https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.11.20.9.52
EntityNameUse	urn:oid:2.16.840.1.113883.1.11.15913	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
EntityPersonNamePartQualifier	urn:oid:2.16.840.1.113883.11.20.9.26	http://www.hl7.org
Ethnicity	urn:oid:2.16.840.1.114222.4.11.83	http://phinivads.cdc.gov/vads/ViewValueSet.action?pid=35D34BBC-

Name	OID	URL
	7	617F-DD11-B38D-00188B398520
Family Member Value Set	urn:oid:2.16.840.1.113883.1.11.19579	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.htm
Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.114222.4.11.1066	http://www.nucc.org/index.php?option=com_content&view=article&id=14&Itemid=125
HealthcareServiceLocation	urn:oid:2.16.840.1.113883.1.11.20275	http://phinivads.cdc.gov/vads/SearchAllVocab_search.action?searchOptions.searchText=Healthcare+Service+Location+%28NHSN%29
HealthStatus	urn:oid:2.16.840.1.113883.1.11.20.12	https://www.hl7.org/
HL7 BasicConfidentialityKind	urn:oid:2.16.840.1.113883.1.11.16926	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
HL7FinanciallyResponsiblePartyType	urn:oid:2.16.840.1.113883.1.11.10416	http://www.hl7.org
INDRoleclassCodes	urn:oid:2.16.840.1.113883.11.20.9.33	http://www.hl7.org
Language	urn:oid:2.16.840.1.113883.1.11.11526	http://www.loc.gov/standards/iso639-2/php/code_list.php
LanguageAbilityMode	urn:oid:2.16.840.1.113883.1.11.12249	http://www.hl7.org
LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.1.11.12199	http://www.hl7.org
Laterality	urn:oid:2.16.840.1.113883.3.520.4.22	http://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.22
Marital Status	urn:oid:2.16.840.1.113883.1.11.12212	http://www.hl7.org
Medication Clinical Drug	urn:oid:2.16.840.1.113762.1.4.1010.4	http://phinivads.cdc.gov/vads/ViewValueSet.action?pid=239BEF3E-971C-DF11-B334-0015173D1785
Medication Route FDA	urn:oid:2.16.840.1.113883.3.88.12.3221.8.7	https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.8.7
MoodCodeEvnInt	urn:oid:2.16.840.1.113883.11.20.9.18	http://www.hl7.org
Morphologic Abnormality of Neoplasm	2.16.840.1.114222.4.11.7256	https://phinivads.cdc.gov/vads/ViewValueSet.action?pid=D566BE8F-D525-4273-BE75-EC972CFAC0B8
NAACCR Behavior Code	urn:oid:2.16.840.1.113883.3.520.4.14	http://phinivads.cdc.gov/vads/ViewValueSet.action?pid=533DA165-1730-E211-8ECF-001A4BE7FA90
NAACCR Diagnostic Confirmation	urn:oid:2.16.840.1.113883.3.520.4	http://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4

Name	OID	URL
	.3	wValueSet.action?pid=F57C484F-DA04-E011-9273-00188B39829B
NAACCR Grade	urn:oid:2.16.840.1.113883.3.520.4.15	http://phinvads.cdc.gov/vads/ViewValueSet.action?pid=ED08D650-DD04-E011-9273-00188B39829B
NAACCR TNM Clinical Staged By	urn:oid:2.16.840.1.113883.3.520.4.4	https://phinvads.cdc.gov/vads/ViewValueSet.action?pid=6336A7B1-E404-E011-9273-00188B39829B
NAACCR TNM Pathologic Staged By	urn:oid:2.16.840.1.113883.3.520.4.27	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.27
NullValues_UNK_NA	urn:oid:2.16.840.1.113883.10.20.5.9.2	N/A
Observation Interpretation (HL7)	urn:oid:2.16.840.1.113883.1.11.78	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.htm
ParticipationFunction	urn:oid:2.16.840.1.113883.1.11.10.267	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.htm
PatientLanguage	urn:oid:2.16.840.1.113883.11.20.9.64	http://www.loc.gov/standards/iso639-2/php/code_list.php
Payer	urn:oid:2.16.840.1.114222.4.11.35.91	http://www.phdsc.org/standards/payer-typology.asp
Personal And Legal Relationship Role Type	urn:oid:2.16.840.1.113883.11.20.1.2.1	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
PHVS_Industry_CDC_Census2010	urn:oid:2.16.840.1.114222.4.11.71.87	http://phinvads.cdc.gov/vads/ViewValueSet.action?pid=2E3330DF-CBD5-43E3-A6B7-FF9BFA52680E
PHVS_Occupation_CDC_Census2010	urn:oid:2.16.840.1.114222.4.11.71.86	http://phinvads.cdc.gov/vads/ViewValueSet.action?pid=1445D71C-F37F-4504-8B6C-BA48C5A3F4CA
Planned moodCode (Act/Encounter/Procedure)	urn:oid:2.16.840.1.113883.11.20.9.23	http://hl7.org/implement/standards/fhir/v3/ActMood/
Planned moodCode (SubstanceAdministration/Supply)	urn:oid:2.16.840.1.113883.11.20.9.24	http://hl7.org/implement/standards/fhir/v3/ActMood/
PostalAddressUse	urn:oid:2.16.840.1.113883.1.11.10.637	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
PostalCode	urn:oid:2.16.840.1.113883.3.88.12.80.2	http://ushik.ahrq.gov/ViewItemDetails?system=mdr&itemKey=86671000
Problem	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.7.4

Name	OID	URL
Problem Status	urn:oid:2.16.840.1.113883.3.88.12.80.68	https://vsac.nlm.nih.gov
Problem Type	urn:oid:2.16.840.1.113883.3.88.12.3221.7.2	http://www.loinc.org/
ProblemAct statusCode	urn:oid:2.16.840.1.113883.11.20.9.19	http://www.hl7.org
ProcedureAct statusCode	urn:oid:2.16.840.1.113883.11.20.9.22	http://www.hl7.org
Race	urn:oid:2.16.840.1.113883.1.11.14.914	http://phinvads.cdc.gov/vads/ViewCodeSystemConcept.action?oid=2.16.840.1.113883.6.238&code=1000-9
Race Category Excluding Nulls	urn:oid:2.16.840.1.113883.3.2074.1.1.3	N/A
Radiation Regional Treatment and Boost Radiation Grouping	urn:oid:2.16.840.1.113883.3.520.4.23	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.23
Radiation Regional Treatment and Boost Radiation HCPCS codes	2.16.840.1.113883.3.520.4.24	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.24
Radiation Regional Treatment and Boost Radiation ICD10-PCS codes	2.16.840.1.113883.3.520.4.25	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.25
Radiation Regional Treatment and Boost Radiation SNOMED CT codes	2.16.840.1.113883.3.520.4.26	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.26
Religious Affiliation	urn:oid:2.16.840.1.113883.1.11.19.185	http://www.hl7.org/v3ballotarchive_temp_16B8D83E-1C23-BA17-0CBFC625BE7BA72F/v3ballot/html/infrastructure/vocabulary/vocabulary.html#voc-sets
Result Status	urn:oid:2.16.840.1.113883.11.20.9.39	http://www.hl7.org
StateValueSet	urn:oid:2.16.840.1.113883.3.88.12.80.1	http://www.census.gov/geo/reference/ansi_statetables.html
Telecom Use (US Realm Header)	urn:oid:2.16.840.1.113883.11.20.9.20	http://www.hl7.org
TNM Clinical Metastasis	urn:oid:2.16.840.1.113883.3.520.4.8	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.8
TNM Clinical Node	urn:oid:2.16.840.1.113883.3.520.4.7	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.7
TNM Clinical Stage Descriptor	urn:oid:2.16.840.1.113883.3.520.4.10	https://phinvads.cdc.gov/vads/ViewValueSet.action?pid=37448BA8-3006-E011-9273-00188B39829B
TNM Clinical Stage Group	urn:oid:2.16.840.1.113883.3.520.4.9	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.9

Name	OID	URL
		13883.3.520.4.9
TNM Clinical Tumor	urn:oid:2.16.840.1.113883.3.520.4.6	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.6
TNM Pathologic Metastasis	urn:oid:2.16.840.1.113883.3.520.4.19	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.19
TNM Pathologic Node	urn:oid:2.16.840.1.113883.3.520.4.18	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.18
TNM Pathologic Stage Descriptor	urn:oid:2.16.840.1.113883.3.520.4.21	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.21
TNM Pathologic Stage Group	urn:oid:2.16.840.1.113883.3.520.4.20	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.20
TNM Pathologic Tumor	urn:oid:2.16.840.1.113883.3.520.4.17	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.520.4.17
Tobacco Use	urn:oid:2.16.840.1.113883.11.20.9.41	http://vtsl.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=365980008 https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.11.20.9.41
UnitsOfMeasureCaseSensitive	urn:oid:2.16.840.1.113883.1.11.12.839	http://unitsofmeasure.org/ucum.html
Vital Sign Result	urn:oid:2.16.840.1.113883.3.88.12.80.62	http://www.loinc.org/
x_ServiceEventPerformer	urn:oid:2.16.840.1.113883.1.11.19.601	http://www.hl7.org

8 CODE SYSTEMS IN THIS GUIDE

Table 238: Code Systems

Name	OID
ActMood	urn:oid:2.16.840.1.113883.5.1001
ActPriority	urn:oid:2.16.840.1.113883.5.7
ActStatus	urn:oid:2.16.840.1.113883.5.14
AddressUse	urn:oid:2.16.840.1.113883.5.1119
AdministrativeGender	urn:oid:2.16.840.1.113883.5.1
ConfidentialityCode	urn:oid:2.16.840.1.113883.5.25
Country	urn:oid:2.16.840.1.113883.3.88.12.80.63
EntityClass	urn:oid:2.16.840.1.113883.5.41
EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43
EntityNameUse	urn:oid:2.16.840.1.113883.5.45
FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.26.1.1
FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92
HCPCS	urn:oid:2.16.840.1.113883.6.14
Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101
HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83
HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259
HL7ActClass	urn:oid:2.16.840.1.113883.5.6
HL7ActRelationshipType	urn:oid:2.16.840.1.113883.5.1002
HL7EntityCode	urn:oid:2.16.840.1.113883.5.1060
HL7NullFlavor	urn:oid:2.16.840.1.113883.5.1008
HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90
ICD9CM	2.16.840.1.113883.6.103
ICD10CM	urn:oid:2.16.840.1.113883.6.90
ICD10PCS	urn:oid:2.16.840.1.113883.6.4
ICD-O-3	2.16.840.1.113883.6.43.1
Industry CDC Census 2010	urn:oid:2.16.840.1.114222.4.5.315
Language	urn:oid:2.16.840.1.113883.6.121
LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60
LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61
LOINC	urn:oid:2.16.840.1.113883.6.1
MaritalStatus	urn:oid:2.16.840.1.113883.5.2
NAACCR Behavior Code	urn:oid:2.16.840.1.113883.3.520.3.14
NAACCR Diagnostic Confirmation	urn:oid:2.16.840.1.113883.3.520.3.3
NAACCR Grade	urn:oid:2.16.840.1.113883.3.520.3.15
NAACCR TNM Clinical Staged By	urn:oid:2.16.840.1.113883.3.520.3.4

Name	OID
NAACCR TNM Pathologic Staged By	urn:oid:2.16.840.1.113883.3.520.3.17
Occupation CDC Census 2010	urn:oid:2.16.840.1.114222.4.5.314
orderableDrugForm	urn:oid:2.16.840.1.113883.5.85
participationFunction	urn:oid:2.16.840.1.113883.5.88
Participationsignature	urn:oid:2.16.840.1.113883.5.89
Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238
ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076
RoleClass	urn:oid:2.16.840.1.113883.5.110
RoleCode	urn:oid:2.16.840.1.113883.5.111
RxNorm	urn:oid:2.16.840.1.113883.6.88
SNOMED CT	urn:oid:2.16.840.1.113883.6.96
Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.113883.3.221.5
TNM 7. Edition	urn:oid:2.16.840.1.113883.15.6
U.S. Board on Geographic Names (USGS - GNIS)	urn:oid:2.16.840.1.113883.6.245
UCUM	urn:oid:2.16.840.1.113883.6.8
Unique Ingredient Identifier (UNII)	urn:oid:2.16.840.1.113883.4.9
USPostalCodes	urn:oid:2.16.840.1.113883.6.231

9 CHANGES FROM PREVIOUS VERSION

9.1 Cancer Event Report Document (V1.1)

Cancer Event Report Document (V1.1) (urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29)

Change	Old	New
Name	Cancer Event Report Document	Cancer Event Report Document (V1.1)
Oid	urn:hl7ii:2.16.840.1.113883.10.13.1:2014-08-08	urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29
Description	The Ambulatory Healthcare Provider Cancer Event Report represents a core data set of relevant administrative, demographic, and clinical information about a patient and the patient's cancer diagnosis and treatment that has been recorded in the patient's electronic health record. It provides a mechanism for healthcare practitioners to electronically report their cancer cases to the public health central cancer registry using a standardized structure. Central cancer registries consolidate the information from these Cancer Event Reports with data from other reporting sources. Public health central cancer registry surveillance data are used for describing the occurrence of cancer in a given population, development of comprehensive cancer control programs, healthcare planning and interventions and research. The Cancer IG specific constraints for the US Realm Header further tighten some conformance verbs, such as birthplace of the patient and document set ID and version number. It also adds new elements including: patient's social security number; usable period for patient's address; patient deceased indicator and deceased time; and physician	The Ambulatory Healthcare Provider Cancer Event Report represents a core data set of relevant administrative, demographic, and clinical information about a patient and the patient's cancer diagnosis and treatment that has been recorded in the patient's electronic health record. It provides a mechanism for healthcare practitioners to electronically report their cancer cases to the public health central cancer registry using a standardized structure. Central cancer registries consolidate the information from these Cancer Event Reports with data from other reporting sources. Public health central cancer registry surveillance data are used for describing the occurrence of cancer in a given population, development of comprehensive cancer control programs, healthcare planning and interventions and research. The Cancer IG specific constraints for the US Realm Header further tighten some conformance verbs, such as birthplace of the patient and document set ID and version number. It also adds new elements including: patient's social security number; usable period for patient's address; patient deceased indicator and deceased time; and physician

Change	Old	New
	who referred patient to the reporting healthcare provider. This document is a *Part 2* of the *HL7 Implementation Guide for CDA® Release 2: Reporting to Public Health Cancer Registries from Ambulatory Healthcare Providers, Release 1"* Implementation Guide. The *Part 2* of the Implementation Guide describes the structure and content requirements for the Cancer Event Report such as document identification, header information, sections, entries and codes systems/value sets. *Document Template ID:* urn:hl7ii:2.16.840.1.113883.10.13.1:2014-08-08 *General Description:* The Cancer Event Report contains a record of a patient's encounter for diagnosis and/or treatment of cancer. *Document Code:* 72134-0 (LOINC code for "Cancer Event Report") *About id, setId, version* 1. CDA requires a ClinicalDocument/id element representing a unique identifier for the document. The id may be represented by either @root or @root plus@extension, so long as the resulting id is globally unique. CDA provides id, setId, versionNumber, and relatedDocument elements to support succession management (document versioning). The id element identifies the CDA document instance (the electronic file). It is independent of the setId and versionNumber elements. 2. Since Cancer Event Reports are sometimes updated, this IG requires setId and versionNumber to ensure that succession management can be easily performed. 3. The setId element identifies the	who referred patient to the reporting healthcare provider. This document is a *Part 2* of the *HL7 Implementation Guide for CDA® Release 2: Reporting to Public Health Cancer Registries from Ambulatory Healthcare Providers, Release 1"* Implementation Guide. The *Part 2* of the Implementation Guide describes the structure and content requirements for the Cancer Event Report such as document identification, header information, sections, entries and codes systems/value sets. *Document Template ID:* urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-09 *General Description:* The Cancer Event Report contains a record of a patient's encounter for diagnosis and/or treatment of cancer. *Document Code:* 72134-0 (LOINC code for "Cancer Event Report") *About id, setId, version* 1. CDA requires a ClinicalDocument/id element representing a unique identifier for the document. The id may be represented by either @root or @root plus@extension, so long as the resulting id is globally unique. CDA provides id, setId, versionNumber, and relatedDocument elements to support succession management (document versioning). The id element identifies the CDA document instance (the electronic file). It is independent of the setId and versionNumber elements. 2. Since Cancer Event Reports are sometimes updated, this IG requires setId and versionNumber to ensure that succession management can be easily performed. 3. The setId element identifies the

Change	Old	New																																										
	set of documents in a version tree and is consistent across all versions; The versionNumber element stores the version number as an integer (the first version is 1, the second is 2, etc.). The vendor software is responsible for generating the necessary values and for ensuring uniqueness. 4. In a replacement document, the relatedDocument element stores the id of the parent document and the typeCode attribute stores the type of document relationship. CDA supports several document relationship typeCodes. If present in a Cancer Event Report, the value of a document relationship typeCode must be RPLC (replace). *COMPONENTS OF CANCER EVENT REPORT DOCUMENT:* The table below list components of Cancer Event Report Document such as the header and all sections. <table> <tr> <td> *Conformance*</td> <td> *Section Name*</td> <td> *Template Identifier*</td> </tr> <tr> <td> SHALL [1..1]</td> <td> Header Section</td> <td></td> </tr> <tr> <td>urn:hl7ii:2.16.840.1.113883.10.13.1:2014-08-08</td> <td> SHALL [1..1]</td> <td> Cancer Diagnosis Section (entries required)</td> </tr> <tr> <td>urn:hl7ii:2.16.840.1.113883.10.13.2:2014-08-08</td> <td> SHALL [1..1]</td> <td> Assessment Section</td> </tr> <tr> <td>urn:hl7ii:2.16.840.1.113883.10.20.22.2.8:2014-06-09</td> <td> SHALL [1..1]</td> <td> Family History Section (V2)</td> </tr> <tr> <td>urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2014-06-09</td> <td> SHALL [1..1]</td> <td> Medications Administered Section (V2) - Cancer IG Specific Constraints</td> </tr> <tr> <td>urn:hl7ii:2.16.840.1.113883.10.13.12:2014-08-08</td> <td> SHALL [1..1]</td> <td> Medications Section (entries required) (V2) -</td> </tr> </table>	*Conformance*	*Section Name*	*Template Identifier*	SHALL [1..1]	Header Section		urn:hl7ii:2.16.840.1.113883.10.13.1:2014-08-08	SHALL [1..1]	Cancer Diagnosis Section (entries required)	urn:hl7ii:2.16.840.1.113883.10.13.2:2014-08-08	SHALL [1..1]	Assessment Section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.8:2014-06-09	SHALL [1..1]	Family History Section (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2014-06-09	SHALL [1..1]	Medications Administered Section (V2) - Cancer IG Specific Constraints	urn:hl7ii:2.16.840.1.113883.10.13.12:2014-08-08	SHALL [1..1]	Medications Section (entries required) (V2) -	set of documents in a version tree and is consistent across all versions; The versionNumber element stores the version number as an integer (the first version is 1, the second is 2, etc.). The vendor software is responsible for generating the necessary values and for ensuring uniqueness. 4. In a replacement document, the relatedDocument element stores the id of the parent document and the typeCode attribute stores the type of document relationship. CDA supports several document relationship typeCodes. If present in a Cancer Event Report, the value of a document relationship typeCode must be RPLC (replace). *COMPONENTS OF CANCER EVENT REPORT DOCUMENT:* The table below list components of Cancer Event Report Document such as the header and all sections. <table> <tr> <td> *Conformance*</td> <td> *Section Name*</td> <td> *Template Identifier*</td> </tr> <tr> <td> SHALL [1..1]</td> <td> Header Section</td> <td></td> </tr> <tr> <td>urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29</td> <td> SHALL [1..1]</td> <td> Cancer Diagnosis Section (entries required)</td> </tr> <tr> <td>urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05</td> <td> SHALL [1..1]</td> <td> Assessment Section</td> </tr> <tr> <td>urn:hl7ii:2.16.840.1.113883.10.20.22.2.8:2014-06-09</td> <td> SHALL [1..1]</td> <td> Family History Section (V2)</td> </tr> <tr> <td>urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2014-06-09</td> <td> SHALL [1..1]</td> <td> Medications Administered Section (V2) - Cancer IG Specific Constraints</td> </tr> <tr> <td>urn:hl7ii:2.16.840.1.113883.10.13.12:2014-08-08</td> <td> SHALL [1..1]</td> <td> Medications Section (entries required) (V2) -</td> </tr> </table>	*Conformance*	*Section Name*	*Template Identifier*	SHALL [1..1]	Header Section		urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29	SHALL [1..1]	Cancer Diagnosis Section (entries required)	urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05	SHALL [1..1]	Assessment Section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.8:2014-06-09	SHALL [1..1]	Family History Section (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2014-06-09	SHALL [1..1]	Medications Administered Section (V2) - Cancer IG Specific Constraints	urn:hl7ii:2.16.840.1.113883.10.13.12:2014-08-08	SHALL [1..1]	Medications Section (entries required) (V2) -
Conformance	*Section Name*	*Template Identifier*																																										
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urn:hl7ii:2.16.840.1.113883.10.20.22.2.8:2014-06-09	SHALL [1..1]	Family History Section (V2)																																										
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urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05	SHALL [1..1]	Assessment Section																																										
urn:hl7ii:2.16.840.1.113883.10.20.22.2.8:2014-06-09	SHALL [1..1]	Family History Section (V2)																																										
urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2014-06-09	SHALL [1..1]	Medications Administered Section (V2) - Cancer IG Specific Constraints																																										
urn:hl7ii:2.16.840.1.113883.10.13.12:2014-08-08	SHALL [1..1]	Medications Section (entries required) (V2) -																																										

Change	Old	New
	Cancer IG Specific Constraints urn:hl7ii:2.16.840.1.113883.10.13.13:2014-08-08 SHALL [[]1..1[]] Payers Section (V2) urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09 SHALL [[]1..1[]] Plan of Treatment Section (V2) - Cancer IG Specific Constraints urn:hl7ii:2.16.840.1.113883.10.13.9:2014-08-08 SHALL [[]1..1[]] Problem Section (entries required) (V2) - Cancer IG Specific Constraints urn:hl7ii:2.16.840.1.113883.10.13.21:2014-08-08 SHALL [[]1..1[]] Procedures Section (entries required) (V2) - Cancer IG Specific Constraints urn:hl7ii:2.16.840.1.113883.10.13.10:2014-08-08 SHALL [[]1..1[]] Results Section (entries required) (V2) urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2014-06-09 SHALL [[]1..1[]] Social History Section (V2) - Cancer IG Specific Constraints urn:hl7ii:2.16.840.1.113883.10.13.11:2014-08-08 SHALL [[]1..1[]] Vital Signs Section (entries required) (V2) urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1.2:2014-06-09	Cancer IG Specific Constraints urn:hl7ii:2.16.840.1.113883.10.13.13:2014-08-08 SHALL [[]1..1[]] Payers Section (V2) urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09 SHALL [[]1..1[]] Plan of Treatment Section (V2) - Cancer IG Specific Constraints urn:hl7ii:2.16.840.1.113883.10.13.9:2014-08-08 SHALL [[]1..1[]] Problem Section (entries required) (V2) - Cancer IG Specific Constraints urn:hl7ii:2.16.840.1.113883.10.13.21:2014-08-08 SHALL [[]1..1[]] Procedures Section (entries required) (V2) - Cancer IG Specific Constraints urn:hl7ii:2.16.840.1.113883.10.13.10:2014-08-08 SHALL [[]1..1[]] Results Section (entries required) (V2) urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2014-06-09 SHALL [[]1..1[]] Social History Section (V2) - Cancer IG Specific Constraints urn:hl7ii:2.16.840.1.113883.10.13.11:2015-01-29 SHALL [[]1..1[]] Vital Signs Section (entries required) (V2) urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1.2:2014-06-09
CONF #: 1169-34264 Added		Or encompassingEncounter SHALL Contain: This encompassingEncounter SHALL contain exactly one [1..1] encounterParticipant (CONF:1169-34264) such that it Note: This element records the provider that referred the patient to the reporting facility. This element SHALL be provided in the header of the CDA document in the event the patient was referred to this ambulatory healthcare provider.
CONF #: 1169-34363 Added		This country MAY contain zero or one [0..1] @nullFlavor (CONF:1169-34363).
CONF #: 1169-34364 Added		This state MAY contain zero or one

Change	Old	New
		[0..1] @nullFlavor (CONF:1169-34364).
CONF #: 1169-34373 Added		SHALL contain exactly one [1..1] assignedEntity (CONF:1169-34373).
CONF #: 1169-34374 Added		This assignedEntity SHALL contain exactly one [1..1] id (CONF:1169-34374).
CONF #: 1169-34375 Added		This assignedEntity SHALL contain exactly one [1..1] @nullFlavor, which SHALL be selected from ValueSet NullValues_UNK_NA urn:oid:2.16.840.1.113883.10.20.5.9.2 DYNAMIC (CONF:1169-34375).
CONF #: 1169-34376 Added		This id SHALL contain exactly one [1..1] @nullFlavor="NA" Not applicable (CONF:1169-34376).
CONF #: 1126-213 Removed	MAY contain zero or one [0..1] @nullFlavor (CONF:1126-213).	
CONF #: 1126-224 Removed	This birthplace MAY contain zero or one [0..1] @nullFlavor (CONF:1126-224).	
CONF #: 1126-230 Removed	This addr SHALL NOT contain [0..0] @nullFlavor (CONF:1126-230).	
CONF #: 1126-233 Removed	This place SHALL NOT contain [0..0] @nullFlavor (CONF:1126-233).	
CONF #: 1169-212 Modified	This encompassingEncounter SHALL contain exactly one [1..1] encounterParticipant	The encompassingEncounter SHALL Contain Either: This encompassingEncounter SHALL contain exactly one [1..1] encounterParticipant
CONF #: 1169-32650 Modified	SHALL contain exactly one [1..1] Cancer Diagnosis Section (entries required) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.2:2014-08-08)	SHALL contain exactly one [1..1] Cancer Diagnosis Section (entries required) (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05)
CONF #: 1169-33050 Modified	SHALL contain exactly one [1..1] Social History Section (V2) - Cancer IG Specific Constraints (identifier: urn:hl7ii:2.16.840.1.113883.10.13.11:2014-08-08)	SHALL contain exactly one [1..1] Social History Section (V2) - Cancer IG Specific Constraints (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.11:2015-01-29)
CONF #: 1169-33183 Modified	This patient *SHOULD* contain zero or one [[0..1] *sdct:deceasedInd*. The prefix sdct: SHALL be bound to the namespace "urn:hl7-org:sdct". The use of the namespace provides a	This patient *SHOULD* contain zero or one [0..1] *sdct:deceasedInd*. The prefix sdct: SHALL be bound to the namespace "urn:hl7-org:sdct". The use of the namespace provides a

Change	Old	New
	necessary extension to CDA R2 for the use of the deceasedInd element	necessary extension to CDA R2 for the use of the deceasedInd element
CONF #: 1169-33184 Modified	This patient <i>*SHOULD*</i> contain zero or one <code>[[0..1]</code> <code>*sdct:deceasedTime*</code> . The prefix <code>sdct:</code> SHALL be bound to the namespace “ <code>urn:hl7-org:sdct</code> ”. The use of the namespace provides a necessary extension to CDA R2 for the use of the deceasedTime element	This patient <i>*SHOULD*</i> contain zero or one <code>[0..1]</code> <code>*sdct:deceasedTime*</code> . The prefix <code>sdct:</code> SHALL be bound to the namespace “ <code>urn:hl7-org:sdct</code> ”. The use of the namespace provides a necessary extension to CDA R2 for the use of the deceasedTime element
CONF #: 1169-33946 Modified	SHALL contain exactly one <code>[1..1]</code> <code>@extension="2014-08-08"</code>	SHALL contain exactly one <code>[1..1]</code> <code>@extension="2015-09-29"</code>

9.2 Cancer Diagnosis Concern Act (V1.1)

[Cancer Diagnosis Concern Act \(V1.1\) \(urn:hl7ii:2.16.840.1.113883.10.13.3:2015-02-05\)](#)

Change	Old	New
Name	Cancer Diagnosis Concern Act	Cancer Diagnosis Concern Act (V1.1)
Oid	urn:hl7ii:2.16.840.1.113883.10.13.3:2014-08-08	urn:hl7ii:2.16.840.1.113883.10.13.3:2015-02-05
CONF #: 1169-32426 Modified	SHALL contain exactly one <code>[1..1]</code> Cancer Diagnosis Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.13.4:2014-08-08)	SHALL contain exactly one <code>[1..1]</code> Cancer Diagnosis Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05)
CONF #: 1169-33955 Modified	SHALL contain exactly one <code>[1..1]</code> <code>@extension="2014-08-08"</code>	SHALL contain exactly one <code>[1..1]</code> <code>@extension="2015-02-05"</code>

9.3 Cancer Diagnosis Observation (V1.1)

Cancer Diagnosis Observation (V1.1) (urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05)

Change	Old	New
Name	Cancer Diagnosis Observation	Cancer Diagnosis Observation (V1.1)
Oid	urn:hl7ii:2.16.840.1.113883.10.13.4:2014-08-08	urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05
CONF #: 1169-34041 Added		This name SHALL contain exactly one [1..1] @code="31206-6" Behavior ICD-O-3 Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34041).
CONF #: 1169-34042 Added		This name SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" CodeSystem: LOINC 2.16.840.1.113883.6.1 (CONF:1169-34042).
CONF #: 1169-34043 Added		This name SHALL contain exactly one [1..1] @code="21861-0" Dx confirmed by Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34043).
CONF #: 1169-34044 Added		This name SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" CodeSystem: LOINC 2.16.840.1.113883.6.1 (CONF:1169-34044).
CONF #: 1169-34045 Added		This name SHALL contain exactly one [1..1] @code="21858-6" Grade Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1169-34045).
CONF #: 1169-34046 Added		This name SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" CodeSystem: LOINC 2.16.840.1.113883.6.1 (CONF:1169-34046).
CONF #: 1169-34365 Added		Or SHALL contain exactly one [1..1] No Known TNM Clinical Stage Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.31:2015-04-02) (CONF:1169-34365).

Change	Old	New
CONF #: 1169-34366 Added		OR SHALL contain exactly one [1..1] No Known TNM Pathologic Stage Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13. 32:2015-04-02) (CONF:1169- 34366).
CONF #: 1169-34370 Added		This value MAY contain zero or one [0..1] @nullFlavor (CONF:1169- 34370). Note: Use @nullFlavor="NA" when a coded value is not available.
CONF #: 1126-33190 Removed	This observation SHALL NOT contain [0..0] @nullFlavor (CONF:1126-33190).	
CONF #: 1126-33191 Removed	This observation SHALL NOT contain [0..0] @nullFlavor (CONF:1126-33191).	
CONF #: 1126-33879 Removed	*SHALL* have an entry conformant to TNM Clinical Stage Observation (templateId: urn:hl7ii:2.16.840.1.113883.10.13. 5:2014-08-08) *OR* No Known TNM Clinical Stage Observation (templateId: urn:hl7ii:2.16.840.1.113883.10.13. 31:2014-08-08) (CONF:1126- 33879). Note: Use the TNM Clinical Stage Observation template to record TNM stage when the stage values are known, including situations when, after staging workup, the stage group and/or TNM component(s) are found to be unknown (e.g., Stage Group= 9, and/or TX, and/or NX). Use the No Known TNM Clinical Stage Observation template when the cancer has not yet been staged, the TNM stage is not available, or when no TNM Staging system exists for the cancer.	
CONF #: 1126-33883 Removed	*SHALL* have an entry conformant to TNM Pathologic Stage Observation (templateId: urn:hl7ii:2.16.840.1.113883.10.13. 7:2014-08-08) *OR* No Known TNM Pathologic Stage Observation (templateId: urn:hl7ii:2.16.840.1.113883.10.13. 32:2014-08-08) (CONF:1126- 33883).	

Change	Old	New
	Note: Use the TNM Pathologic Stage Observation template to record TNM stage when the stage values are known, including situations when, after staging workup, the stage group and/or TNM component(s) are found to be unknown (e.g., Stage Group= 9, and/or TX, and/or NX). Use the No Known TNM Pathologic Stage Observation template when the cancer has not yet been staged, the TNM stage is not available, or when no TNM Staging system exists for the cancer.	
CONF #: 1126-34010 Removed	This name SHALL contain exactly one [1..1] @code="31206-6" Behavior ICD-O-3 Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-34010).	
CONF #: 1126-34011 Removed	This name SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" CodeSystem: LOINC 2.16.840.1.113883.6.1 (CONF:1126-34011).	
CONF #: 1126-34012 Removed	This name SHALL contain exactly one [1..1] @code="21858-6" Grade Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-34012).	
CONF #: 1126-34013 Removed	This name SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" CodeSystem: LOINC 2.16.840.1.113883.6.1 (CONF:1126-34013).	
CONF #: 1126-34014 Removed	This name SHALL contain exactly one [1..1] @code="21861-0" Dx confirmed by Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-34014).	
CONF #: 1126-34015 Removed	This name SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" CodeSystem: LOINC 2.16.840.1.113883.6.1 (CONF:1126-34015).	
CONF #: 1169-32451 Modified	SHALL contain exactly one [1..1] observation	This entryRelationship SHALL contain either SHALL contain exactly one [1..1]

Change	Old	New
		TNM Clinical Stage Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.5:2015-02-05)
CONF #: 1169-32464 Modified	This value SHALL contain exactly one [1..1] @code	If value/@nullFlavor is not present then This value SHALL contain exactly one [1..1] @code
CONF #: 1169-32473 Modified	The @code for histologic type of tumor SHALL be selected from: (a) ICD-O-3 (CodeSystem: 2.16.840.1.113883.6.43.1) or (b) Morphologic Abnormality of Neoplasms Value Set (ValueSet: 2.16.840.1.114222.4.11.7256) or (c) ICD-9-CM Appendix A-Morphology of Neoplasms (CodeSystem: 2.16.840.1.114222.4.11.6038) or (d) ICD-10-CM (CodeSystem: 2.16.840.1.113883.6.90)	The @code for histologic type of tumor, if present, SHALL be selected from: (a) ICD-O-3 (CodeSystem: 2.16.840.1.113883.6.43.1) or (b) Morphologic Abnormality of Neoplasms Value Set (ValueSet: 2.16.840.1.114222.4.11.7256) or (c) ICD-9-CM Appendix A-Morphology of Neoplasms (CodeSystem: 2.16.840.1.114222.4.11.6038) or (d) ICD-10-CM (CodeSystem: 2.16.840.1.113883.6.90)
CONF #: 1169-32537 Modified	This value SHALL contain exactly one [1..1] originalText	If value/@coder not present then This value SHALL contain exactly one [1..1] originalText
CONF #: 1169-32618 Modified	This value SHALL contain exactly one [1..1] @displayName	If value/@nullFlavor not present then This value SHALL contain exactly one [1..1] @displayName
CONF #: 1169-32634 Modified	This value SHALL contain exactly one [1..1] @codeSystem	If value/@nullFlavor not present then This value SHALL contain exactly one [1..1] @codeSystem
CONF #: 1169-33180 Modified	SHALL contain exactly one [1..1] observation	This entryRelationship SHALL contain either SHALL contain exactly one [1..1] TNM Pathologic Stage Observation (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.7:2015-02-06)
CONF #: 1169-33956 Modified	SHALL contain exactly one [1..1] @extension="2014-08-08"	SHALL contain exactly one [1..1] @extension="2015-02-05"
CONF #: 1169-34003 Modified	This value MAY contain zero or one [0..1] @sdct:valueSet	If value/@nullFlavor not present then This value MAY contain zero or one [0..1] @sdct:valueSet

9.4 Employment History Observation Organizer (V1.1)

Employment History Observation Organizer (V1.1)

(urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29)

Change	Old	New
Name	Employment History Observation Organizer	Employment History Observation Organizer (V1.1)
Oid	urn:hl7ii:2.16.840.1.113883.10.13.16:2014-08-08	urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29
CONF #: 1169-34250 Added		MAY contain zero or one [0..1] @nullFlavor (CONF:1169-34250).
CONF #: 1126-32708 Removed	This observation SHALL contain exactly one [1..1] @classCode="OBS" (CONF:1126-32708).	
CONF #: 1126-32709 Removed	This observation SHALL contain exactly one [1..1] @moodCode="EVN" (CONF:1126-32709).	
CONF #: 1126-32710 Removed	This observation SHALL contain exactly one [1..1] code (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-32710).	
CONF #: 1126-32711 Removed	This observation SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1126-32711).	
CONF #: 1126-32716 Removed	This observation SHALL contain exactly one [1..1] @classCode="OBS" (CONF:1126-32716).	
CONF #: 1126-32717 Removed	This observation SHALL contain exactly one [1..1] @moodCode="EVN" (CONF:1126-32717).	
CONF #: 1126-32718 Removed	This observation SHALL contain exactly one [1..1] code (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-32718).	
CONF #: 1126-32719 Removed	This observation SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1126-32719).	
CONF #: 1126-33196 Removed	This observation SHALL contain exactly one [1..1] effectiveTime (CONF:1126-33196). Note: If current industry information is provided, the effectiveTime/low SHALL be	

Change	Old	New
	specified and effectiveTime/high SHALL NOT be specified. If historical industry information is provided, both effectiveTime/low and effectiveTime/high SHALL be specified.	
CONF #: 1126-33197 Removed	This effectiveTime SHOULD contain zero or one [0..1] low (CONF:1126-33197).	
CONF #: 1126-33198 Removed	This effectiveTime MAY contain zero or one [0..1] high (CONF:1126-33198).	
CONF #: 1126-33199 Removed	This observation SHALL contain exactly one [1..1] effectiveTime (CONF:1126-33199). Note: If current occupation information is provided, the effectiveTime/low SHALL be specified and effectiveTime/high SHALL NOT be specified. If historical occupation information is provided, both effectiveTime/low and effectiveTime/high SHALL be specified.	
CONF #: 1126-33200 Removed	This effectiveTime SHOULD contain zero or one [0..1] low (CONF:1126-33200).	
CONF #: 1126-33201 Removed	This effectiveTime MAY contain zero or one [0..1] high (CONF:1126-33201).	
CONF #: 1126-33675 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet PHVS_Industry_CDC_Census2010 urn:oid:2.16.840.1.114222.4.11.7187 STATIC (CONF:1126-33675).	
CONF #: 1126-33677 Removed	This value SHALL contain exactly one [1..1] @displayName, which SHALL be selected from ValueSet PHVS_Industry_CDC_Census2010 urn:oid:2.16.840.1.114222.4.11.7187 STATIC (CONF:1126-33677).	
CONF #: 1126-33678 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet PHVS_Occupation_CDC_Census2010 urn:oid:2.16.840.1.114222.4.11.7186 STATIC (CONF:1126-33678).	
CONF #: 1126-33679 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.114222.	

Change	Old	New
	4.5.314" Occupation CDC Census 2010 (CodeSystem: Occupation CDC Census 2010 urn:oid:2.16.840.1.114222.4.5.314) (CONF:1126-33679).	
CONF #: 1126-33680 Removed	This value SHALL contain exactly one [1..1] @displayName, which SHALL be selected from ValueSet PHVS_Occupation_CDC_Census2010 urn:oid:2.16.840.1.114222.4.11.7186 STATIC (CONF:1126-33680).	
CONF #: 1126-33681 Removed	This code SHALL contain exactly one [1..1] @code="21844-6" Usual Industry Hx (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33681).	
CONF #: 1126-33682 Removed	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33682).	
CONF #: 1126-33683 Removed	This code SHALL contain exactly one [1..1] @code="21843-8" Usual occupation Hx (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33683).	
CONF #: 1126-33684 Removed	This code MAY contain zero or one [0..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33684).	
CONF #: 1126-33693 Removed	This value SHOULD contain exactly one [1..1] originalText (CONF:1126-33693).	
CONF #: 1126-33694 Removed	This originalText SHOULD contain exactly one [1..1] reference (CONF:1126-33694). Note: This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1).	
CONF #: 1126-33695 Removed	This reference SHOULD contain exactly one [1..1] @value (CONF:1126-33695).	
CONF #: 1126-33696 Removed	This value SHOULD contain exactly one [1..1] originalText (CONF:1126-33696).	

Change	Old	New
CONF #: 1126-33697 Removed	This originalText SHOULD contain exactly one [1..1] reference (CONF:1126-33697). Note: This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1).	
CONF #: 1126-33698 Removed	This reference SHOULD contain exactly one [1..1] @value (CONF:1126-33698).	
CONF #: 1126-33699 Removed	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33699).	
CONF #: 1126-33700 Removed	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33700).	
CONF #: 1126-33719 Removed	This value SHALL contain exactly one [1..1] @sdct:valueSet="2.16.840.1.11422 2.4.11.7187" (CodeSystem: Industry CDC Census 2010 urn:oid:2.16.840.1.114222.4.5.315) (CONF:1126-33719).	
CONF #: 1126-33720 Removed	This value SHALL contain exactly one [1..1] @sdct:valueSet="2.16.840.1.11422 2.4.11.7186" (CodeSystem: Occupation CDC Census 2010 urn:oid:2.16.840.1.114222.4.5.314) (CONF:1126-33720).	
CONF #: 1126-34004 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.114222.4.5.315" Industry CDC Census 2010 (CodeSystem: Industry CDC Census 2010 urn:oid:2.16.840.1.114222.4.5.315) (CONF:1126-34004).	
CONF #: 1169-32704 Modified	SHALL contain exactly one [1..1] component	If organizer/@nullFlavor is not present: SHALL contain exactly one [1..1] component
CONF #: 1169-32707 Modified	SHALL contain exactly one [1..1] observation	SHALL contain exactly one [1..1] Usual Industry History (identifier: urn:hl7ii:2.16.840.1.113883.10.13.

Change	Old	New
		33:2015-01-29)
CONF #: 1169-32712 Modified	SHALL contain exactly one [1..1] component	If organizer/@nullFlavor is not present: SHALL contain exactly one [1..1] component
CONF #: 1169-32715 Modified	SHALL contain exactly one [1..1] observation	SHALL contain exactly one [1..1] Usual Occupation History (identifier: urn:hl7ii:2.16.840.1.113883.10.13.34:2015-01-29)
CONF #: 1169-33957 Modified	This templateId SHALL contain exactly one [1..1] @extension="2014-08-08"	This templateId SHALL contain exactly one [1..1] @extension="2015-01-29"

9.5 No Known TNM Clinical Stage Observation (V1.1)

No Known TNM Clinical Stage Observation (V1.1)
(urn:hl7ii:2.16.840.1.113883.10.13.31:2015-04-02)

Change	Old	New
Name	No Known TNM Clinical Stage Observation	No Known TNM Clinical Stage Observation (V1.1)
Oid	urn:hl7ii:2.16.840.1.113883.10.13.31:2014-08-08	urn:hl7ii:2.16.840.1.113883.10.13.31:2015-04-02
CONF #: 1169-34367 Added		SHALL contain exactly one [1..1] @extension="2015-04-02" (CONF:1169-34367).
CONF #: 1126-33960 Removed	SHALL contain exactly one [1..1] @extension="2014-08-08" (CONF:1126-33960).	
CONF #: 1169-33777 Modified	MAY contain zero or one [0..1] @nullFlavor	SHALL NOT contain [0..0] @nullFlavor

9.6 No Known TNM Pathologic Stage Observation (V1.1)

No Known TNM Pathologic Stage Observation (V1.1)

(urn:hl7ii:2.16.840.1.113883.10.13.32:2015-04-02)

Change	Old	New
Name	No Known TNM Pathologic Stage Observation	No Known TNM Pathologic Stage Observation (V1.1)
Oid	urn:hl7ii:2.16.840.1.113883.10.13.32:2014-08-08	urn:hl7ii:2.16.840.1.113883.10.13.32:2015-04-02
CONF #: 1169-34368 Added		SHALL contain exactly one [1..1] @extension="2015-04-02" (CONF:1169-34368).
CONF #: 1169-34369 Added		SHALL NOT contain [0..0] @nullFlavor (CONF:1169-34369).
CONF #: 1126-33857 Removed	MAY contain zero or one [0..1] @nullFlavor (CONF:1126-33857).	
CONF #: 1126-33961 Removed	SHALL contain exactly one [1..1] @extension="2014-08-08" (CONF:1126-33961).	

9.7 TNM Clinical Stage Observation (V1.1)

TNM Clinical Stage Observation (V1.1) (urn:hl7ii:2.16.840.1.113883.10.13.5:2015-02-05)

Change	Old	New
Name	TNM Clinical Stage Observation	TNM Clinical Stage Observation (V1.1)
Oid	urn:hl7ii:2.16.840.1.113883.10.13.5:2014-08-08	urn:hl7ii:2.16.840.1.113883.10.13.5:2015-02-05
CONF #: 1126-33401 Removed	This observation SHALL contain exactly one [1..1] code (CONF:1126-33401).	
CONF #: 1126-33402 Removed	This code SHALL contain exactly one [1..1] @code="21908-9" Stage group.clinical (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33402).	
CONF #: 1126-33403 Removed	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33403).	
CONF #: 1126-33404 Removed	This observation SHALL contain exactly one [1..1] statusCode (CONF:1126-33404).	
CONF #: 1126-33405 Removed	This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1126-33405).	
CONF #: 1126-33406 Removed	This observation SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1126-33406).	
CONF #: 1126-33407 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet TNM Clinical Stage Group urn:oid:2.16.840.1.113883.3.520.4.9 DYNAMIC (CONF:1126-33407).	
CONF #: 1126-33409 Removed	This value SHOULD contain zero or one [0..1] originalText (CONF:1126-33409).	
CONF #: 1126-33410 Removed	The originalText, if present, SHOULD contain zero or one [0..1] reference (CONF:1126-33410).	
CONF #: 1126-33411 Removed	The reference, if present, SHOULD contain zero or one [0..1] @value (CONF:1126-33411).	

Change	Old	New
CONF #: 1126-33412 Removed	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33412).	
CONF #: 1126-33413 Removed	This value SHALL contain exactly one [1..1] qualifier (CONF:1126-33413).	
CONF #: 1126-33414 Removed	This qualifier SHALL contain exactly one [1..1] name (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33414).	
CONF #: 1126-33415 Removed	This qualifier SHALL contain exactly one [1..1] value (CONF:1126-33415).	
CONF #: 1126-33416 Removed	This value SHOULD contain zero or one [0..1] originalText (CONF:1126-33416).	
CONF #: 1126-33417 Removed	The originalText, if present, SHOULD contain zero or one [0..1] reference (CONF:1126-33417).	
CONF #: 1126-33418 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet TNM Clinical Stage Descriptor urn:oid:2.16.840.1.113883.3.520.4.10 DYNAMIC (CONF:1126-33418).	
CONF #: 1126-33419 Removed	This value SHOULD contain zero or one [0..1] @displayName (CONF:1126-33419).	
CONF #: 1126-33420 Removed	The reference, if present, SHOULD contain zero or one [0..1] @value (CONF:1126-33420).	
CONF #: 1126-33421 Removed	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33421).	
CONF #: 1126-33431 Removed	This observation SHALL contain exactly one [1..1] entryRelationship (CONF:1126-33431) such that it Note: This entryRelationship provides information on the TNM Clinical Stage Tumor (T).	
CONF #: 1126-33432 Removed	This observation SHALL contain exactly one [1..1] entryRelationship (CONF:1126-33432) such that it Note: This entryRelationship	

Change	Old	New
	provides information on the TNM Clinical Stage Node (N).	
CONF #: 1126-33433 Removed	This observation SHALL contain exactly one [1..1] entryRelationship (CONF:1126-33433) such that it Note: This entryRelationship provides information on the TNM Clinical Stage Metastasis (M).	
CONF #: 1126-33434 Removed	SHALL contain exactly one [1..1] @typeCode="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33434).	
CONF #: 1126-33435 Removed	SHALL contain exactly one [1..1] observation (CONF:1126-33435).	
CONF #: 1126-33436 Removed	This observation SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33436).	
CONF #: 1126-33437 Removed	This observation SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33437).	
CONF #: 1126-33438 Removed	This observation SHALL contain exactly one [1..1] code (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33438).	
CONF #: 1126-33439 Removed	This observation SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1126-33439).	
CONF #: 1126-33440 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet TNM Clinical Tumor urn:oid:2.16.840.1.113883.3.520.4.6 (CONF:1126-33440).	
CONF #: 1126-33441 Removed	This value SHOULD contain zero or one [0..1] originalText (CONF:1126-33441).	
CONF #: 1126-33442 Removed	The originalText, if present, SHOULD contain zero or one [0..1] reference (CONF:1126-33442).	
CONF #: 1126-33443 Removed	The reference, if present, SHOULD contain zero or one [0..1] @value	

Change	Old	New
	(CONF:1126-33443).	
CONF #: 1126-33444 Removed	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33444).	
CONF #: 1126-33445 Removed	SHALL contain exactly one [1..1] @typeCode="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33445).	
CONF #: 1126-33446 Removed	SHALL contain exactly one [1..1] observation (CONF:1126-33446).	
CONF #: 1126-33447 Removed	This observation SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33447).	
CONF #: 1126-33448 Removed	This observation SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33448).	
CONF #: 1126-33449 Removed	This observation SHALL contain exactly one [1..1] code (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33449).	
CONF #: 1126-33450 Removed	This observation SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1126-33450).	
CONF #: 1126-33451 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet TNM Clinical Node urn:oid:2.16.840.1.113883.3.520.4.7 (CONF:1126-33451).	
CONF #: 1126-33452 Removed	This value SHOULD contain zero or one [0..1] originalText (CONF:1126-33452).	
CONF #: 1126-33453 Removed	The originalText, if present, SHOULD contain zero or one [0..1] reference (CONF:1126-33453).	
CONF #: 1126-33454 Removed	The reference, if present, SHOULD contain zero or one [0..1] @value (CONF:1126-33454).	

Change	Old	New
CONF #: 1126-33455 Removed	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33455).	
CONF #: 1126-33456 Removed	SHALL contain exactly one [1..1] observation (CONF:1126-33456).	
CONF #: 1126-33457 Removed	SHALL contain exactly one [1..1] @typeCode="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33457).	
CONF #: 1126-33458 Removed	This observation SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33458).	
CONF #: 1126-33459 Removed	This observation SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33459).	
CONF #: 1126-33460 Removed	This observation SHALL contain exactly one [1..1] code (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33460).	
CONF #: 1126-33462 Removed	This observation SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1126-33462).	
CONF #: 1126-33463 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet TNM Clinical Metastasis urn:oid:2.16.840.1.113883.3.520.4.8 (CONF:1126-33463).	
CONF #: 1126-33464 Removed	This value SHOULD contain zero or one [0..1] originalText (CONF:1126-33464).	
CONF #: 1126-33465 Removed	The originalText, if present, SHOULD contain zero or one [0..1] reference (CONF:1126-33465).	
CONF #: 1126-33466 Removed	The reference, if present, SHOULD contain zero or one [0..1] @value (CONF:1126-33466).	
CONF #: 1126-33467 Removed	This reference/@value SHALL	

Change	Old	New
	begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33467).	
CONF #: 1126-33474 Removed	This observation SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33474).	
CONF #: 1126-33475 Removed	This observation SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33475).	
CONF #: 1126-33559 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33559).	
CONF #: 1126-33561 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33561).	
CONF #: 1126-33564 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33564).	
CONF #: 1126-33566 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33566).	
CONF #: 1126-33568 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33568).	
CONF #: 1126-33663 Removed	This code SHALL contain exactly one [1..1] @code="21905-5" Primary tumor.clinical [Class] Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	

Change	Old	New
	(CONF:1126-33663).	
CONF #: 1126-33664 Removed	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33664).	
CONF #: 1126-33665 Removed	This code SHALL contain exactly one [1..1] @code="21906-3" Regional lymph nodes.clinical [Class] Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33665).	
CONF #: 1126-33666 Removed	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33666).	
CONF #: 1126-33667 Removed	This code SHALL contain exactly one [1..1] @code="21907-1" Distant metastases.clinical [Class] Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33667).	
CONF #: 1126-33668 Removed	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33668).	
CONF #: 1126-33709 Removed	This value SHALL contain exactly one [1..1] @sdct:valueSet="2.16.840.1.113883.3.520.4.9" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33709).	
CONF #: 1126-33710 Removed	This value SHALL contain exactly one [1..1] @sdct:valueSet="2.16.840.1.113883.3.520.4.10" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33710).	
CONF #: 1126-33711 Removed	This value SHALL contain exactly one [1..1] @sdct:valueSet="2.16.840.1.113883.3.520.4.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6)	

Change	Old	New
	(CONF:1126-33711).	
CONF #: 1126-33712 Removed	This value SHALL contain exactly one [1..1] @sdtc:valueSet="2.16.840.1.113883.3.520.4.7" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33712).	
CONF #: 1126-33713 Removed	This value SHALL contain exactly one [1..1] @sdtc:valueSet="2.16.840.1.113883.3.520.4.8" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33713).	
CONF #: 1126-33781 Removed	This observation SHALL contain exactly one [1..1] entryRelationship (CONF:1126-33781) such that it Note: Identifies the role of the person who recorded the staging elements.	
CONF #: 1126-33782 Removed	SHALL contain exactly one [1..1] observation (CONF:1126-33782).	
CONF #: 1126-33783 Removed	This observation SHALL contain exactly one [1..1] code (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33783).	
CONF #: 1126-33785 Removed	SHALL contain exactly one [1..1] @typeCode="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33785).	
CONF #: 1126-33786 Removed	This observation SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33786).	
CONF #: 1126-33787 Removed	This observation SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33787).	
CONF #: 1126-33788 Removed	This code SHALL contain exactly one [1..1] @code="21910-5" Stager.clinical Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33788).	

Change	Old	New
CONF #: 1126-33789 Removed	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33789).	
CONF #: 1126-33985 Removed	This observation SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1126-33985).	
CONF #: 1126-33986 Removed	This value SHOULD contain zero or one [0..1] originalText (CONF:1126-33986).	
CONF #: 1126-33987 Removed	The originalText, if present, SHOULD contain zero or one [0..1] reference (CONF:1126-33987).	
CONF #: 1126-33988 Removed	The reference, if present, SHOULD contain zero or one [0..1] @value (CONF:1126-33988).	
CONF #: 1126-33989 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet NAACCR TNM Clinical Staged By urn:oid:2.16.840.1.113883.3.520.4.4 DYNAMIC (CONF:1126-33989).	
CONF #: 1126-33990 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.3.520.3.4" NAACCR TNM Clinical Staged By (CONF:1126-33990).	
CONF #: 1126-33991 Removed	This value SHALL contain exactly one [1..1] @sdct:valueSet="2.16.840.1.113883.3.520.4.4" NAACCR TNM Clinical Staged By (CONF:1126-33991).	
CONF #: 1126-33992 Removed	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33992).	
CONF #: 1126-34006 Removed	This name SHALL contain exactly one [1..1] @code="21909-7" Descriptor.clinical Cancer Narrative (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-34006).	
CONF #: 1126-34007 Removed	This name SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" CodeSystem: LOINC	

Change	Old	New
	2.16.840.1.113883.6.1 (CONF:1126-34007).	
CONF #: 1169-33188 Modified	MAY contain zero or one [0..1] @nullFlavor	SHALL NOT contain [0..0] @nullFlavor
CONF #: 1169-33400 Modified	This entryRelationship SHALL contain exactly one [1..1] observation	This entryRelationship SHALL contain exactly one [1..1] TNM Clinical Stage Group (identifier: urn:hl7ii:2.16.840.1.113883.10.13. 35:2015-02-05)
CONF #: 1169-33976 Modified	SHALL contain exactly one [1..1] @extension="2014-08-08"	SHALL contain exactly one [1..1] @extension="2015-02-05"

9.8 TNM Pathologic Stage Observation (V1.1)

TNM Pathologic Stage Observation (V1.1) (urn:hl7ii:2.16.840.1.113883.10.13.7:2015-02-06)

Change	Old	New
Name	TNM Pathologic Stage Observation	TNM Pathologic Stage Observation (V1.1)
Oid	urn:hl7ii:2.16.840.1.113883.10.13.7:2014-08-08	urn:hl7ii:2.16.840.1.113883.10.13.7:2015-02-06
CONF #: 1126-33472 Removed	This observation SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33472).	
CONF #: 1126-33473 Removed	This observation SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33473).	
CONF #: 1126-33476 Removed	This observation SHALL contain exactly one [1..1] code (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33476).	
CONF #: 1126-33477 Removed	This code SHALL contain exactly one [1..1] @code="21902-2" Stage group.pathology Cancer (CONF:1126-33477).	
CONF #: 1126-33478 Removed	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 STATIC) (CONF:1126-33478).	
CONF #: 1126-33479 Removed	This observation SHALL contain exactly one [1..1] statusCode (CONF:1126-33479).	
CONF #: 1126-33480 Removed	This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1126-33480).	
CONF #: 1126-33481 Removed	This observation SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1126-33481).	
CONF #: 1126-33482 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be	

Change	Old	New
	selected from ValueSet TNM Pathologic Stage Group urn:oid:2.16.840.1.113883.3.520.4.20 DYNAMIC (CONF:1126-33482).	
CONF #: 1126-33484 Removed	This value SHOULD contain zero or one [0..1] originalText (CONF:1126-33484).	
CONF #: 1126-33485 Removed	The originalText, if present, SHOULD contain zero or one [0..1] reference (CONF:1126-33485).	
CONF #: 1126-33486 Removed	The reference, if present, SHOULD contain zero or one [0..1] @value (CONF:1126-33486).	
CONF #: 1126-33487 Removed	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33487).	
CONF #: 1126-33488 Removed	This value SHALL contain exactly one [1..1] qualifier (CONF:1126-33488).	
CONF #: 1126-33489 Removed	This qualifier SHALL contain exactly one [1..1] name (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33489).	
CONF #: 1126-33490 Removed	This qualifier SHALL contain exactly one [1..1] value (CONF:1126-33490).	
CONF #: 1126-33491 Removed	This value SHOULD contain zero or one [0..1] originalText (CONF:1126-33491).	
CONF #: 1126-33492 Removed	The originalText, if present, SHOULD contain zero or one [0..1] reference (CONF:1126-33492).	
CONF #: 1126-33493 Removed	The reference, if present, SHOULD contain zero or one [0..1] @value (CONF:1126-33493).	
CONF #: 1126-33494 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet TNM Pathologic Stage Descriptor urn:oid:2.16.840.1.113883.3.520.4.21 (CONF:1126-33494).	
CONF #: 1126-33495 Removed	This value SHOULD contain zero or one [0..1] @displayName (CONF:1126-33495).	
CONF #: 1126-33496 Removed	This reference/@value SHALL begin with a '#' and SHALL point to	

Change	Old	New
	its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33496).	
CONF #: 1126-33506 Removed	This observation SHALL contain exactly one [1..1] entryRelationship (CONF:1126-33506) such that it Note: This entryRelationship provides information on the TNM Clinical Stage Tumor (T).	
CONF #: 1126-33507 Removed	SHALL contain exactly one [1..1] observation (CONF:1126-33507).	
CONF #: 1126-33508 Removed	SHALL contain exactly one [1..1] @typeCode="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33508).	
CONF #: 1126-33509 Removed	This observation SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33509).	
CONF #: 1126-33510 Removed	This observation SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33510).	
CONF #: 1126-33511 Removed	This observation SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1126-33511).	
CONF #: 1126-33512 Removed	This value SHOULD contain zero or one [0..1] originalText (CONF:1126-33512).	
CONF #: 1126-33513 Removed	The originalText, if present, SHOULD contain zero or one [0..1] reference (CONF:1126-33513).	
CONF #: 1126-33514 Removed	The reference, if present, SHOULD contain zero or one [0..1] @value (CONF:1126-33514).	
CONF #: 1126-33515 Removed	This observation SHALL contain exactly one [1..1] code (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33515).	
CONF #: 1126-33516 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet TNM	

Change	Old	New
	Pathologic Tumor urn:oid:2.16.840.1.113883.3.520.4.17 (CONF:1126-33516).	
CONF #: 1126-33517 Removed	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33517).	
CONF #: 1126-33518 Removed	This observation SHALL contain exactly one [1..1] entryRelationship (CONF:1126-33518) such that it Note: This entryRelationship provides information on the TNM Clinical Stage Node (N).	
CONF #: 1126-33519 Removed	SHALL contain exactly one [1..1] @typeCode="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33519).	
CONF #: 1126-33520 Removed	SHALL contain exactly one [1..1] observation (CONF:1126-33520).	
CONF #: 1126-33521 Removed	This observation SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33521).	
CONF #: 1126-33522 Removed	This observation SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33522).	
CONF #: 1126-33523 Removed	This observation SHALL contain exactly one [1..1] code (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33523).	
CONF #: 1126-33524 Removed	This observation SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1126-33524).	
CONF #: 1126-33525 Removed	This value SHOULD contain zero or one [0..1] originalText (CONF:1126-33525).	
CONF #: 1126-33526 Removed	The originalText, if present, SHOULD contain zero or one [0..1] reference (CONF:1126-33526).	
CONF #: 1126-33527 Removed	The reference, if present, SHOULD	

Change	Old	New
	contain zero or one [0..1] @value (CONF:1126-33527).	
CONF #: 1126-33528 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet TNM Pathologic Node urn:oid:2.16.840.1.113883.3.520.4.18 (CONF:1126-33528).	
CONF #: 1126-33529 Removed	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33529).	
CONF #: 1126-33530 Removed	This observation SHALL contain exactly one [1..1] entryRelationship (CONF:1126-33530) such that it Note: This entryRelationship provides information on the TNM Clinical Stage Metastasis (M).	
CONF #: 1126-33531 Removed	SHALL contain exactly one [1..1] observation (CONF:1126-33531).	
CONF #: 1126-33532 Removed	SHALL contain exactly one [1..1] @typeCode="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33532).	
CONF #: 1126-33533 Removed	This observation SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33533).	
CONF #: 1126-33534 Removed	This observation SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33534).	
CONF #: 1126-33535 Removed	This observation SHALL contain exactly one [1..1] code (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33535).	
CONF #: 1126-33536 Removed	This observation SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1126-33536).	
CONF #: 1126-33537 Removed	This value SHOULD contain zero or one [0..1] originalText (CONF:1126-	

Change	Old	New
	33537).	
CONF #: 1126-33538 Removed	The originalText, if present, SHOULD contain zero or one [0..1] reference (CONF:1126-33538).	
CONF #: 1126-33539 Removed	The reference, if present, SHOULD contain zero or one [0..1] @value (CONF:1126-33539).	
CONF #: 1126-33540 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet TNM Pathologic Metastasis urn:oid:2.16.840.1.113883.3.520.4.19 (CONF:1126-33540).	
CONF #: 1126-33541 Removed	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-33541).	
CONF #: 1126-33558 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33558).	
CONF #: 1126-33560 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33560).	
CONF #: 1126-33570 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33570).	
CONF #: 1126-33572 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33572).	
CONF #: 1126-33574 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.15.6" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33574).	
CONF #: 1126-33669 Removed	This code SHALL contain exactly one [1..1] @code="21899-0"	

Change	Old	New
	Primary tumor.pathology Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33669).	
CONF #: 1126-33670 Removed	This code MAY contain zero or one [0..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33670).	
CONF #: 1126-33671 Removed	This code SHALL contain exactly one [1..1] @code="21900-6" Regional lymph nodes.pathology [Class] Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33671).	
CONF #: 1126-33672 Removed	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33672).	
CONF #: 1126-33673 Removed	This code MAY contain zero or one [0..1] @code="21901-4" Distant metastases.pathology [Class] Cancer (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33673).	
CONF #: 1126-33674 Removed	This code MAY contain zero or one [0..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33674).	
CONF #: 1126-33714 Removed	This value SHALL contain exactly one [1..1] @sdct:valueSet="2.16.840.1.113883.3.520.4.20" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33714).	
CONF #: 1126-33715 Removed	This value SHALL contain exactly one [1..1] @sdct:valueSet="2.16.840.1.113883.3.520.4.21" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33715).	
CONF #: 1126-33716 Removed	This value SHALL contain exactly one [1..1] @sdct:valueSet="2.16.840.1.113883.3.520.4.22" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33716).	

Change	Old	New
	3.3.520.4.17" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33716).	
CONF #: 1126-33717 Removed	This value SHALL contain exactly one [1..1] @sdct:valueSet="2.16.840.1.113883.3.520.4.18" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33717).	
CONF #: 1126-33718 Removed	This value SHALL contain exactly one [1..1] @sdct:valueSet="2.16.840.1.113883.3.520.4.19" (CodeSystem: TNM 7. Edition urn:oid:2.16.840.1.113883.15.6) (CONF:1126-33718).	
CONF #: 1126-33793 Removed	This observation SHALL contain exactly one [1..1] entryRelationship (CONF:1126-33793) such that it Note: Identifies the role of the person who recorded the staging elements.	
CONF #: 1126-33794 Removed	SHALL contain exactly one [1..1] @typeCode="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1126-33794).	
CONF #: 1126-33795 Removed	SHALL contain exactly one [1..1] observation (CONF:1126-33795).	
CONF #: 1126-33796 Removed	This observation SHALL contain exactly one [1..1] code (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33796).	
CONF #: 1126-33799 Removed	This observation SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1126-33799).	
CONF #: 1126-33800 Removed	This observation SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1126-33800).	
CONF #: 1126-33801 Removed	This code SHALL contain exactly one [1..1] @code="21904-8" Stager.pathology Cancer	

Change	Old	New
	(CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33801).	
CONF #: 1126-33802 Removed	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1126-33802).	
CONF #: 1126-33993 Removed	This observation SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1126-33993).	
CONF #: 1126-33994 Removed	This value SHOULD contain zero or one [0..1] originalText (CONF:1126-33994).	
CONF #: 1126-33995 Removed	The originalText, if present, SHOULD contain zero or one [0..1] reference (CONF:1126-33995).	
CONF #: 1126-33996 Removed	The reference, if present, SHOULD contain zero or one [0..1] @value (CONF:1126-33996).	
CONF #: 1126-33997 Removed	This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet NAACCR TNM Pathologic Staged By urn:oid:2.16.840.1.113883.3.520.4.27 DYNAMIC (CONF:1126-33997).	
CONF #: 1126-33998 Removed	This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.3.520.3.17" NAACCR TNM Pathologic Staged By (CONF:1126-33998).	
CONF #: 1126-33999 Removed	This value SHALL contain exactly one [1..1] @sdtc:valueSet="2.16.840.1.113883.3.520.4.27" NAACCR TNM Pathologic Staged By (CONF:1126-33999).	
CONF #: 1126-34000 Removed	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1126-34000).	
CONF #: 1126-34008 Removed	This name SHALL contain exactly one [1..1] @code="21903-0" Descriptor.pathology Cancer Narrative (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	

Change	Old	New
	(CONF:1126-34008).	
CONF #: 1126-34009 Removed	This name SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" CodeSystem: LOINC 2.16.840.1.113883.6.1 (CONF:1126-34009).	
CONF #: 1169-33189 Modified	MAY contain zero or one [0..1] @nullFlavor	SHALL NOT contain [0..0] @nullFlavor
CONF #: 1169-33469 Modified	This entryRelationship SHALL contain exactly one [1..1] observation	This entryRelationship SHALL contain exactly one [1..1] TNM Pathologic Stage Group (identifier: urn:hl7ii:2.16.840.1.113883.10.13.40:2015-02-05)
CONF #: 1169-33977 Modified	SHALL contain exactly one [1..1] @extension="2014-08-08"	SHALL contain exactly one [1..1] @extension="2015-02-06"

9.9 Cancer Diagnosis Section (entries required) (V1.1)

Cancer Diagnosis Section (entries required) (V1.1)

(urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05)

Change	Old	New
Name	Cancer Diagnosis Section (entries required)	Cancer Diagnosis Section (entries required) (V1.1)
Oid	urn:hl7ii:2.16.840.1.113883.10.13.2:2014-08-08	urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05
CONF #: 1169-257 Modified	SHALL contain exactly one [1..1] Cancer Diagnosis Concern Act (identifier: urn:hl7ii:2.16.840.1.113883.10.13.3:2014-08-08)	SHALL contain exactly one [1..1] Cancer Diagnosis Concern Act (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.3:2015-02-05)
CONF #: 1169-33947 Modified	SHALL contain exactly one [1..1] @extension="2014-08-08"	SHALL contain exactly one [1..1] @extension="2015-02-05"

9.10 Social History Section (V2) - Cancer IG Specific Constraints (V1.1)

Social History Section (V2) - Cancer IG Specific Constraints (V1.1)

(urn:hl7ii:2.16.840.1.113883.10.13.11:2015-01-29)

Change	Old	New
Name	Social History Section (V2) - Cancer IG Specific Constraints	Social History Section (V2) - Cancer IG Specific Constraints (V1.1)
Oid	urn:hl7ii:2.16.840.1.113883.10.13.11:2014-08-08	urn:hl7ii:2.16.840.1.113883.10.13.11:2015-01-29
CONF #: 1126-33685 Removed	This organizer MAY contain zero or one [0..1] @nullFlavor (CONF:1126-33685).	
CONF #: 1169-32700 Modified	SHALL contain exactly one [1..1] Employment History Observation Organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.13.16:2014-08-08)	SHALL contain exactly one [1..1] Employment History Observation Organizer (V1.1) (identifier: urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29)
CONF #: 1169-33954 Modified	SHALL contain exactly one [1..1] @extension="2014-08-08"	SHALL contain exactly one [1..1] @extension="2015-01-29"

APPENDIX A: DATA ELEMENTS AND CDA ELEMENTS RELATIONSHIP TABLE (NON-NORMATIVE)

The following table provides the data elements, template ID and optionality for the Ambulatory Healthcare Provider Cancer Event Report.

Table 239: Data Elements Cross Reference

DATA ELEMENTS CROSS REFERENCE	
Column	Definition
NAACCR ID Number (1)	Data Item number reference assigned to data elements by the North American Association of Central Cancer Registries (NAACCR) and used by hospital, state, provincial and national cancer registries in North America. NAACCR ID Number can be used to find data element definition in NAACCR Standards for Cancer Registries, Volume II: Data Standards and Data Dictionary, Sixteenth Edition
Data Element (2)	This is the concept that may be present or a formal data element name corresponding to a standard representation of this concept.
Opt (Optionality) (6)	Indicates optionality of the data element.
templateID (3)	OID for the templateID

Table 240: Ambulatory Healthcare Provider Cancer Event Report — Data Elements

NAACCR ID	Data Element	Opt	LOINC ID	Template Identifier
CDA Header		SHALL		
2110	Date Case Report Exported	SHALL (NO NULL)		General Header Constraints for CDA R2 urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09
	SetID ¹	SHALL		US Realm Header – Cancer Specific Constraints urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29
	VersionNumber	SHALL		US Realm Header – Cancer Specific Constraints urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29
2170	Vendor Name	SHALL		US Realm Header – Cancer Specific Constraints urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29

¹ When combined with Version Number, will indicate whether a CDA document is a replacement of a previously transmitted Cancer Event Report.

NAACCR ID	Data Element	Opt	LOINC ID	Template Identifier
2230	Patient Name – Last	SHALL (NO NULL)		US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.18:2014-08-08)
2270	Patient Name – Suffix	SHOULD		US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.18:2014-08-08)
2240	Patient Name – First	SHALL (NO NULL)		US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.18:2014-08-08)
2250	Patient Name - Middle	SHALL		US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.18:2014-08-08)
2390	Patient Name - Maiden	SHOULD		US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.18:2014-08-08)
2280	Patient Name – Alias	SHOULD		US Realm Patient Name (PTN.US.FIELDDED) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.18:2014-08-08)
2330, 2530	Patient Address – No & Street	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)
2335, 2355	Patient Address - Supplemental	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)
70, 1810	Patient Address - City	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)
80 - 1820	Patient Address - State	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)
100, 1830	Patient Address – Postal Code	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)
102, 1832	Patient Address - Country	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)

NAACCR ID	Data Element	Opt	LOINC ID	Template Identifier
	Address History (Useable Period)	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)
	Address Use	SHOULD		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)
2360	Patient Telephone	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)
220	Patient Sex/Gender	SHALL (NO NULL)		US Realm Header – Cancer Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29)
240	Patient Date of Birth	SHALL (NO NULL)		US Realm Header – Cancer Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29)
1750	Date of Last Contact	SHALL		General Header Constraints for CDA R2 (urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09)
	Date of Death	SHOULD		US Realm Header – Cancer Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29)
2300	Patient Medical Record Number	SHALL		US Realm Header – Cancer Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29)
2320	Patient Social Security Number	SHALL		US Realm Header – Cancer Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29)
160	Patient Race 1	SHALL		US Realm Header – Cancer Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29)
161,162,163, 164	Patient Race 2 - 5	MAY		General Header Constraints for CDA R2 (urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09)
170	Race Coding System Current	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)
190	Patient Ethnicity	SHALL		General Header Constraints for CDA R2 (urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09)
	Language Communication	SHALL		General Header Constraints for CDA R2 (urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09)

NAACCR ID	Data Element	Opt	LOINC ID	Template Identifier
252	Birthplace – State	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)
254	Birthplace – Country	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08)
150	Patient Marital Status	SHALL		US Realm Header – Cancer Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29)
	Physician Name (Last, Suffix, First, Middle)	SHALL		General Header Constraints for CDA R2 (urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09) [serviceEvent/performer]
2465, 2475	Physician ID – NPI	SHALL		General Header Constraints for CDA R2 (urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09) [serviceEvent/performer]
2460, 2470	Physician – Local ID	SHOULD		General Header Constraints for CDA R2 (urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09) [serviceEvent/performer]
	Physician Address (Street Address, City, State, Zip Code, Country, Telephone, email)	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08) [serviceEvent/performer]
	Physician Specialty	SHOULD		General Header Constraints for CDA R2 (urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09) [serviceEvent/performer]
545	Provider Organization ID	SHALL		General Header Constraints for CDA R2 (urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09) <u>[encompassingEncounter/healthcareFacility]</u>
	Provider Organization (Street Address, City, State, Zip Code, Country, Telephone)	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08) <u>[encompassingEncounter/healthcareFacility]</u>
2415	Provider Referred From – NPI	SHALL		US Realm Header – Cancer Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29) [Encompassing Encounter]
2410	Provider Referred From – Local ID	SHOULD		US Realm Header – Cancer Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.1:2015-01-29) Encompassing Encounter]

NAACCR ID	Data Element	Opt	LOINC ID	Template Identifier
	Provider Referred From Address (Street Address, City, State, Zip Code, Country, Telephone)	SHALL		US Realm Address (AD.US.FIELDDED) (V2) - Cancer IG Specific Constraints (urn:hl7ii:2.16.840.1.113883.10.13.17:2014-08-08) [Encompassing Encounter]
	Social History Section (V2) - Cancer IG Specific Constraints	SHALL	29762-2	section: identifier (urn:hl7ii:2.16.840.1.113883.10.13.11:2015-01-29)
	Social History Narrative	SHALL		
272	Occupation	SHALL	21843-8	Employment History Observation Organizer organizer: identifier (urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29)
310	Text--Usual Occupation	SHALL		Employment History Observation Organizer organizer: identifier (urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29)
282	Industry	SHALL	21844-6	Employment History Observation Organizer organizer: identifier (urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29)
320	Text--Usual Industry	SHALL		Employment History Observation Organizer organizer: identifier (urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29)
330	Occ/Ind Coding System	SHALL		Employment History Observation Organizer organizer: identifier (urn:hl7ii:2.16.840.1.113883.10.13.16:2015-01-29)
	Smoking Status – Meaningful Use	SHALL	72166-2	Smoking Status - Meaningful Use (V2) observation: identifier (urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09)
	Tobacco Use	SHALL	11367-0	Tobacco Use - V2 observation: identifier (urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09)
	Payers Section	SHALL	48768-6	section: identifier (urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09)

NAACCR ID	Data Element	Opt	LOINC ID	Template Identifier
630	Payer Type	SHOULD		Policy Activity (V2) act: identifier (urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09)
Cancer Diagnosis Section		SHALL (NO NULL)	72135-7	section: identifier (urn:hl7ii:2.16.840.1.113883.10.13.2:2015-02-05)
390	Diagnosis Date	SHALL (NO NULL)		Cancer Diagnosis Observation observation: identifier (urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05)
522	Histologic type	SHALL		Cancer Diagnosis Observation observation: identifier (urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05)
523	Behavior	SHALL	31206-6	Cancer Diagnosis Observation observation: identifier (urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05)
440	Grade	SHALL	21858-6	Cancer Diagnosis Observation observation: identifier (urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05)
490	Diagnostic confirmation	SHALL	21861-0	Cancer Diagnosis Observation observation: identifier (urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05)
400	Primary Site	SHALL (NO NULL)		Cancer Diagnosis Observation observation: identifier (urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05)
410	Laterality	SHALL	20228-3	Cancer Diagnosis Observation observation: identifier (urn:hl7ii:2.16.840.1.113883.10.13.4:2015-02-05)
970	TNM Clinical Stage Group	SHALL	21908-9	TNM Clinical Stage Group Observation observation: identifier (urn:hl7ii:2.16.840.1.113883.10.13.35:2015-02-05)

NAACCR ID	Data Element	Opt	LOINC ID	Template Identifier
980	TNM Clinical Stage Descriptor	SHALL	21909-7	TNM Clinical Stage Group Observation observation: identifier (urn:hl7ii:2.16.840.1.113883.10.13.35:2015-02-05)
990	TNM Clinical Staged By (Provider who recorded stage information)	SHALL	21910-5	Stager Clinical Cancer observation: identifier (urn:hl7ii:2.16.840.1.113883.10.13.39:2015-02-05)
1060	TNM Edition Number	SHALL		TNM Clinical Stage Group Observation observation: identifier (urn:hl7ii:2.16.840.1.113883.10.13.35:2015-02-05)
940	TNM Clinical T	SHALL	21905-5	Primary Tumor Clinical (urn:hl7ii:2.16.840.1.113883.10.13.36:2015-02-05)
950	TNM Clinical N	SHALL	21906-3	Regional Lymph Nodes Clinical (urn:hl7ii:2.16.840.1.113883.10.13.37:2015-02-05)
960	TNM Clinical M	SHALL	21907-1	Distant Metastases Clinical (urn:hl7ii:2.16.840.1.113883.10.13.38:2015-02-05)
910	TNM Pathologic Stage Group	SHALL	21902-2	TNM Pathologic Stage Group Observation observation: (urn:hl7ii:2.16.840.1.113883.10.13.40:2015-02-05)
920	TNM Pathologic Stage Descriptor	SHALL	21903-0	TNM Pathologic Stage Group Observation observation: (urn:hl7ii:2.16.840.1.113883.10.13.40:2015-02-05)
930	TNM Pathologic Staged By (Provider who recorded stage information)	SHALL	21904-8	Stager Pathologic Cancer (urn:hl7ii:2.16.840.1.113883.10.13.44:2015-02-05)
1060	TNM Edition Number	SHALL		TNM Pathologic Stage Observation observation: (urn:hl7ii:2.16.840.1.113883.10.13.40:2015-02-05)
880	TNM Pathologic T	SHALL	21899-0	Primary Tumor Pathologic (urn:hl7ii:2.16.840.1.113883.10.13.41:2015-02-05)
890	TNM Pathologic N	SHALL	21900-6	Regional Lymph Nodes Pathologic (urn:hl7ii:2.16.840.1.113883.10.13.42:2015-02-05)
900	TNM Pathologic M	SHALL	21901-4	Distant Metastases Pathologic (urn:hl7ii:2.16.840.1.113883.10.13.43:2015-02-05)

NAACCR ID	Data Element	Opt	LOINC ID	Template Identifier
1770	Cancer Status	MAY	11323-3	Health Status Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09
Problem Section (entries required) (V2) - Cancer IG Specific Constraints		SHALL	11450-4	section: identifier oid:2.16.840.1.113883.10.13.21
	Start date of problem	SHALL		Problem Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09
	Stop date of problem	SHALL		Problem Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09
3110 – 3164	Comorbidity/complications 1 - 10	SHALL	75323-6	Problem Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09
3780 - 3798	Secondary Diagnosis 1 - 10	SHALL	75323-6	Problem Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09
3165	ICD Revision (Comorbidities)	SHALL		Problem Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09
Results Section (entries required) (V2)		SHALL	30954-2	section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2014-06-09
	Result DateTime	SHALL		Result Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09
	Result Value	SHALL		Result Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09
	Result Text	SHALL		Result Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09

NAACCR ID	Data Element	Opt	LOINC ID	Template Identifier
	Facility	MAY		Result Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09
	Facility ID	MAY		Result Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09
Procedures Section (entries required) (V2) - Cancer IG Specific Constraints		SHALL	47519-4	section: identifier oid:2.16.840.1.113883.10.13.10
1200,1210	Procedure DateTime	SHALL		Procedure Activity Procedure (V2) - Cancer IG Specific Constraints procedure: identifier oid:2.16.840.1.113883.10.13.15
670, 1290, 730, 1294	Procedure Type	SHALL		Procedure Activity Procedure (V2) - Cancer IG Specific Constraints procedure: identifier oid:2.16.840.1.113883.10.13.15
	Body Site of procedure	MAY		Procedure Activity Procedure (V2) - Cancer IG Specific Constraints procedure: identifier oid:2.16.840.1.113883.10.13.15
	Physical Location (where procedure was performed)	SHALL		Procedure Activity Procedure (V2) - Cancer IG Specific Constraints procedure: identifier oid:2.16.840.1.113883.10.13.15
2480	Physician ID (who performed the procedure)	SHOULD		Procedure Activity Procedure (V2) - Cancer IG Specific Constraints procedure: identifier oid:2.16.840.1.113883.10.13.15
	Indication (provides a link/pointer to relevant Problem)	SHALL		Indication (V2) - Cancer IG Specific Constraints observation: identifier oid:2.16.840.1.113883.10.13.19
Radiation Oncology Section		SHALL	34832-6	section: identifier oid:2.16.840.1.113883.10.13.24
1210	Date of Radiation	SHOULD		section: identifier oid:2.16.840.1.113883.10.13.24
2495	NPI Physician 3 (Radiation Oncologist)	SHALL		Radiation Regional Treatment Modality organizer: identifier oid:2.16.840.1.113883.10.13.29

NAACCR ID	Data Element	Opt	LOINC ID	Template Identifier
1570	Radiation Regional Treatment Modality	SHALL	21964-2	Radiation Regional Treatment Modality organizer: identifier oid:2.16.840.1.113883.10.13.29
110	Radiation Regional Dose cGy	MAY	21958-4	Radiation Regional Treatment Modality organizer: identifier oid:2.16.840.1.113883.10.13.29
3200	Radiation Boost Treatment Modality	SHALL	42128-9	Radiation Boost Modality Organizer organizer: identifier oid:2.16.840.1.113883.10.13.30
3210	Radiation Boost Dose cGy	MAY	42119-8	Radiation Boost Modality Organizer organizer: identifier oid:2.16.840.1.113883.10.13.30
	Indication (links/points to relevant Problem)	SHALL		Indication (V2) - Cancer IG Specific Constraints observation: identifier oid:2.16.840.1.113883.10.13.19
Medications Administered Section (V2) - Cancer IG Specific Constraints (medications that are administered during the encounter)		SHALL	29549-3	section: identifier oid:2.16.840.1.113883.10.13.13 section: identifier oid:2.16.840.1.113883.10.13.12
Medications Section (entries required) (V2) - Cancer IG Specific Constraints (Chemotherapy, Hormone Therapy, Immunotherapy)		SHALL	10160-0	
1220, 1230, 1240	Start Date	SHALL		Medication Activity (V2) substanceAdministration: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
	Stop Date	SHALL		Medication Activity (V2) substanceAdministration: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
	Frequency	SHOULD		Medication Activity (V2) substanceAdministration: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
	Dose	SHOULD		Medication Activity (V2) substanceAdministration: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
700, 1390, 710, 1400, 720, 1410	Coded medication name	SHALL		Medication Information (V2) manufacturedProduct: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09

NAACCR ID	Data Element	Opt	LOINC ID	Template Identifier
	Indication (provides a link/pointer to relevant Problem)	SHALL		Indication (V2) - Cancer IG Specific Constraints observation: identifier oid:2.16.840.1.113883.10.13.19
	Assessment Section	SHALL	51848-0	section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09
	Assessment Narrative	SHALL		section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09
	Plan of Treatment Section (V2) - Cancer IG Specific Constraints	SHALL	18776-5	section: identifier oid:2.16.840.1.113883.10.13.9
	Medication Entry	MAY		Planned Medication Activity substanceAdministration: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09
	Procedure Entry	MAY		Planned Procedure (V2) procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09
	Encounters Entry	SHALL		Planned Encounter (V2) - Cancer IG Specific Constraints encounter: identifier oid:2.16.840.1.113883.10.13.20
2425	Provider Referred To - NPI	SHALL		Planned Encounter (V2) - Cancer IG Specific Constraints encounter: identifier oid:2.16.840.1.113883.10.13.20
2420	Provider Referred To - Local ID	SHOULD		Planned Encounter (V2) - Cancer IG Specific Constraints encounter: identifier oid:2.16.840.1.113883.10.13.20
	Provider Referred To Address and Telephone	SHOULD		Planned Encounter (V2) - Cancer IG Specific Constraints encounter: identifier oid:2.16.840.1.113883.10.13.20
	Vital Signs Section (entries required) (V2)	SHALL	8716-3	section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09)
	Height	SHALL		Vital Sign Observation (V2 observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09

NAACCR ID	Data Element	Opt	LOINC ID	Template Identifier
	Weight	SHALL		Vital Sign Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09
	Body Mass Index	SHALL		Vital Sign Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09
Family History Section		SHALL	10157-6	section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2014-06-09
360	Family History of Cancer	SHALL		Family History Observation (V2) observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2014-06-09

APPENDIX B: CONSOLIDATE CDA R2 (C-CDA R2) TEMPLATES

The following table lists all C-CDA R2 templates that are either included in this guide or are inferred but not included. See Volume I – Introductory Material, Section 2.1 - Design principle of Cancer IG for full information on how the templates below are utilized by the Guide.

Table 241: C-CDA R2 Templates

C-CDA R2 Template Title	templateId	Included In This Guide
US Realm Header (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09	Yes
Assessment Section	urn:oid:2.16.840.1.113883.10.20.22.2.8	Yes
Family History Section (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2014-06-09	Yes
Medications Administered Section (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09	Yes
Medications Section (entries required) (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09	Yes
Payers Section (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09	Yes
Plan of Treatment Section (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09	Yes
Problem Section (entries required) (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2014-06-09	Yes
Procedures Section (entries required) (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.7.1:2014-06-09	Yes
Results Section (entries required) (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2014-06-09	Yes
Social History Section (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2014-06-09	Yes
Vital Signs Section (entries required) (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09	Yes
Coverage Activity (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2014-06-09	Yes
Family History Observation (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2014-06-09	Yes
Family History Organizer (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2014-06-09	Yes
Health Status Observation (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09	Yes
Indication (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09	Yes
Medication Activity (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09	Yes
Medication Information (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09	Yes
Planned Encounter (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09	Yes
Planned Medication Activity (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09	Yes
Planned Procedure (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09	Yes
Policy Activity (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09	Yes
Problem Concern Act (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2014-06-09	Yes
Problem Observation (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09	Yes
Problem Status (DEPRECATED)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09	Yes
Procedure Activity Procedure (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09	Yes

C-CDA R2 Template Title	templateId	Included In This Guide
Result Observation (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09	Yes
Result Organizer (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09	Yes
Service Delivery Location	urn:oid:2.16.840.1.113883.10.20.22.4.32	Yes
Smoking Status - Meaningful Use (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09	Yes
Social History Observation (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09	Yes
Tobacco Use (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09	Yes
Vital Sign Observation (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09	Yes
Vital Signs Organizer (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09	Yes
Author Participation	urn:oid:2.16.840.1.113883.10.20.22.4.119	Yes
US Realm Address (AD.US.FIELDDED)	urn:oid:2.16.840.1.113883.10.20.22.5.2	Yes
US Realm Date and Time (DTM.US.FIELDDED)	urn:oid:2.16.840.1.113883.10.20.22.5.4	Yes
US Realm Patient Name (PTN.US.FIELDDED)	urn:oid:2.16.840.1.113883.10.20.22.5.1	Yes
US Realm Person Name (PN.US.FIELDDED)	urn:oid:2.16.840.1.113883.10.20.22.5.1.1	Yes
Age Observation	urn:oid:2.16.840.1.113883.10.20.22.4.31	No
Caregiver Characteristics	urn:oid:2.16.840.1.113883.10.20.22.4.72	No
Characteristics of Home Environment	urn:oid:2.16.840.1.113883.10.20.22.4.109	No
Cultural and Religious Observation	urn:oid:2.16.840.1.113883.10.20.22.4.111	No
Drug Monitoring Act	urn:oid:2.16.840.1.113883.10.20.22.4.123	No
Drug Vehicle	urn:oid:2.16.840.1.113883.10.20.22.4.24	No
Entry Reference	urn:oid:2.16.840.1.113883.10.20.22.4.122	No
Estimated Date of Delivery	urn:oid:2.16.840.1.113883.10.20.15.3.1	No
External Document Reference	urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09	No
Family History Death Observation	urn:oid:2.16.840.1.113883.10.20.22.4.47	No
Goal Observation	urn:oid:2.16.840.1.113883.10.20.22.4.121	No
Handoff Communication Participants	urn:oid:2.16.840.1.113883.10.20.22.4.141	No
Immunization Medication Information (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09	No
Instruction (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09	No
Medication Dispense (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09	No
Medication Supply Order (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09	No
Nutrition Recommendations	urn:oid:2.16.840.1.113883.10.20.22.4.130	No
Planned Act (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09	No
Planned Coverage	urn:oid:2.16.840.1.113883.10.20.22.4.129	No
Planned Immunization Activity	urn:oid:2.16.840.1.113883.10.20.22.4.120	No

C-CDA R2 Template Title	templateId	Included In This Guide
Planned Observation (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09	No
Planned Supply (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09	No
Precondition for Substance Administration (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09	No
Pregnancy Observation	urn:oid:2.16.840.1.113883.10.20.15.3.8	No
Priority Preference	urn:oid:2.16.840.1.113883.10.20.22.4.143	No
Procedure Activity Act (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09	No
Procedure Activity Observation (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09	No
Product Instance	urn:oid:2.16.840.1.113883.10.20.22.4.37	No
Prognosis Observation	urn:oid:2.16.840.1.113883.10.20.22.4.113	No
Reaction Observation (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09	No
Severity Observation (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09	No
Substance Administered Act	urn:oid:2.16.840.1.113883.10.20.22.4.118	No
Medication Section (entries optional)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.1:2014-06-09	No
Problem Section (entries optional) (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.5:2014-06-09	No
Procedures Section (entries optional) (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.7:2014-06-09	No
Results Section (entries optional) (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2014-06-09	No
Vital Signs Section (entries optional) (V2)	urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2014-06-09	No