



Joint IHE Laboratory/Anatomic Pathology meeting

May 31, 2012 - Paris

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Agenda

- Image management (H.Solomon)
- Brief proposals defined in collaboration across domains
- Harmonization of CDA implementation guides, MDHT

Anatomic Pathology Technical Framework

- **Current Technical Framework - Revision 2.0**

July 23, 2010. Copyright © 2010: IHE International, Inc. Trial Implementation

- Vol. 1 (PAT TF-1): Integration Profiles

- Vol. 2 (PAT TF-2): Transactions

- These volumes provide specification of the following profile:
 - Anatomic Pathology Workflow (APW)

- **Supplements for Trial Implementation**

- To be tested at subsequent IHE Connectathons.

- Supplements extend the IHE Anatomic Pathology Technical Framework, Rev. 2.0 for Trial Implementation.

- Anatomic Pathology Reporting to Public Health (ARPH) - Published 2010-07-23

- Anatomic Pathology Structured Reports (APSR) - Published 2011-03-31
 - APSR Value Sets Appendix - Published 2011-03-31

IT Infrastructure profiles

IHE Anatomic Pathology Existing and planned profiles

Healthcare community

ATNA

CT

Security

PAM

PDQ

Patient mgmt.

XDS

XDS-I

XDM

Docs./Image sharing

Care Ward

Anatomic Pathology Laboratory

Order mgmt.

Image mgmt.

Report mgmt.

Automaton

APW: AP workflow

Enhanced Imaging workflow

IAPW:
Inter AP labs workflow

ARW:AP reporting workflow

APDA:
AP devices automation

APOR:
AP opinion request

APSR: AP Structured Report

ARPH: AP Report for Public Health

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APOR:
AP opinion request

APSR: AP Structured Report

ARPH: AP Report for Public Health

Adapting LAB integration profiles to Anatomic Pathology domain



2012-13

Change proposals/Profiles/White papers

- Content profile -> Structured orders (*with LAB, RAD?*)
- Integration Profiles (*with RAD, CARD*)
 - *Anatomic Pathology Reporting Workflow (APRWF)(G.Rodriguez – Satec)*
- White papers
 - Device automation integration profile (*with LAB, ITI*)
 - Inter-departments workflow (*with LAB, ITI*)
 - Telepathology (*with ITI*)
 - Opinion request (content and workflow)
 - *Relationships between pathology/radiology/endoscopy*
 - *Sharing templates/terminology* (*with ITI*)

Sharing observations across domains

C.Daniel (ADICAP, ASIP Santé, INSERM)

W.Li (INSERM)

[APSR] – Anatomic Pathology Structured Report

- Joint IHE and HL7 anatomic pathology initiative
- Content profile providing templates for building Anatomic Pathology Structured Reports in all fields of anatomic pathology (cancers, benign neoplasms as well as non-neoplastic conditions)
 - CDA documents including Anatomic Pathology observations bound to images or regions of interest
 - Shared or exchanged within a community of care providers using existing integration profiles defined by IHE Information Technology Infrastructure

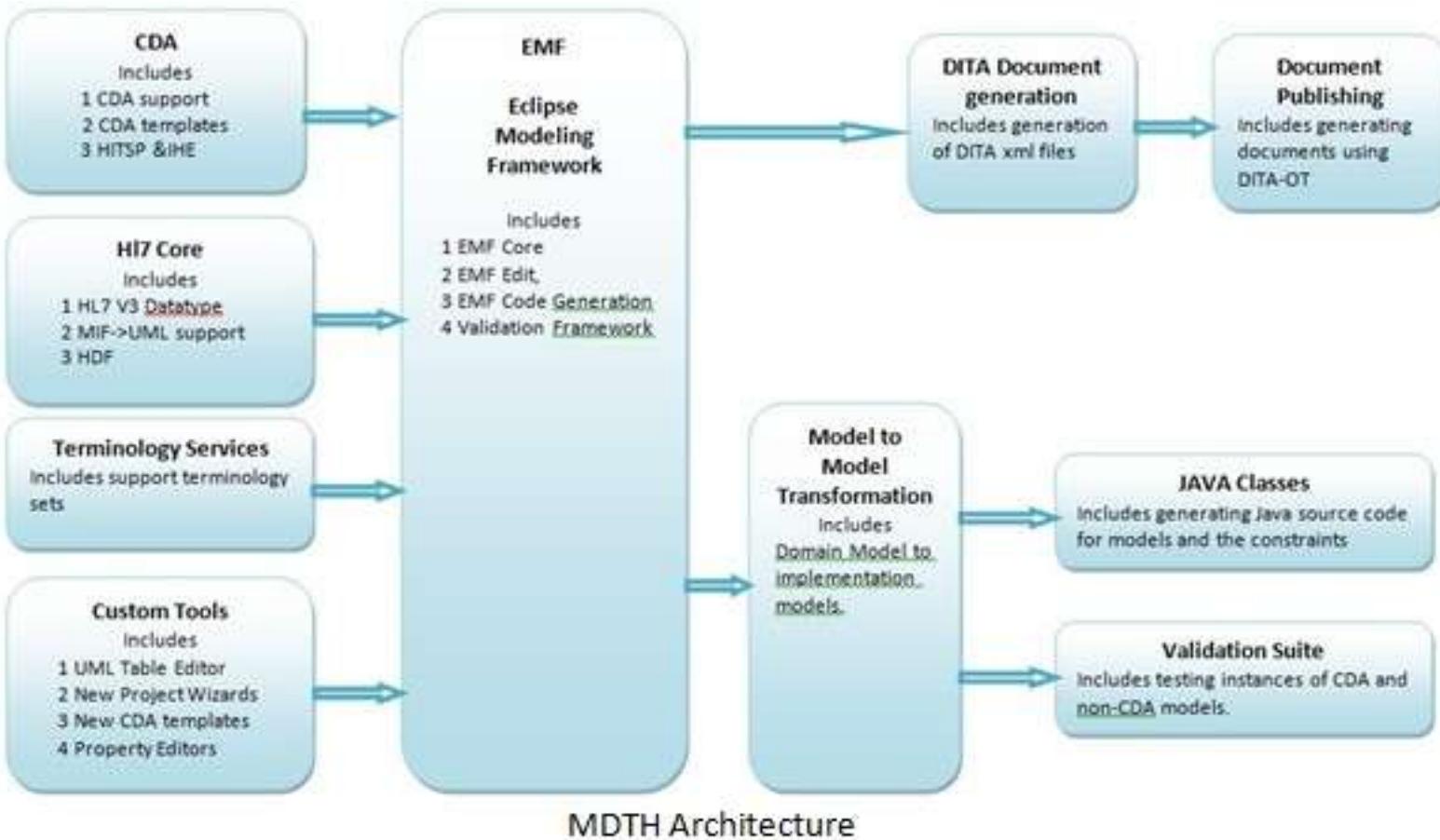
[APSR] – Anatomic Pathology Structured Report

- Clinical Use Case to implement this profile
 - Sharing/exchanging APSR for surgical pathology
 - 21 CDA templates (Document Content Modules)
 - Generic APSR template
 - All organs & fields of anatomic pathology (inflammatory, vascular, traumatic, metabolic diseases as well as cancer)
 - 20 organ-specific APSR templates
 - Cancer-specific organizers covering 85% of incident cancers
 - 490 observations & procedure templates
 - 21 procedure templates
 - 469 observation templates (including molecular biology observation templates)

Experiment of MDHT

- Open Health Tools Model-Driven Health Tools (MDHT) Project is a wide-ranging open source effort to promote interoperability in healthcare infrastructure.
- A common modeling framework and tools that support seamless integration of design, publication, and runtime artifact creation. Allows the creation of computable models of the templates in UML. These models can be used to produce:
 - Template Specifications (DITA, XHTML, PDF, Other)
 - Conformance/Validation Tools
 - Model Driven Code Generation
 - Schematron
- The project has already built models from the following specifications:
 - HL7 Continuity of Care Document
 - HITSP C83 Sections and Entries
 - IHE Patient Care Coordination Technical Framework
 - HL7 Common Document Types
 - HL7 Consolidated CDA (DSTU Dec 2011)
 - HL7 CDA IG : Public Health Case Reports (US Realm)
 - HL7 CDA IG : Personal Healthcare Monitoring Report (PHMR)

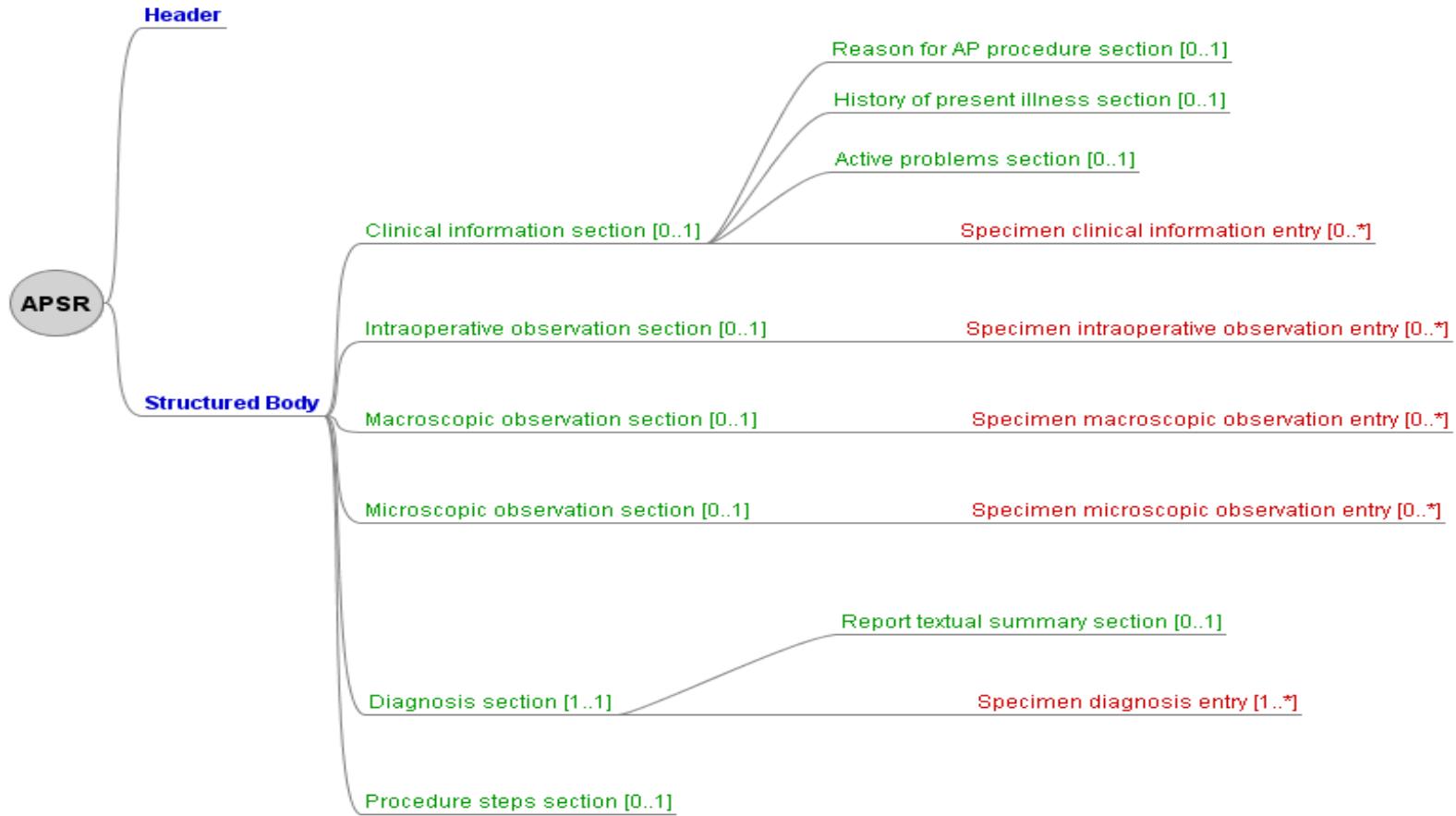
MDTH Architecture



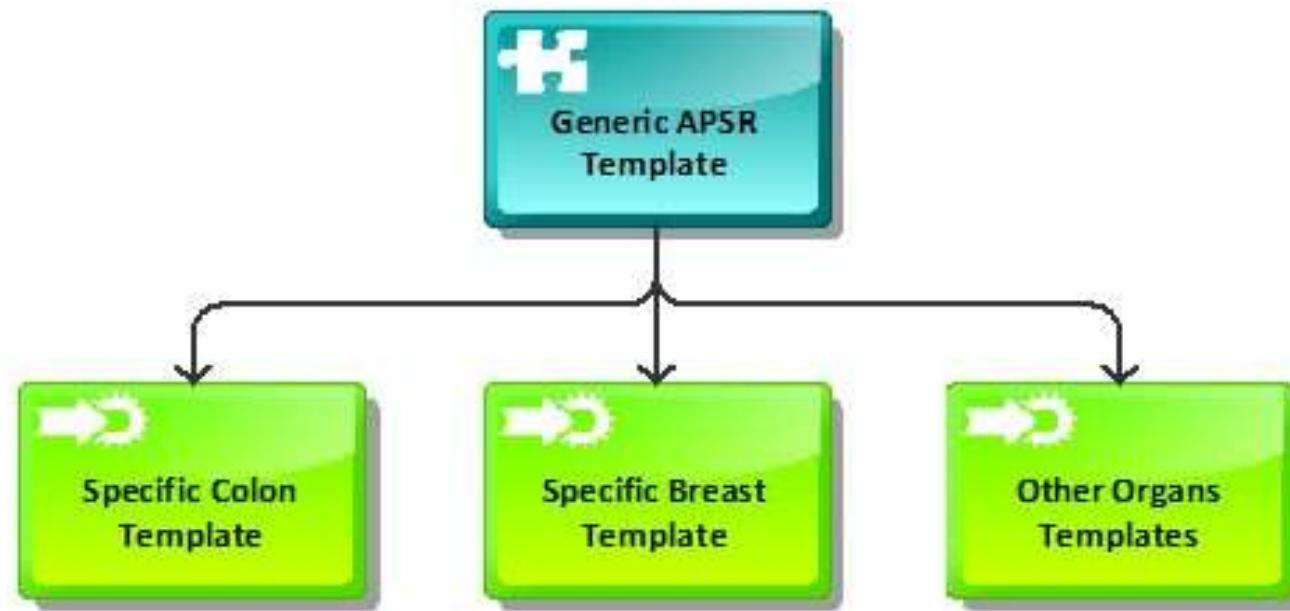
Example

Implementation guide of the Breast APSR (french edition)

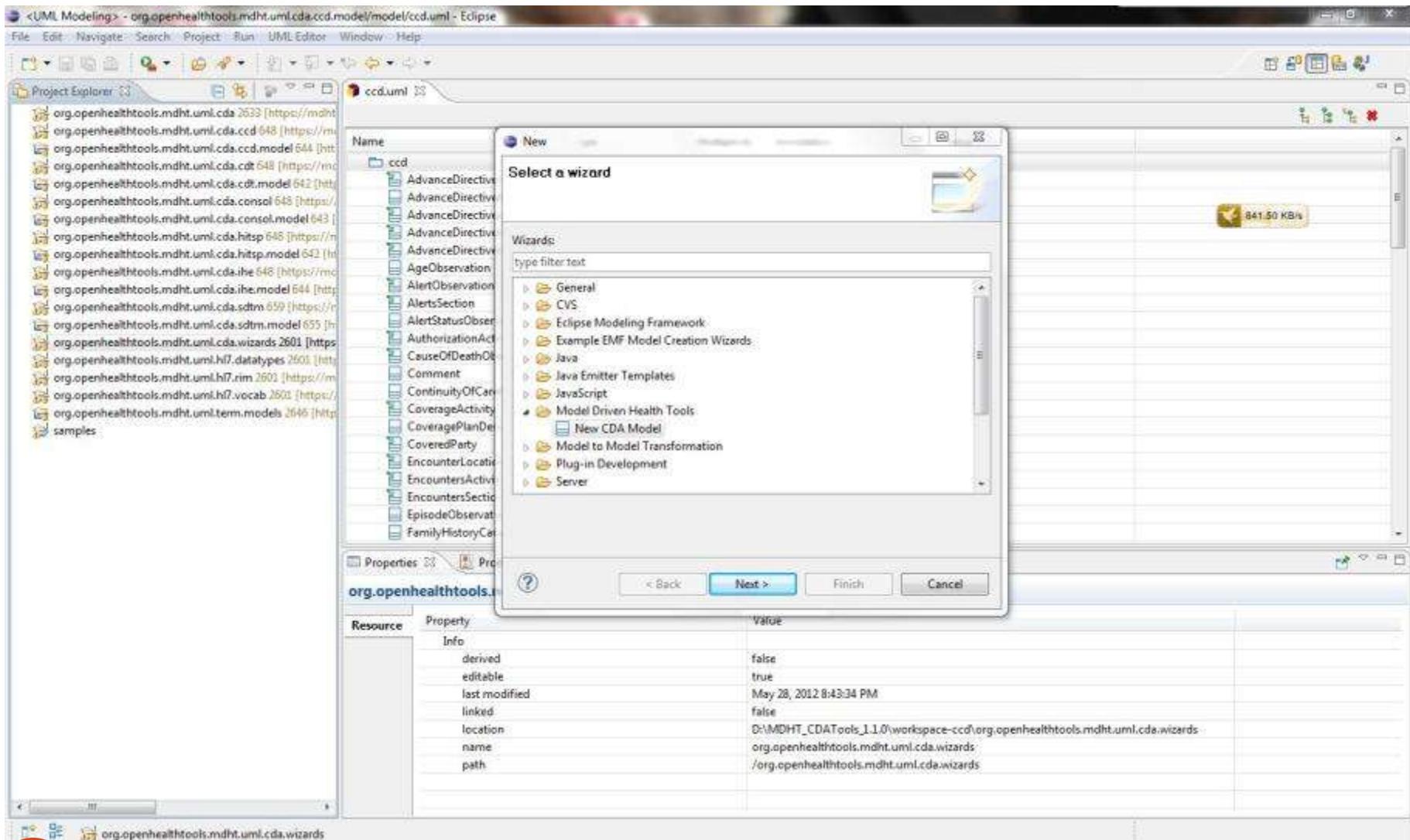
APSR contains 6 sections



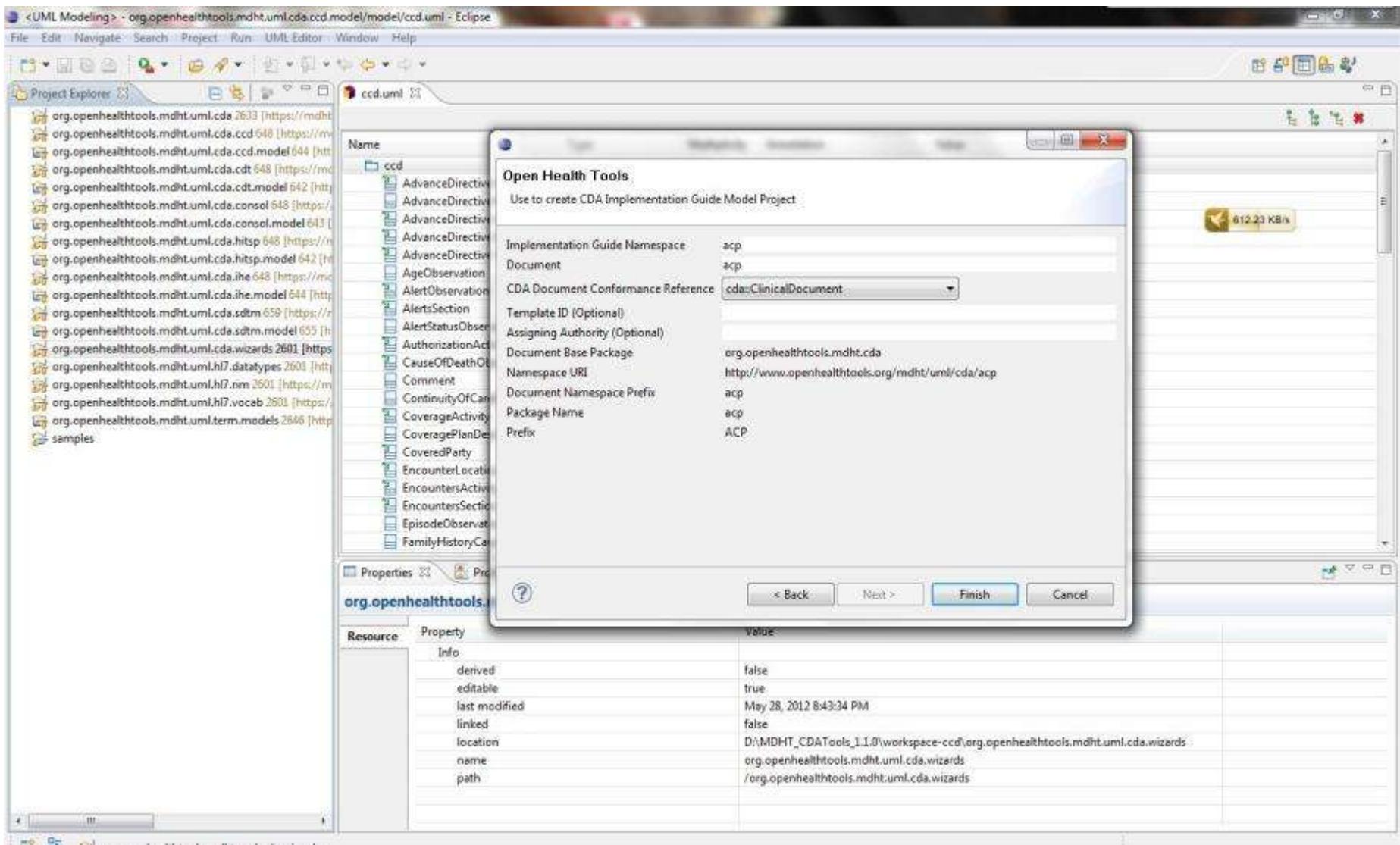
APSR Template Architecture



Create ACP Project (1)



Create ACP Project (2)



Create ACP Project(3)

The screenshot shows the Eclipse UML Modeling interface with the title bar <UML Modeling> - org.openhealthtools.mdht.uml.cda.acp.model/model/acp.uml - Eclipse. The menu bar includes File, Edit, Navigate, Search, Project, Run, UML Editor, Window, and Help. The toolbar has various icons for file operations like New, Open, Save, and Delete.

The left pane is the Project Explorer, showing the project structure:

- org.openhealthtools.mdht.uml.cda.acp
- JRE System Library [J2SE-1.5]
- Plug-in Dependencies
- src
- META-INF
- model
- build.properties
- plugin.properties
- plugin.xml
- transform.xml
- org.openhealthtools.mdht.uml.cda.acp.doc
- org.openhealthtools.mdht.uml.cda.acp.model
- model
- acp.uml
- acp
- acp-vocab.uml
- org.openhealthtools.mdht.uml.cda.ccd 648 [https://mdht.p...]
- org.openhealthtools.mdht.uml.cda.ccd.model 644 [https://n...]
- org.openhealthtools.mdht.uml.cda.cdt 648 [https://mdht.p...]
- org.openhealthtools.mdht.uml.cda.cdt.model 642 [https://n...]
- org.openhealthtools.mdht.uml.cda.consol 648 [https://mdht...]
- org.openhealthtools.mdht.uml.cda.consol.model 643 [https:...]
- org.openhealthtools.mdht.uml.cda.hitsp 648 [https://mdht.p...]
- org.openhealthtools.mdht.uml.cda.hitsp.model 642 [https://...]
- org.openhealthtools.mdht.uml.cda.ihe 648 [https://mdht.p...]
- org.openhealthtools.mdht.uml.cda.ihe.model 644 [https://n...]
- org.openhealthtools.mdht.uml.cda.sdtm 639 [https://mdht.p...]
- org.openhealthtools.mdht.uml.cda.sdtm.model 635 [https://...]
- org.openhealthtools.mdht.uml.cda.wizards 2601 [https://md...]
- org.openhealthtools.mdht.uml.hl7.datatypes 2601 [https://n...]
- org.openhealthtools.mdht.uml.hl7.rim 2601 [https://mdht.p...]
- org.openhealthtools.mdht.uml.hl7.vocab 2601 [https://mdht.p...]
- > org.openhealthtools.mdht.uml.term.models 2646 [https://...]
- META-INF 2564 2564
- >> model 2564 2564
- >> CodeSystems.uml 2564 2564
- CodeSystems
- https-c80.uml 1563 1563
- phcr.uml 1523 1523

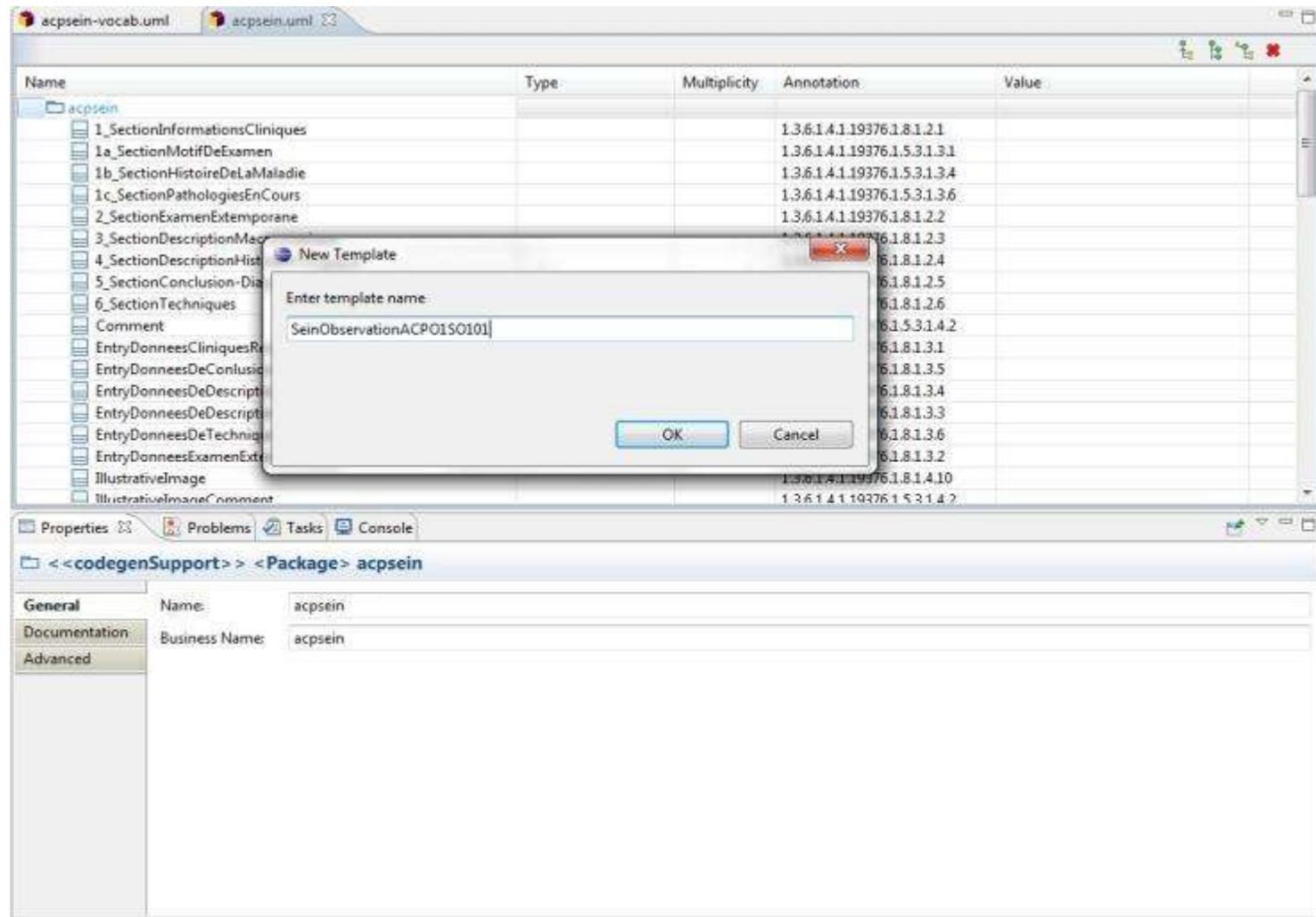
The central workspace displays the contents of acp.uml. A table lists the elements and their properties:

Name	Type	Multiplicity	Annotation	Value
acp				
1_SectionInformationsCliniques				1.36.1.4.1.19376.1.8.1.2.1
1a_SectionMotifDeExamen				1.36.1.4.1.19376.1.5.3.1.3.1
1b_SectionHistoireDeLaMaladie				1.36.1.4.1.19376.1.5.3.1.3.4
1c_SectionPathologiesEnCours				1.36.1.4.1.19376.1.5.3.1.3.6
2_SectionExamenExtemporane				1.36.1.4.1.19376.1.8.1.2.2
3_SectionDescriptionMacroscopique				1.36.1.4.1.19376.1.8.1.2.3
4_SectionDescriptionHistopathologique				1.36.1.4.1.19376.1.8.1.2.4
5_SectionConclusion-Diagnostic				1.36.1.4.1.19376.1.8.1.2.5
6_SectionTechniques				1.36.1.4.1.19376.1.8.1.2.6
AssignedAuthor				
AssignedAuthoringDevice				
AssignedCustodian				
AssignedEntity				
AssignedEntity1				
AssignedEntity2				
AssignedInformer				
AssignedPerson				
AssociatedEntity				
AssociatedPerson				
Authenticator				
Author				1.36.1.4.1.19376.1.8.1.4.3
Automaton				1.36.1.4.1.19376.1.8.1.4.2
Comment				1.36.1.4.1.19376.1.8.1.4.7

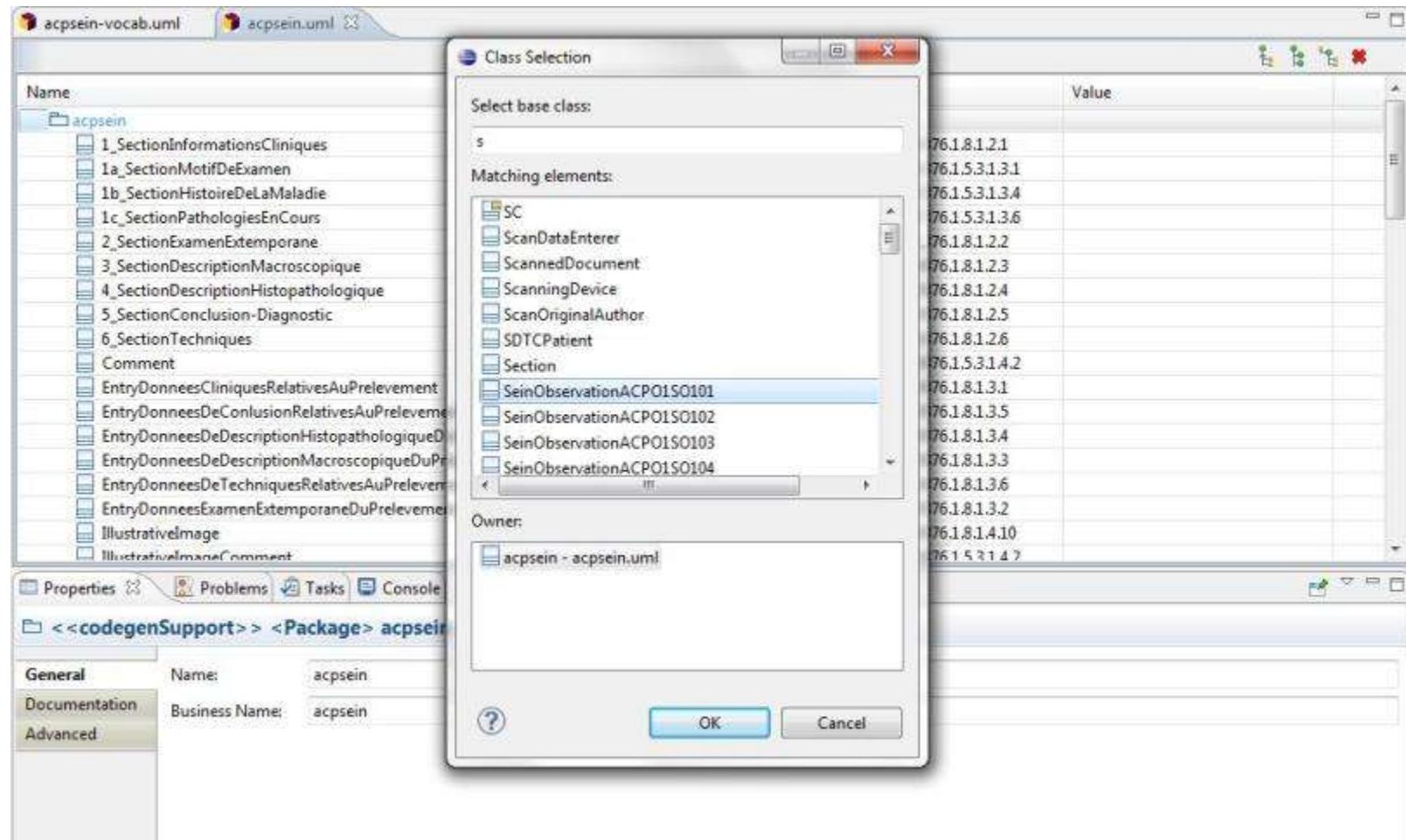
The bottom pane shows the properties for the package acp:

General	Name:	acp
Documentation	Business Name:	acp
Advanced		

Add new template(1)



Add new template(2)



Add new template(3)

The screenshot shows the Eclipse UML2 tool interface. On the left, the 'Properties' view displays a package named 'acpsein' with its general information. In the center, the 'Subclass Editor' dialog is open, showing the class 'acpsein::SeinObservationACPO1SO101' which extends 'acp::ObservationAnatomieDuCytologiePathologique(ACP)'. The editor lists various attributes and their types, many of which have been checked. On the right, the 'Table View' window is visible, showing a table with columns for 'Value' and other data.

model/acpsein.uml - Eclipse

Help

acpsein-vocab.uml acpsein.uml

Name

- acpsein
 - 1_SectionInformationsCliniques
 - 1a_SectionMotifDeExamen
 - 1b_SectionHistoireDeLaMaladie
 - 1c_SectionPathologiesEnCours
 - 2_SectionExamenExtemporane
 - 3_SectionDescriptionMacroscopique
 - 4_SectionDescriptionHistopathologique
 - 5_SectionConclusion-Diagnostic
 - 6_SectionTechniques
 - Comment
 - EntryDonneesCliniquesRelativesAu
 - EntryDonneesDeConclusionRelative
 - EntryDonneesDeDescriptionHistopat
 - EntryDonneesDeDescriptionMacrosc
 - EntryDonneesDeTechniquesRelativ
 - EntryDonneesExamenExtemporane
 - IllustrativeImage
 - IllustrativeImageComment

Properties

<<codegenSupport>> <Package>

General Name: acps...
Documentation Business Name: acpsi...
Advanced

Subclass Editor

acpsein::SeinObservationACPO1SO101
extends acp::ObservationAnatomieDuCytologiePathologique(ACP)

Value
6.1.8.1.2.1
6.1.5.3.1.3.1
6.1.5.3.1.3.4
6.1.5.3.1.3.6
6.1.8.1.2.2
6.1.8.1.2.3
6.1.8.1.2.4
6.1.8.1.2.5
6.1.8.1.2.6
6.1.5.3.1.4.2
6.1.8.1.3.1
6.1.8.1.3.5
6.1.8.1.3.4
6.1.8.1.3.3
6.1.8.1.3.6
6.1.8.1.3.2
6.1.8.1.4.10
6.1.5.3.1.4.2

Generic Header Constraints

The screenshot shows a UML tool interface with a table of generic header constraints and a class properties view.

Table of Generic Header Constraints:

Name	Type	Multiplicity	Annotation	Value
code	CE	1..1	C:LOINC#11526-1	
confidentialityCode	CE	1..1	C:ConfidentialityCode	
effectiveTime	TS	1..1		
id	II	1..1		
languageCode	CS	1..1	C:#fr-FR	
realmCode	CS	1..1	C:#FR	
setid	II	0..1		
title	ST	1..1		
typeid	InfrastructureRootObject	1..1		
versionNumber	INT	0..1		
recordTarget	RecordTarget	1..1		
author	Author	1..*		
dataEnterer	DataEnterer	0..*	①	
informant	Informant	0..*	①	
custodian	Custodian	1..1		
legalAuthenticator	LegalAuthenticator	1..1		
authenticator	Authenticator	0..*		
informationRecipient	InformationRecipient	0..*		
participant01	Participant01	0..*		
participant02	Participant02	0..*		
participant03	Participant03	0..*		
participant04	Participant04	0..*		
inFulfillmentOf	InFulfillmentOf	0..1		
documentationOf	DocumentationOf	1..*		
componentOf	ComponentOf	1..1		

Class Properties View:

Properties: Problems, Tasks, Console

<<cdaTemplate>> <Class> GenericHeaderConstraints

General	Name:	GenericHeaderConstraints
CDA Tools	Business Name:	GenericHeaderConstraints
Documentation	Base Type:	acp::GenericDocumentConstraints
Advanced	Abstract	<input type="checkbox"/> Select Type...

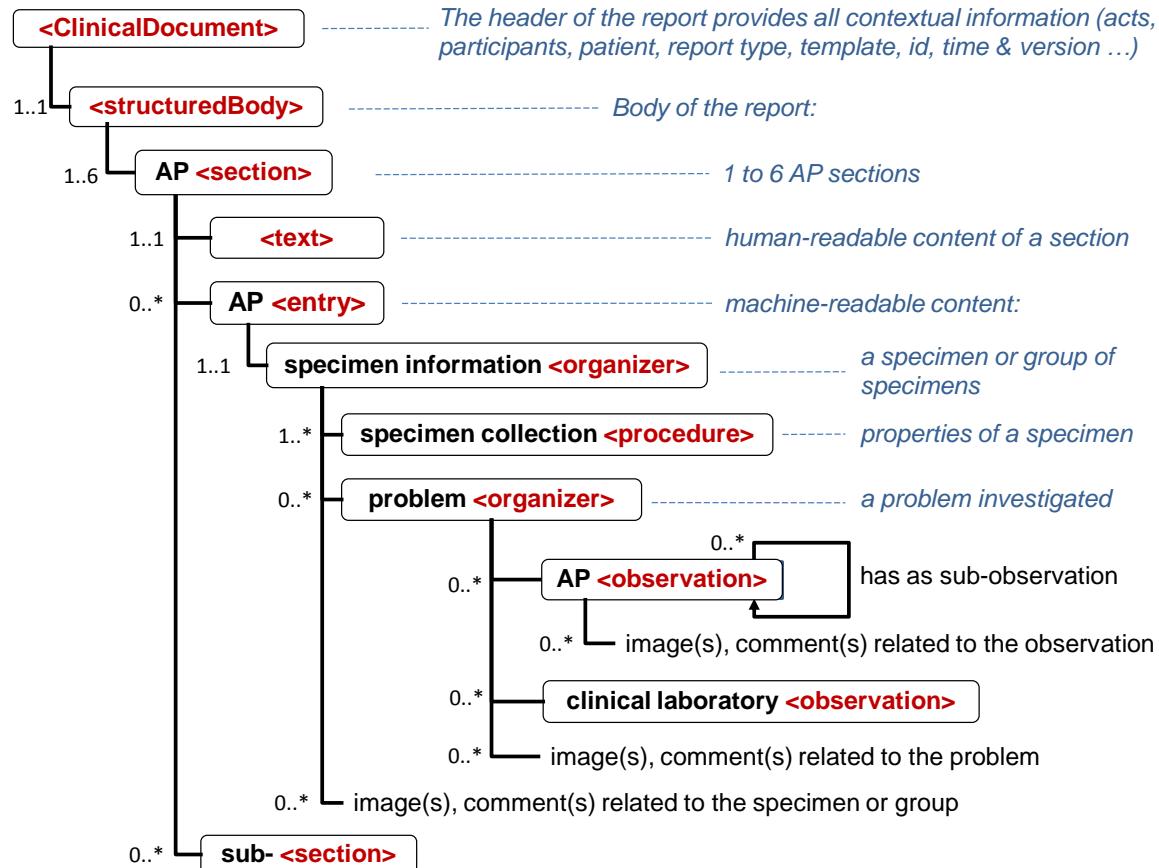
Generic Body Constraints

Name	Type	Multiplicity	Annotation	Value
GenericBodyConstraints			1.2.250.1.213.1.1.1	
1_SectionInformationsCliniques				
code		0..1		
text				
title				
entryDonneesCliniquesRelativesAuPrelevement		0..*	① COMP (component)	
1a_SectionMotifDeExamen				
1b_SectionHistoireDeLaMaladie				
1c_SectionPathologiesEnCours				
2_SectionExamenExtemporane				
code		0..1	C:LOINC#a obtener de Regenstrief Institute	
text				
title				
entryDonneesExamenExtemporaneDuPrelevement		0..*	① COMP (component)	
3_SectionDescriptionMacroscopique				
code		0..1	C:LOINC#22634-0	
text				
title				
entryDonneesDeDescriptionMacroscopiqueDuPrelevement		0..*	① COMP (component)	
4_SectionDescriptionHistopathologique				
code		0..1	C:LOINC#22635-7	
text				
title				
entryDonneesDeDescriptionHistopathologiqueDuPrelevement		0..*	① COMP (component)	
5_SectionConclusion-Diagnostic				
code		0..1	C:LOINC#22637-3	
text				
title				
entryDonneesDeConclusionRelativesAuPrelevement		0..*	① COMP (component)	
6_SectionTechniques				
code		0..1	C:LOINC#46059-2	
text				
title				
entryDonneesDeTechniquesRelativesAuPrelevement		0..*	① COMP (component)	

SectionDiagnostic

Name	Type	Multiplicity	Annotation	Value
5_SectionConclusion-Diagnostic			1.3.6.1.4.1.19376.1.8.1.2.5	
code	CE	0..1	X C:LOINC#22637-3	
text	StrucDocText	0..1	X	
title	ST	0..1	X	
entryDonneesDeConclusionRelativesAuPrelevement	EntryDonneesDe...	0..*	X COMP (component)	
organisateurDesDonneesRelativesAuPrelevement	OrganisateurDesDo...	0..1	X	
classCode	x_ActClassDocu...	1..1	X	
effectiveTime	IVL_TS	0..1	⚠	CLUSTER
moodCode	ActMood	1..1	X	
statusCode	CS	1..1	X C:#completed	EVN
illustrativeImage	IllustrativeImage	0..1	⚠	
regionInteret	RegionInteret	0..1	⚠	
comment	Comment	0..1	⚠	
procedureSpecimenCollection	ProcedureSpeci...	1..*	X	
classCode	ActClass	1..1	X	PROC
code	CD	0..1	X C:NABM	
effectiveTime	IVL_TS	0..1	X	
moodCode	x_DocumentProc...	1..1	X	
targetSiteCode	CD	0..1	X C:SNOMED International	EVN
preleveur	Preleveur	0..1	X	
participantSpecimen	ParticipantSpeci...	0..1	X	
reception	Reception	0..1	X COMP (has component)	
organisateurDesDonneesRelativesAunProbleme	OrganisateurDesDo...	0..*	X	
classCode	x_ActClassDocu...	1..1	X	BATTERY
code	CD	0..1	X C:#completed	
effectiveTime	IVL_TS	0..1	X	
moodCode	ActMood	1..1	X	
statusCode	CS	1..1	X C:#completed	EVN
illustrativeImage	IllustrativeImage	0..*	⚠	
regionInteret	RegionInteret	0..*	⚠	
comment	Comment	0..*	⚠	
observationAnatomieOuCytologiePathologique(ACP)	ObservationAnat...	0..*	ⓘ	
cda::Section				

Entries containing specimen-based organizers and « problem »-based organizers



Specimen-based organizers and «problem»-based organizers in

HL7 v2

5_SectionConclusion-Diagnostic				
code	CE	0.1	C:LOINC#22637-3	
text	StrucDocText	0.1	X	
title	ST	0.1	X	
entryDonneesDeConclusionRelativesAuPrelevement	EntryDonneesDeConclusionRelativesAuPrelevement	0..*	X	COMP (component)
organisateurDesDonneesRelativesAuPrelevement	OrganisateurDesDonneesRelativesAuPrelevement	0.1	X	
classCode	x_ActClassDocumentEntryOrganizer	1..1	X	CLUSTER
effectiveTime	IVL_TS	0.1	!	
moodCode	ActMood	1..1	X	EVN
statusCode	CS	1..1	X	C:#completed
illustrativeImage	IllustrativeImage	0.1	!	
regionInteret	RegionInteret	0.1	!	
comment	Comment	0.1	!	
procedureSpecimenCollection	ProcedureSpecimenCollection	1..*	X	
classCode	ActClass	1..1	X	PROC
code	CD	0.1	X	C:NABM
effectiveTime	IVL_TS	0.1	X	
moodCode	x_DocumentProcedureMood	1..1	X	EVN
targetSiteCode	CD	0.1	X	C:SNOMED International
preleveur	Preleveur	0.1	X	
participantSpecimen	ParticipantSpecimen	0.1	X	
reception	Reception	0.1	X	COMP (has component)
organisateurDesDonneesRelativesAunProbleme	OrganisateurDesDonneesRelativesAunProbleme	0..*	X	
classCode	x_ActClassDocumentEntryOrganizer	1..1	X	BATTERY
code	CD	0.1	X	C:#completed
effectiveTime	IVL_TS	0.1	X	
moodCode	ActMood	1..1	X	EVN
statusCode	CS	1..1	X	C:#completed
illustrativeImage	IllustrativeImage	0..*	!	
regionInteret	RegionInteret	0..*	!	
comment	Comment	0..*	!	
observationAnatomieOuCytologiePathologique(ACP)	ObservationAnatomieOuCytologiePathologique(A...)	0..*	!	

Observation

Name	Type	Multiplicity	Annotation	Value
ObservationAnatomieOuCytologiePathologique(ACP)			13.6.1.4.1.19376.1.8.1.4.9	
└ classCode	ActClassObservation	1..1	X	OBS
└ code	CD	0..1	X	
└ effectiveTime	IVL_TS	0..1	X	
└ id	II	0..*	X	
└ interpretationCode	CE	0..1	X C:ObservationInterpretation	
└ methodCode	CE	0..1	X	
└ moodCode	x_ActMoodDocumentObservation	1..1	X	EVN
└ statusCode	CS	1..1	X C#completed	
└ value	ANY	0..*	X	
└ laboratoryProducer	LaboratoryProducer	0..1	i	
└ regionInteret	RegionInteret	0..*	X COMP (has component)	
└ comment	Comment	0..1	⚠ SUBJ (has subject)	
└ illustrativeImage	IllustrativeImage	0..1	i COMP (has component)	
└ RegionInteret				
└ cda::Observation				

Code System-PATHLEX

The screenshot shows the Eclipse UML2 Workbench interface. The title bar has two tabs: "acpsein-vocab.uml" and "CodeSystems.uml". The main view displays a table of code system entries. The columns are: Name, Type, Multiplicity, Annotation, and Value. The table contains 18 rows, each representing a different code system or reference. The "Name" column includes entries like "PATHLEX", "<Comment>", "PHIN VS (CDC Local Coding Sy", "Provider Role (HL7)", "R02", "Race and Ethnicity - CDC", "ReligiousAffiliation", "ResultStatus", "RoleCode", "Route of administration (HL7)", "RxNorm", "SeverityObservation", "SNOMED International", "SNOMEDCT", "UCUM - Unified Code for Units", "UMLS", "Unique Ingredient Identifier (UI)", and "US Postal Codes". The "Annotation" column provides specific identifiers for each entry, such as "1.3.6.1.4.1.19376.1.8.2.1" for PATHLEX and "2.16.840.1.114222.4.5.274" for PHIN VS.

Name	Type	Multiplicity	Annotation	Value
PATHLEX			1.3.6.1.4.1.19376.1.8.2.1	
<Comment>				
PHIN VS (CDC Local Coding Sy			2.16.840.1.114222.4.5.274	
Provider Role (HL7)			2.16.840.1.113883.12.443	
R02			1.2.250.1.71.4.2.4	
Race and Ethnicity - CDC			2.16.840.1.113883.6.238	
ReligiousAffiliation			2.16.840.1.113883.5.1076	
ResultStatus			2.16.840.1.113883.12.123	
RoleCode			2.16.840.1.113883.5.111	
Route of administration (HL7)			2.16.840.1.113883.12.162	
RxNorm			2.16.840.1.113883.6.88	
SeverityObservation			2.16.840.1.113883.5.1063	
SNOMED International			1.2.250.1.213.2.12	
SNOMEDCT			2.16.840.1.113883.6.96	
UCUM - Unified Code for Units			2.16.840.1.113883.6.8	
UMLS			2.16.840.1.113883.6.86	
Unique Ingredient Identifier (UI)			2.16.840.1.113883.4.9	
US Postal Codes			2.16.840.1.113883.6.231	

Below the table, there is a properties view for the "PATHLEX" code system. The "Terminology" tab is selected. The "Code System Version" section contains the following fields:

- Name: PATHLEX
- ID: 1.3.6.1.4.1.19376.1.8.2.1
- Full Name: Pathology Lexicon
- Source: IHE Anatomic Pathology
- URL: (empty)
- Version: (empty)
- Release Date: (empty)
- Effective Date: (empty)

Value Set Version

The screenshot shows a UML editor window titled "acpsein-vocab.uml". The main area displays a table of value sets with columns: Name, Type, Multiplicity, Annotation, and Value. The "Name" column lists various medical terms, many of which have icons next to them. The "Value" column contains corresponding UML IDs. Below this table, a navigation bar includes "Properties", "Problems", "Tasks", and "Console". A detailed properties panel is open for the "Sein-Grade histologique (CCIS)" value set. This panel has tabs for "General", "Terminology", "Documentation", and "Advanced". The "General" tab is selected, showing the "Value Set Version" section with a "Select Code System..." button and a dropdown currently set to "CodeSystems::PATHLEX". Other fields in this section include "Name: Sein-Grade histologique (CCIS)", "ID: 1.2.250.1.213.1.1.4.88", and "Full Name: Sein-Grade histologique (CCIS)". The "Advanced" tab shows fields for "Source:", "URL:", "Type: Extensional", "Binding: Dynamic", "Version:", "Release Date:", "Effective Date:", and "Definition:".

Name	Type	Multiplicity	Annotation	Value
Sein-Grade histologique (CCIS)			1.2.250.1.213.1.1.4.88	
743			Sein-Grade histologique (CCIS) Bas grade	1.2.250.1.213.1.1.4.75
744			Sein-Grade histologique (CCIS) Grade intermediaire	1.2.250.1.213.1.1.4.76
745			Sein-Grade histologique (CCIS) Haut grade	1.2.250.1.213.1.1.4.78
Sein-Grade histologique (Nottingham/SBR - Differentiation glandulaire)				1.2.250.1.213.1.1.4.75
Sein-Grade histologique (Nottingham/SBR - Mitoses)				1.2.250.1.213.1.1.4.77
Sein-Grade histologique (Nottingham/SBR - Pleomorphisme nuceaire)				1.2.250.1.213.1.1.4.76
Sein-Grade histologique (Nottingham/SBR Score total)				1.2.250.1.213.1.1.4.78
Sein-Localisation de la tumeur dans l'organe				1.2.250.1.213.1.1.4.73
Sein-Localisation de(s) ganglion(s)				1.2.250.1.213.1.1.4.80
Sein-Localisation de(s) limite(s) de resection				1.2.250.1.213.1.1.4.79
Sein-Observation d'anatomie pathologique				1.2.250.1.213.1.1.4.281
Sein-Organ/region anatomique du prelevement				1.2.250.1.213.1.1.4.71
Sein-pN				1.2.250.1.213.1.1.4.82
Sein-Procedure de prelevement				1.2.250.1.213.1.1.4.72
Sein-pT				1.2.250.1.213.1.1.4.81
Sein-Statut des recepteurs à l'oestrogène				1.2.250.1.213.1.1.4.86
Sein-Statut des récepteurs à la progestérone				1.2.250.1.213.1.1.4.85

Value Set Code

The screenshot shows a UML tool interface with a table of value set codes and a properties panel below it.

Table of Value Set Codes:

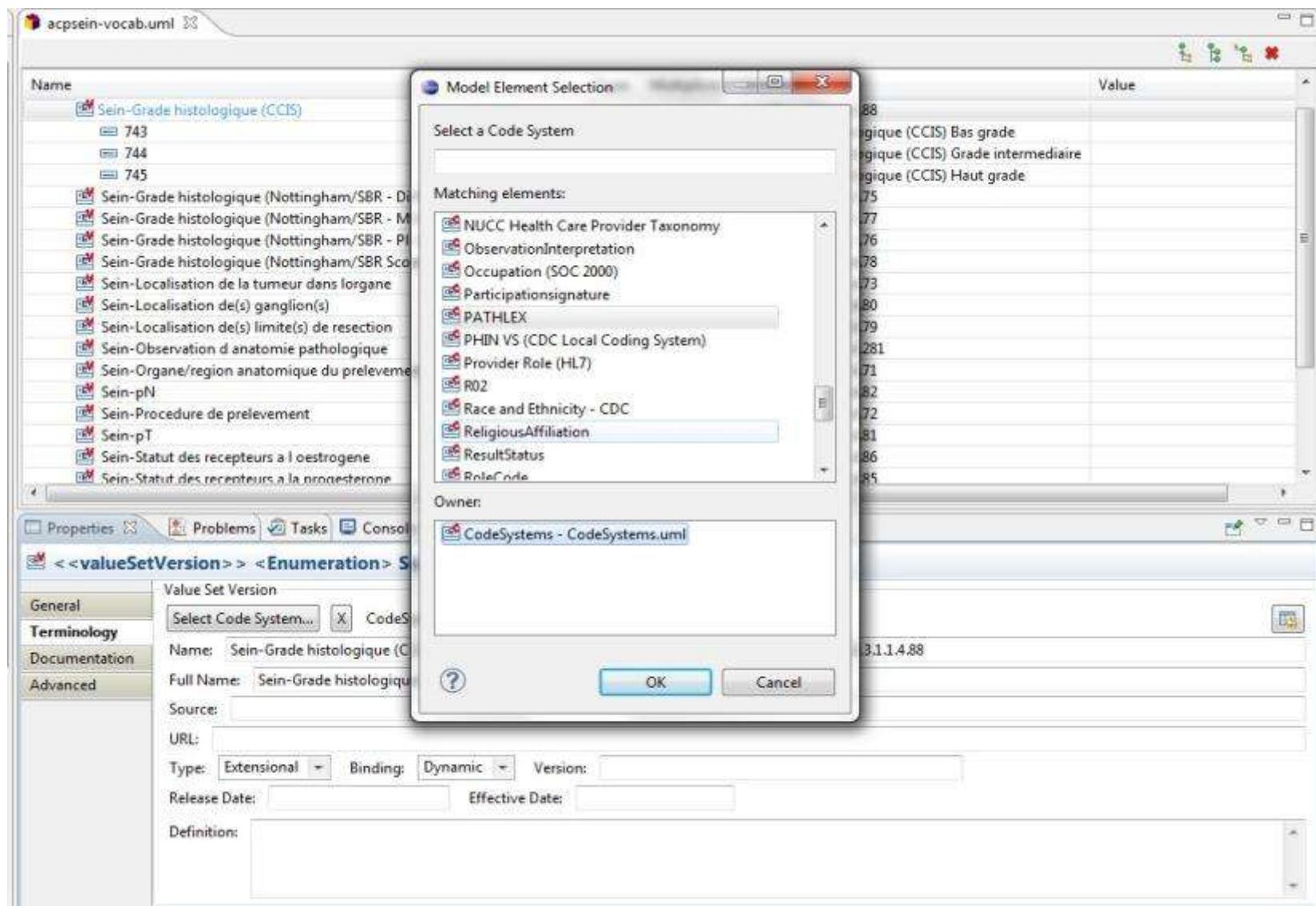
Name	Type	Multiplicity	Annotation	Value
Sein-Grade histologique (CCIS)			1.2.250.1.213.1.1.4.88	
743			Sein-Grade histologique (CCIS) Bas grade	
744			Sein-Grade histologique (CCIS) Grade intermédiaire	
745			Sein-Grade histologique (CCIS) Haut grade	
Sein-Grade histologique (Nottingham/SBR - Differentiation glandulaire)			1.2.250.1.213.1.1.4.75	
Sein-Grade histologique (Nottingham/SBR - Mitoses)			1.2.250.1.213.1.1.4.77	
Sein-Grade histologique (Nottingham/SBR - Pleomorphisme nucléaire)			1.2.250.1.213.1.1.4.76	
Sein-Grade histologique (Nottingham/SBR Score total)			1.2.250.1.213.1.1.4.78	
Sein-Localisation de la tumeur dans l'organe			1.2.250.1.213.1.1.4.73	
Sein-Localisation de(s) ganglion(s)			1.2.250.1.213.1.1.4.80	
Sein-Localisation de(s) limite(s) de resection			1.2.250.1.213.1.1.4.79	
Sein-Observation d'anatomie pathologique			1.2.250.1.213.1.1.4.281	
Sein-Organ/region anatomique du prélèvement			1.2.250.1.213.1.1.4.71	
Sein-pN			1.2.250.1.213.1.1.4.82	
Sein-Procédures de prélèvement			1.2.250.1.213.1.1.4.72	
Sein-pT			1.2.250.1.213.1.1.4.81	
Sein-Statut des récepteurs à l'oestrogène			1.2.250.1.213.1.1.4.86	
Sein-Statut des récepteurs à la progestérone			1.2.250.1.213.1.1.4.85	

Properties Panel:

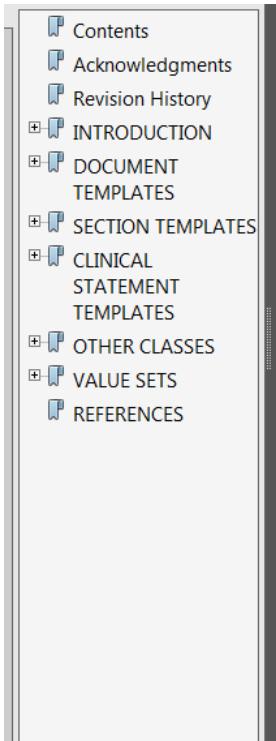
Properties for <<valueSetCode>> <Enumeration Literal> 743

General	Value Set Code
Terminology	Select Code System... X (default) CodeSystems::PATHLEX
Documentation	Concept Code: 743
Advanced	Concept Name: Sein-Grade histologique (CCIS) Bas grade Usage Note: Add New Code

Select Code System



MDHT : Automatic generation of the implementation guide - e.g Breast APSR



Implementation Guide for CDA Release 2 Compte Rendu Structuré d'Anatomie et de Cytologie Pathologiques (CR-ACP) du Sein



PROTOTYPE: FOR DISCUSSION
AND DEMONSTRATION USE ONLY

Document template

Sein Specific Body Constraints

[ClinicalDocument: templateId 1.2.250.1.213.1.1.1.1]

1. SHALL conform to *Sein Specific Header Constraints* template (templateId: 1.2.250.1.213.1.1.1.1)
2. SHOULD contain zero or one [0..1] **component** (CONF-171)
 - a. Contains exactly one [1..1] *1_Section Informations Cliniques* (templateId: 1.3.6.1.4.1.19376.1.8.1.2.1)
3. SHOULD contain zero or one [0..1] **component** (CONF-196)
 - a. Contains exactly one [1..1] *2_Section Examen Extemporane* (templateId: 1.3.6.1.4.1.19376.1.8.1.2.2)
4. SHOULD contain zero or one [0..1] **component** (CONF-203)
 - a. Contains exactly one [1..1] *3_Section Description Macroscopique* (templateId: 1.3.6.1.4.1.19376.1.8.1.2.3)
5. SHOULD contain zero or one [0..1] **component** (CONF-210)
 - a. Contains exactly one [1..1] *4_Section Description Histopathologique* (templateId: 1.3.6.1.4.1.19376.1.8.1.2.4)
6. SHALL contain zero or one [0..1] **component** (CONF-217)
 - a. Contains exactly one [1..1] *5_Section Conclusion-Diagnostic* (templateId: 1.3.6.1.4.1.19376.1.8.1.2.5)
7. MAY contain zero or one [0..1] **component** (CONF-820)
 - a. Contains exactly one [1..1] *6_Section Techniques* (templateId: 1.3.6.1.4.1.19376.1.8.1.2.6)

Sein Specific Body Constraints example

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <realmCode code="FR"/>
  <realmCode code="FR"/>
  <typeId root="2.16.840.1.113883.1.3"/>
```

Section templates

5_ Section Conclusion- Diagnostic

[Section: templateId 1.3.6.1.4.1.19376.1.8.1.2.5]

1. SHALL conform to *acp 5_ Section Conclusion- Diagnostic* template (templateId: 1.3.6.1.4.1.19376.1.8.1.2.5)
2. SHALL contain zero or one [0..1] **code** (CONF-218)/@code="22637-3" *Diagnostic anatomopathologique* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF-219)
3. SHALL contain zero or one [0..1] **text** (CONF-220)
4. SHALL contain zero or one [0..1] **title** = "CONCLUSION" (CONF-221)
5. SHALL contain zero or one [0..1] **entry** (CONF-223)
 - a. Contains exactly one [1..1] *Entry Donnees De Conclusion Relatives Au Prelevement* (templateId: 1.3.6.1.4.1.19376.1.8.1.3.5)

5_ Section Conclusion- Diagnostic example

```
<?xml version="1.0" encoding="UTF-8"?>
```

Observation templates

Sein Observation ACPO1ISO102

[Observation: templateId 1.3.6.1.4.1.19376.1.8.1.4.9]

1. SHALL conform to *acp Observation Anatomie Ou Cytologie Pathologique(AC P)* template (templateId: 1.3.6.1.4.1.19376.1.8.1.4.9)
2. SHALL contain exactly one [1..1] @classCode="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF-317)
3. SHALL contain exactly one [1..1] @moodCode="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF-325)
4. SHALL contain zero or one [0..1] code (CONF-318)/@code="437" *Sein-Type histologique de lesion neoplasique maligne invasive* (CodeSystem: 1.3.6.1.4.1.19376.1.8.2.1 PATHLEX) (CONF-319)
5. SHALL contain zero or one [0..1] effectiveTime (CONF-320)
6. SHALL contain zero or more [0..*] id (CONF-321)
7. SHALL contain zero or one [0..1] interpretationCode (CONF-322), where the @code SHALL be selected from (CodeSystem: 2.16.840.1.113883.5.83 ObservationInterpretation) (CONF-323)
8. SHALL contain zero or one [0..1] methodCode (CONF-324)
9. SHALL contain exactly one [1..1] statusCode (CONF-326)/@code="completed" (CONF-327)
10. SHALL contain zero or more [0..*] value with data type CD (CONF-328), where the @code SHALL be selected from ValueSet *Sein-Type histologique de lesion neoplasique maligne invasive* 1.2.250.1.213.1.1.4.74 DYNAMIC (CONF-329)
11. MAY contain zero or one [0..1] performer (CONF-330)
 - a. Contains exactly one [1..1] *Laboratory Producer* (templateId: 1.3.6.1.4.1.19376.1.3.3.1.7)
12. SHOULD contain zero or one [0..1] entryRelationship (CONF-331)

Table of attributes

acp::DocumentationOf							
cda::documentationOf[cda:templateId/@root =]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
typeCode	@typeCode	0..1		NO	ActRelationshipType		DOC
realmCode	realmCode	0..*		YES	CS		
templateId	templateId	0..*		YES	II		
serviceEvent	serviceEvent	1..1	SHALL	YES	ServiceEvent	CONF-133	
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

Instances of observation templates

Sein Observation ACPO1SO102 example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
  classCode="OBS" moodCode="EVN">
  <templateId root="1.3.6.1.4.1.19376.1.8.1.4.9"/>
  <templateId root="1.3.6.1.4.1.19376.1.8.1.4.9"/>
  <id root="616067975" extension="MDHT"/>
  <code code="437" codeSystem="1.3.6.1.4.1.19376.1.8.2.1"
    codeSystemName="PATHLEX" displayName="Sein-Type histologique de lesion
    neoplasique maligne invasive"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="CD" code="87400808"/>
  <interpretationCode codeSystem="2.16.840.1.113883.5.83"
    codeSystemName="ObservationInterpretation"/>
  <interpretationCode codeSystem="2.16.840.1.113883.5.83"
    codeSystemName="ObservationInterpretation"/>
  <methodCode code="429421891"/>
  <performer>
    <time>
      <low value="2012"/>
      <high value="2012"/>
    </time>
    <assignedEntity>
      <id root="1974910257" extension="MDHT"/>
      <addr/>
      <telecom/>
      <assignedPerson>
```

Value sets

Sein-Type histologique de lesion neoplasique maligne invasive

Value Set	Sein-Type histologique de lesion neoplasique maligne invasive - 1.2.250.1.213.1.1.4.74		
Code System	PATHLEX - 1.3.6.1.4.1.19376.1.8.2.1		
Concept Code	Concept Name	Code System	Description
688	Carcinome infiltrant canalaire	PATHLEX	
689	Carcinome infiltrant lobulaire	PATHLEX	
690	Carcinome infiltrant autre	PATHLEX	

Joint IHE Anatomic Pathology/IHE Laboratory/ HL7 Clinical Genomics

*Harmonization process APSR/Clinical genomics
CDA templates*

C.Daniel (ADICAP, ASIP Santé, INSERM) – W.Li (INSERM)

Use case

Protocol for the Examination of Specimens from Patients with Neuroendocrine Tumors (Carcinoid Tumors) of the Colon and Rectum

Protocol applies to well-differentiated neuroendocrine tumors of the large bowel and rectum. Carcinomas with mixed endocrine/glandular differentiation, poorly differentiated carcinomas with neuroendocrine features, and small cell carcinomas are not included.

Based on AJCC/UICC TNM, 7th Edition
Protocol web posting date: February 1, 2011

Procedures

- Local Excision (Transanal Dick Excision)

*Ancillary Studies (select all that apply) (Notes E and H)

- Ki-67 index
 - ≤2%
 - >2% to 20%
 - >20%
- Other (specify): _____
- Not performed

*Additional Pathologic Findings (select all that apply) (Note I)

- Tumor necrosis
- Other (specify): _____

*Comment(s)

Use case

Protocol for the Examination of Specimens From Patients With Non-Hodgkin Lymphoma/Lymphoid Neoplasms

Protocol applies to non-Hodgkin lymphoma/lymphoid neoplasms involving any site except the ~~ocular adnexa, bone marrow, viscera, fusions, and~~
Sezary syndrome.

Based on AJCC/UIC
Protocol web posting

Procedures

- Biopsy
- Resection of lymph

Authors

Jerry W. Husson, MD

Immunophenotyping (flow cytometry and/or immunohistochemistry) (note E)

- Performed, see separate report: _____
 Performed
Specify method(s) and results: _____
 Not performed

*Cytogenetic Studies (note E)

- * Performed, see separate report: _____
* Performed
* Specify method(s) and results: _____
* Not performed

*Molecular Genetic Studies (note E)

- * Performed, see separate report: _____
* Performed
* Specify method(s) and results: _____
* Not performed

Joint IHE/HL7 AP/Clinical Genomics

- Defining a common set of observation templates for molecular biology
- Managing these observations
 - Common Data Elements (metadata repository)
 - Value sets
 - Terminology (LOINC, PathLex)
- Using the same modelling tool : **Model-Driven Health Tools (MDHT)**