



**Technical Interface Specification
For
eHR Laboratory Result (Anatomical
Pathology Result) Record**

Version 2.0.0

Jun 2017

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Table of Contents

DOCUMENT SUMMARY	5	
AMENDMENT HISTORY	6	
PURPOSE.....	9	
1.1 OBJECTIVE.....	9	
1.2 INTENDED READERS	9	
2 SCOPE	9	
3 REFERENCES.....	10	
4 DEFINITIONS AND CONVENTIONS.....	11	
4.1 HL7 MESSAGE STANDARDS.....	11	
4.2 ABBREVIATIONS	11	
4.3 NOTATIONS.....	11	
5 ASSUMPTIONS.....	13	
6 DELIVERY REQUIREMENTS.....	13	
7.	DATA UPLOAD REQUIREMENTS	14
7.1	Types of File Upload Mode	14
8	MESSAGE FORMAT OVERVIEW.....	15
8.1	DATA COMPONENTS FOR HL7-HK MESSAGE STANDARDS.....	15
8.2	OVERVIEW OF HL7 ORU - UNSOLICITED OBSERVATION MESSAGE	16
9	HL7 V2.5 UNSOLICITED OBSERVATION MESSAGE.....	17
9.1	HL7 MESSAGE	17
9.2	ORU - UNSOLICITED OBSERVATION MESSAGE (EVENT R01)	17
9.3	MESSAGE STRUCTURE OF UNSOLICITED OBSERVATION MESSAGE	17
9.4	DATA MAPPING IN UNSOLICITED OBSERVATION MESSAGE	19
9.5	XML DIGITAL SIGNATURE ON HL7.....	29
10	CDA DOCUMENT	33
10.1	CDA DOCUMENT STRUCTURE OVERVIEW	33
10.2	LABAP DATASET	34
10.3	LABAP INTERFACE RELATIONSHIP DIAGRAMS.....	35
10.4	CDA DOCUMENT SKELETON	37
10.5	DATA MAPPING IN CDA FOR HL7-HK MESSAGE STANDARDS	46
10.6	ADDITIONAL MANDATORY ELEMENTS IN CDA FOR HL7-HK MESSAGE STANDARDS	72
11	OTHER REQUIREMENTS	74
11.1	CHARACTER SET AND ENCODING.....	74
11.2	XML PREDEFINED ENTITIES.....	74
12	PREPARATION OF MESSAGE FOR DATA TRANSFER	75
12.1	BASIC REQUIREMENTS	75
12.2	HL7 MESSAGE STRUCTURE APPLIED	75
12.3	PREPARE A HL7 ORU MESSAGE WITH CDA & IMAGE DOCUMENT	75
12.4	DATA MAPPING FOR MIME PACKAGE (CDA)	76

13	FILE NAMING CONVENTION.....	79
13.1	HL7 MESSAGE FILE NAME	79
13.2	CDA DOCUMENT NAME.....	81
13.3	Image File Name.....	83
14	EXAMPLE OF HL7-HK MESSAGE STANDARDS.....	85
14.1	EXAMPLES FOR DATA COMPLIANCE LEVEL 1	85
14.2	EXAMPLES FOR DATA COMPLIANCE LEVEL 2	100
14.3	EXAMPLES FOR DATA COMPLIANCE LEVEL 3	117
14.3	RE-MATERIALISATION MESSAGE.....	133

DOCUMENT SUMMARY

Document Item	Current Value
Document Title	Technical Interface Specification for Laboratory Result (Anatomical Pathology Result) Record
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Document Description	The paper explains the technical interface for implementing Health Level Seven (HL7) version 2.5 standards messaging and Clinical Document Architecture (CDA) for transferring Laboratory Result (Anatomical Pathology Result) record from healthcare providers (HCP) to eHR system for Hong Kong Special Administrative Region eHR. The document should be read in conjunction with other related documents suggested by the eHR Information Standards Office.
Prepared by	eHR Information Standards Office
Contact Information	eHR@fhb.gov.hk

AMENDMENT HISTORY

Version No.	Summary of Changes	Date
1.0.0	Original version	30 Jun 2012
1.1.0	Restructure specification Major update on dataset	20 Jan 2013
1.2.0	<ul style="list-style-type: none"> • Added the remarks in XML PREDEFINED ENTITIES: ‘The prefix of namespace in XML in HL7 message is not expected.’ • Removed sections ‘SPECIFICATION ORGANISATION’ and ‘GENERAL INFORMATION’ from section 4 • Updated section ‘ASSUMPTIONS’ • Added section ‘DELIVERY REQUIREMENTS’ • Updated remarks in <MSH.10> • Added remarks in data field ‘Transaction type’ in section ‘CDA DOCUMENT’ and updated HL7 samples of ‘Delete’ scenario • Updated section 9.2 Cardinality of ‘Last update datetime’ from ‘0..1’ to ‘1..1’ • Updated section 9.2, Cardinality of ‘Laboratory test order number’ of all levels, S3 from ‘N/A’ to ‘0..1’ • Updated section 9.2, Remarks of <ul style="list-style-type: none"> ◦ Laboratory test order number ◦ Transaction type • Updated the template of cover page and descriptions in footer • Updated the contents in section 'Intellectual Property Rights Notice' • Aligned the terms used in eHR Sharing System (eHRSS) Bill: <ul style="list-style-type: none"> ◦ Participant -> eHR Healthcare Recipient 	20 Jun 2014
1.3.0	<ul style="list-style-type: none"> • Section 7 Data Upload Requirement is added to state the 3 message upload mode • Section 14.3 Re-materialisation message is added 	30 Jun 2015

	<p>to provide the re-materialisation message example</p> <ul style="list-style-type: none"> • Updated Section 9.4.3 OBX - Observation/Result Segment OBX.4's remarks • Updated data requirement for the following fields in scenario S1 and S2 of data compliance level 1 <ul style="list-style-type: none"> ◦ Panel local code ◦ Panel local description ◦ Specimen details ◦ Specimen type local code ◦ Specimen type local description ◦ Anatomical pathology test name • Updated tag name <ul style="list-style-type: none"> ◦ Laboratory Test Order Number from lab_order_no to order_no ◦ Text Report from text to report_text ◦ Panel local code from test_panel_lt_set to panel_lt_cd ◦ Panel local description from test_panel_lt_desc to panel_lt_desc ◦ Laboratory category local description • Updated data fields ordering in tag lab_report_data, moved report_auth_dtm before report_dtm • For update and delete scenario HL7 samples in Section 14, OBX.4 data upload format should be “NBL” 	
1.3.1	<ul style="list-style-type: none"> • Updated data requirement for the following fields in scenario S1 and S2 of data compliance level 1 <ul style="list-style-type: none"> ◦ detail/lab_report_data/report_auth_dtm • Updated data requirement for the following fields in scenario S1 and S2 of data compliance level 2 <ul style="list-style-type: none"> ◦ detail/lab_req_data/specimen_type_lt_desc 	13 Oct 2016
2.0.0	<ul style="list-style-type: none"> • Added version number mapping in MSH.21 • Added data compliance level 3 • Added recognised terminology sets applied in Laboratory Result (Anatomical Pathology Result) Sharable Dataset in Section 2 - Scope • Added possible value (3: Level 3) for MSH.8 	21 Jun 2017

	<ul style="list-style-type: none">• Added data fields<ul style="list-style-type: none">◦ Diagnosis topography - recognised terminology name◦ Diagnosis topography identifier - recognised terminology◦ Diagnosis topography description - recognised terminology◦ Diagnosis finding - recognised terminology name◦ Diagnosis finding identifier - recognised terminology◦ Diagnosis finding description - recognised terminology• Updated data requirement of following field<ul style="list-style-type: none">- Anatomical pathology test name from Optional to Mandatory in Scenario 1 and 2 of data compliance level 1• Aligned to data requirement specification for the following fields in scenario S1 and S2 of data compliance level 1<ul style="list-style-type: none">- Laboratory report (text)- Laboratory report (PDF)• Added message samples for data compliance level 3• Updated Assumptions, Delivery Requirements, Data Upload Requirement description and Image file name description	
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PURPOSE

1.1 OBJECTIVE

This document describes the technical interface for implementing Health Level Seven (HL7) version 2.5 standards messaging and Clinical Document Architecture (CDA) for transferring Laboratory Result (Anatomical Pathology Result) records from healthcare providers to eHR system.

There are TWO data exchange standards for uploading clinical records to eHR system:

- HL7-HK Message Standards
- HL7-HK Localised Bulk Load Standards

HL7-HK Message Standards will be described in detail in this document. For the HL7-HK Localised Bulk Load Standards, please refer to ‘Bulk Load Standards Specification for eHR Record’.

1.2 INTENDED READERS

This document is intended for all parties involving the interface development of EMR and eHR of Hong Kong.

2 SCOPE

This reference defines the implementation of HL7 version 2.5 messaging and CDA for the communication of HL7-HK Message Standards between EMR applications and eHR system. The structure of a HL7 message and CDA document, data mapping specification of eHR Healthcare Recipient (HCR) identity data, healthcare provider data, clinical data and functional data and the mechanism of creating a HL7 message for transferring LABAP record data will be covered in this document.

The recognised terminology sets applied in Laboratory Result (Anatomical Pathology Result) Sharable Dataset include:

Diagnosis Topography:

- Hong Kong Clinical Terminology Table (HKCTT)

Diagnosis Finding:

- Hong Kong Clinical Terminology Table (HKCTT)

This document is referring to the health data defined in the eHR sharable dataset domain “Laboratory” mentioned in **eHR Content Standards Guidebook** in eHR Office website. It provides interpretation and guidance to which HL7 trigger event and data elements are required for interfacing to eHR system.

3 REFERENCES

- Data Requirement Specification for Laboratory Result (Anatomical Pathology Result) Record
- eHealth Record Office (eHR Information Standards Document)
 - eHR Content Standards Guidebook
 - eHR Data Interoperability Standards

4 DEFINITIONS AND CONVENTIONS

4.1 HL7 MESSAGE STANDARDS

Health Level Seven (HL7) version 2.5 message standards and Clinical Document Architecture (CDA) release 2.0 will be implemented for healthcare records exchange under eHR programme. HL7 provides a framework and related standards for the exchange, integration, sharing, and retrieval of electronic health-related information. CDA provides an exchange model for structured clinical documents.

Information using the HL7 messaging standards is sent as a collection of one or more messages. The HL7 messages are used to transfer electronic data between different healthcare systems. Each HL7 message contains information about a particular event such as patient admission, laboratory records, etc. CDA, which contains structured clinical data, can be embedded in the HL7 message for transmission.

To learn more about the HL7 organization and standard, please refer to the official HL7 website.

4.2 ABBREVIATIONS

Term	Description
CDA	Clinical Document Architecture
CDR	Clinical Data Repository
eHR	Electronic Health Record
EMR	Electronic Medical Record
HCP	Healthcare Provider
HL7	Health Level Seven
LABAP	Laboratory Result (Anatomical Pathology Result) Record
ORU	HL7 message type of “Unsolicited Observation Message”
HCR	eHR Healthcare Recipient

4.3 NOTATIONS

Value	Description
#	HL7 Mandatory Field
✓	Required HL7 Segment
0..1	Zero to One occurrence
1..1	Exact One occurrence
0..*	Zero to Many occurrence
1..*	One to Many occurrence
“quoted”	Fixed value
N/A	Not Applicable
S0 - S99	Scenario numbering
RP/#	Repeatable Indicator [Y:Yes N: No] of HL7 element
TBL#	HL7 Table Reference Number

Technical Interface Specification for LABAP Record

[]	Optional
{ }	Repeatable
YYYY	Year
MM	Month
DD	Day
hh	Hour (24-Hour)
mm	Minute
ss	Second
.sss	Millisecond

5 ASSUMPTIONS

- HCP is responsible for ensuring the integrity, accuracy and completeness of her shareable structured data in eHR sharing system (eHRSS).
- HCP is recommended to share timely clinical records of HCR to eHRSS within a reasonable time period to ensure the data timeliness.

6 DELIVERY REQUIREMENTS

- HL7 version 2.5 message standards in XML format and data files (HCR list file and structured data file) will be implemented for delivering Laboratory Result (Anatomical Pathology Result) event messages defined by eHR.
- HCP has to register the data compliance level before uploading data to eHR Sharing System. There are three levels of compliance for Anatomical Pathology result standards. HCP should decide the compliance level based on her data and system readiness. HCP should ensure the submitted data is complied with the level she has declared in each data transmission. For details on data requirement of different compliance levels, please refer to the data component table in chapter 10.2.
- Each laboratory record contains laboratory observations of one specimen which might be reported at different report statuses under the same laboratory request number. Laboratory record with different report status should be uploaded by a unique record key. A complete laboratory record containing all authorized reports is expected to be submitted in every data transmission
- eHR has defined code table for laboratory report status. Each Anatomical Pathology report is requested to map with one of the defined status – “Provisional/Preliminary report”, “Final report”, “Amended report”, “Supplementary report” or “Unspecific report status”.

7. Data Upload Requirements

7.1 Types of File Upload Mode

There are three types of file upload mode:

1. **Incremental mode** is the format for HCP to upload sharable data in ONE batch.
2. **Materialisation mode** is the format for HCP to upload HCR's clinical records that exist in local EMR and fall within the registered eHR data domain(s). HCP is recommended to share historical records to facilitate data completeness. The format is for uploading records of new registered HCR and re-registered HCR.
3. **Re-materialisation mode** is the format for HCP to clear the clinical data uploaded in eHR. It is required to upload the re-materialisation message before HCP next materialisation message for same HCR.

The following table shows the files required for different upload mode and its schedule:

	HCR information	Clinical Data	Schedule
Incremental Mode	Required	Required	Within agreed period
Materialisation Mode	Required	Required	Within agreed period
Re-materialisation Mode	Required	Not required	

Remarks:

For Materialisation Mode, 'Update' and 'Delete' transaction types are not accepted. If 'Update' or 'Delete' transaction type is uploaded using materialisation mode, the record will be rejected by eHR.

8 MESSAGE FORMAT OVERVIEW

8.1 DATA COMPONENTS FOR HL7-HK MESSAGE STANDARDS

According to HL7-HK Message Standards, there are three major components used to carry the clinical information related to the Laboratory Result (Anatomical Pathology Result) records when transferring data from healthcare providers to eHR. The three components are:

- HL7 version 2.5 ORU – Unsolicited Observation Message (Event R01)
ORU^R01 event includes 3 mandatory segments
 - MSH – Message Header Segment
 - OBR – Observation Request Segment
 - OBX – Observation related to OBRs
- Clinical Document Architecture (CDA) Document
- XML Signature:
In order to ensure the integrity, reputation and authenticity of the message exchange, a XML digital signature is required to digitally sign the whole HL7 document. The eHR system will not accept messages that are not digitally signed.

HL7 version 2.5 ORU will be described in detail in Section 7 *HL7 v2.5 Unsolicited Observation Message* and Clinical Document Architecture will be described in Section 8 *CDA Document*.

8.2 OVERVIEW OF HL7 ORU - UNSOLICITED OBSERVATION MESSAGE

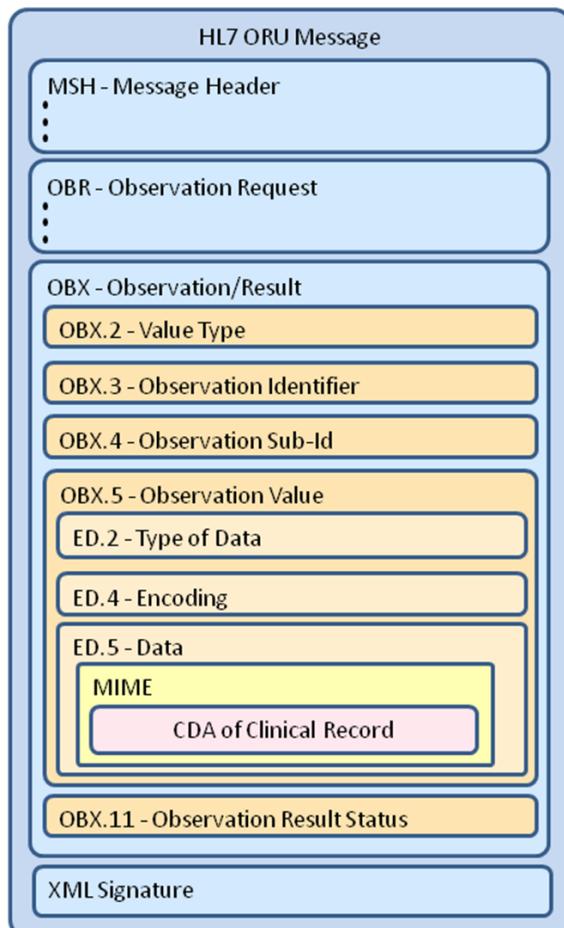


Figure 1 - *HL7 v2.5 Unsolicited Observation Message for LABAP Record Transfer*

Figure 1 describes the overview structure of a LABAP Record HL7 v2.5 ORU Message. In order to exchange a LABAP record, data mapping in the HL7 v2.5 Unsolicited Observation Message has to be complied.

And for the clinical information, the CDA is first Base64-encoded and embedded in MIME format, and then mapped to OBX.5 - ED.5 of ORU Message. In the following section, CDA will be explained in detail.

XML digital signature must be applied in eHR message communication. Since XML Signature is not the element in the schema of HL7 v2.5 ORU Message, it should be applied and located in the last section of the message. The components and example of XML signature are explained in *Section 7.5 - XML Digital Signature on HL7*.

(Please refer to ‘eHR Data Interoperability Standards’ in eHealth Record Office website for further elaboration.)

9 HL7 v2.5 Unsolicited Observation Message

9.1 HL7 MESSAGE

In eHR environment, HL7 v2.5 message in XML format and CDA release 2.0 will be used for message interchange. An HL7 message is composed of ‘Message Type’, ‘Message Event’ and ‘Message Structure’. ‘Message Type’ identifies the business purpose of a message. ‘Message Event’ is a unique identifier to the context in which message is generated. And ‘Message Structure’ is a data structure used to express an association of a message type with an event for a class of messages.

For LABAP record exchange, the following message event will be applied:

Message Type	ORU (Unsolicited Observation Message)
Message Event	R01
Message Structure	ORU_R01
Usage	To carry structured HCR-oriented clinical data from local EMR system to eHR.

CDA is used to contain most of the data elements required in “LABAP” domain. Then, the CDA containing structured can be attached in the HL7 V2.5 messages for data exchange.

9.2 ORU - UNSOLICITED OBSERVATION MESSAGE (EVENT R01)

The ORU message is for transmitting LABAP records from healthcare provider to eHR. Under HL7-HK Message Standards, functional data, clinical data and clinical images are embedded in the three segments of the ORU Message. They are: Message Header (MSH), Observation Request (OBR) and Observation/Result (OBX). In the following sections, the message structure of ORU Message and the data mapping of ORU message among clinical and functional information will be shown.

9.3 MESSAGE STRUCTURE OF UNSOLICITED OBSERVATION MESSAGE

<u>Required eHR Segment</u>	<u>ORU^R01^ORU_R01</u>	<u>ORU Message</u>	<u>Chapter in HL7 Specification</u>
✓	MSH	Message Header	2
	[{ SFT }]	Software Segment	2
	{	--- PATIENT_RESULT begin	
	[--- PATIENT begin	
	PID	Patient Identification	3
	[PD1]	Additional Demographics	3
	[{NTE}]	Notes and Comments	2

Technical Interface Specification for LABAP Record

[{NK1}]	Next of Kin/Associated Parties	3
[--- VISIT begin	
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info	3
]	--- VISIT end	
]	--- PATIENT end	
{	--- ORDER_OBSERVATION begin	
[ORC]	Order common	4
✓ OBR	Observations Request	7
{[NTE]}	Notes and comments	2
[{	--- TIMING_QTY begin	
TQ1	Timing/Quantity	4
[{TQ2}]	Timing/Quantity Order Sequence	4
}]	--- TIMING_QTY end	
[CTD]	Contact Data	11
[{	--- OBSERVATION begin	
OBX	Observation related to OBR	7
{[NTE]}	Notes and comments	2
}]	--- OBSERVATION end	
[{FT1}]	Financial Transaction	6
{[CTI]}	Clinical Trial Identification	7
[{	--- SPECIMEN begin	
SPM	Specimen	
✓ {[OBX]}	Observation related to Specimen	
}]	--- SPECIMEN end	
}	--- ORDER_OBSERVATION end	
}	--- PATIENT_RESULT end	
[DSC]	Continuation Pointer	2
✓ [Signature]	XML Digital Signature	

9.4 DATA MAPPING IN UNSOLICITED OBSERVATION MESSAGE

In order to exchange LABAP record, data mapping in the HL7 v2.5 Unsolicited Observation Message has to be complied.

9.4.1 MSH - Message Header

Tag	Len	HL7 Data Type	RP/#	TBL#	Element Name	Fields	Remarks
#<MSH.1>	1	ST			Field Separator	" "	Fixed value
#<MSH.2>	4	ST			Encoding Characters	"^~\&"	Fixed value
<MSH.3> <HD.1>	227	HD		0361	Sending Application Namespace ID	System Version	Refer to the HCP's system name and version registered in eHR for data exchange
<MSH.4> <HD.1>	227	HD		0362	Sending Facility Namespace ID	Healthcare Provider Identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution for participation in eHR Sharing System
<MSH.5> <HD.1>	227	HD		0361	Receiving Application Namespace ID	"EIF"	Fixed value
<MSH.6> <HD.1>	227	HD		0362	Receiving Facility Namespace ID	"eHR"	Fixed value
#<MSH.7> <TS.1>	26	TS			Date/Time Of Message Time	Message generation datetime	In format: YYYYMMDDhhmmss

Technical Interface Specification for LABAP Record

Tag	Len	HL7 Data Type	RP#	TBL#	Element Name	Fields	Remarks
<MSH.8>	40	ST			Security	Data Compliance Level e.g. 3	Possible value: 1 : Level 1 2 : Level 2 3 : Level 3
#<MSH.9> <MSG.1> <MSG.2> <MSG.3>	15	MSG			Message Type Message Type Trigger Event Message Structure	“ORU” “R01” “ORU_R01”	Fixed value Fixed value Fixed value
#<MSH.10>	20	ST			Message Control ID	Unique message identifier in sending application	Values can be in any combination of alphanumeric characters i.e. [A-Z][0-9][-_]
#<MSH.11> <PT.1>	3	PT			Processing ID Processing ID	“P”	<ul style="list-style-type: none"> • Fixed value • P: Production
#<MSH.12> <VID.1>	60	VID			Version ID Version ID	“2.5”	Fixed value
<MSH.13>	15	NM			Sequence Number	NOT USE	
<MSH.14>	180	ST			Continuation Pointer	NOT USE	
<MSH.15>	2	ID		0155	Accept Acknowledgment Type	“NE”	<ul style="list-style-type: none"> • Fixed value • NE: Never
<MSH.16>	2	ID		0155	Application Acknowledgment Type	NOT USE	

Technical Interface Specification for LABAP Record

Tag	Len	HL7 Data Type	RP/#	TBL#	Element Name	Fields	Remarks
<MSH.17>	3	ID		0399	Country Code	NOT USE	
<MSH.18>	16	ID	Y	0211	Character Set	NOT USE	
<MSH.19>	250	CE			Principal Language Of Message	NOT USE	
<MSH.20>	20	ID		0356	Alternate Character Set Handling Scheme	NOT USE	
<MSH .21> <EI.1>	427	EI	Y		Message Profile Identity Entity Identifier	“eHRSS-2.0.0”	• Fixed value

9.4.2 OBR - Observation Request Segment

Tag	Len	HL7 Data Type	RP#	TBL#	Element Name	Fields	Remarks
<OBR.1>	4	SI			Set ID – OBR	NOT USE	
<OBR.2>	22	EI			Placer Order Number	NOT USE	
<OBR.3>	22	EI			Filler Order Number	NOT USE	
#<OBR.4> <CE.1>	250	CE			Universal Service Identifier Identifier	“LABAP”	Fixed value
<OBR.5>	2	ID			Priority – OBR	NOT USE	
<OBR.6>	26	TS			Requested Date/Time	NOT USE	
<OBR.7>	26	TS			Observation Date/Time #	NOT USE	
<OBR.8>	26	TS			Observation End Date/Time #	NOT USE	
<OBR.9>	20	CQ			Collection Volume *	NOT USE	
<OBR.10>	250	XCN	Y		Collector Identifier *	NOT USE	

Technical Interface Specification for LABAP Record

Tag	Len	HL7 Data Type	RP#	TBL#	Element Name	Fields	Remarks
<OBR.11>	1	ID		0065	Specimen Action Code *	NOT USE	
<OBR.12>	250	CE			Danger Code	NOT USE	
<OBR.13>	300	ST			Relevant Clinical Information	NOT USE	
<OBR.14>	26	TS			Specimen Received Date/Time *	NOT USE	
<OBR.15>	300	SPS			Specimen Source	NOT USE	
<OBR.16>	250	XCN	Y		Ordering Provider	NOT USE	
<OBR.17>	250	XTN	Y/2		Order Callback Phone	NOT USE	
<OBR.18>	60	ST			Placer Field 1	NOT USE	
<OBR.19>	60	ST			Placer Field 2	NOT USE	
<OBR.20>	60	ST			Filler Field 1 +	NOT USE	
<OBR.21>	60	ST			Filler Field 2 +	NOT USE	
<OBR.22>	26	TS			Results Rpt/Status Chng -	NOT USE	
<OBR.23>	40	MOC			Charge to Practice +	NOT USE	
<OBR.24>	10	ID		0074	Diagnostic Serv Sect ID	NOT USE	
<OBR.25>	1	ID		0123	Result Status +	NOT USE	

Technical Interface Specification for LABAP Record

Tag	Len	HL7 Data Type	RP#	TBL#	Element Name	Fields	Remarks
<OBR.26>	400	PRL			Parent Result +	NOT USE	
<OBR.27>	200	TQ	Y		Quantity/Timing	NOT USE	
<OBR.28>	250	XCN	Y		Result Copies To	NOT USE	
<OBR.29>	200	EIP			Parent	NOT USE	
<OBR.30>	20	ID		0124	Transportation Mode	NOT USE	
<OBR.31>	250	CE	Y		Reason for Study	NOT USE	
<OBR.32>	200	NDL			Principal Result Interpreter +	NOT USE	
<OBR.33>	200	NDL	Y		Assistant Result Interpreter +	NOT USE	
<OBR.34>	200	NDL	Y		Technician +	NOT USE	
<OBR.35>	200	NDL	Y		Transcriptionist +	NOT USE	
<OBR.36>	26	TS			Scheduled Date/Time +	NOT USE	
<OBR.37>	4	NM			Number of Sample Containers *	NOT USE	
<OBR.38>	250	CE	Y		Transport Logistics of Collected Sample *	NOT USE	
<OBR.39>	250	CE	Y		Collector's Comment *	NOT USE	

Technical Interface Specification for LABAP Record

Tag	Len	HL7 Data Type	RP#	TBL#	Element Name	Fields	Remarks
<OBR.40>	250	CE			Transport Arrangement Responsibility	NOT USE	
<OBR.41>	30	ID		0224	Transport Arranged	NOT USE	
<OBR.42>	1	ID		0225	Escort Required	NOT USE	
<OBR.43>	250	CE	Y		Planned Patient Transport Comment	NOT USE	
<OBR.44>	250	CE		0088	Procedure Code	NOT USE	
<OBR.45>	250	CE	Y	0340	Procedure Code Modifier	NOT USE	
<OBR.46>	250	CE	Y	0411	Placer Supplemental Service Information	NOT USE	
<OBR.47>	250	CE	Y	0411	Filler Supplemental Service Information	NOT USE	
<OBR.48>	250	CWE		0476	Medically Necessary Duplicate Procedure Reason	NOT USE	
<OBR.49>	2	IS		0507	Result Handling	NOT USE	

9.4.3 OBX - Observation/Result Segment

Tag	Len	HL7 Data Type	RP#	TBL#	Element Name	Fields	Remarks
<OBX.1>	4	SI			Set ID – OBX	NOT USE	
<OBX.2>	2	ID		0125	Value Type	“ED”	<ul style="list-style-type: none"> • Fixed value • This field defines the datatype of OBX.5 ED: Encapsulated Data
#<OBX.3> <CE.1>	250	CE			Observation Identifier Identifier	“LABAP”	Fixed value
<OBX.4>	20	ST			Observation Sub-Id	e.g. NBL	<p>Possible value of data upload format: NBL: Non-Bulk load; NBL-M: Non-Bulk load for materialisation; NBL-R: Non-Bulk load for re-materialisation</p> <p><i>Remarks: Materialisation - HCP upload a HCR's specific sharable dataset that exists in EMR.</i></p>

Technical Interface Specification for LABAP Record

Tag	Len	HL7 Data Type	RP#	TBL#	Element Name	Fields	Remarks
<OBX.5> <ED.2> <ED.4> <ED.5>	99999	Varies	Y		Observation Value Type of Data Encoding Data	“multipart” “A” MIME package	Fixed value Fixed value A: ASCII text Encapsulated data values of embedded CDA and image file
<OBX.6>	250	CE			Units	NOT USE	
<OBX.7>	60	ST			References Range	NOT USE	
<OBX.8>	5	IS	Y	0078	Abnormal Flags	NOT USE	
<OBX.9>	5	NM			Probability	NOT USE	
<OBX.10>	2	ID	Y	0080	Nature of Abnormal Test	NOT USE	
#<OBX.11>	1	ID		0085	Observation Result Status	“F”	Fixed value: F: Final Result
<OBX.12>	26	TS			Effective Date of Reference Range	NOT USE	
<OBX.13>	20	ST			User Defined Access Checks	NOT USE	
<OBX.14>	26	TS			Date/Time of the Observation	NOT USE	
<OBX.15>	250	CE			Producer's ID	NOT USE	

Technical Interface Specification for LABAP Record

Tag	Len	HL7 Data Type	RP#	TBL#	Element Name	Fields	Remarks
<OBX.16>	250	XCN	Y		Responsible Observer	NOT USE	
<OBX.17>	250	CE	Y		Observation Method	NOT USE	
<OBX.18>	22	EI	Y		Equipment Instance Identifier	NOT USE	
<OBX.19>	26	TS			Date/Time of the Analysis	NOT USE	

9.5 XML DIGITAL SIGNATURE ON HL7

The components of XML digital signature are listed below:

No.	XML Tag	XPath	Attribute	Element Name	Mandatory (M) / Optional(O)	Remarks
1	Signature	Signature		Signature	M	Sign the HL7 message (Please refer to "XML Signature Syntax and Processing (Second Edition)" provided by W3C Recommendation 10 June 2008)
			@xmlns		M	Fixed Value: “ http://www.w3.org/2000/09/xmldsig# ”
2	SignedInfo	Signature/SignedInfo		Signed Information	M	
2.1	CanonicalizationMethod	Signature/SignedInfo/CanonicalizationMethod		Canonicalization Method	M	
			@Algorithm	Algorithm	M	Fixed Value: “ http://www.w3.org/TR/2001/REC-xml-c14n-20010315 ”
2.2	SignatureMethod	Signature/SignedInfo/SignatureMethod		Signature Method	M	
			@Algorithm	Algorithm	M	Fixed Value: “ http://www.w3.org/2001/04/xmldsig-more#rsa-sha512 ”

Technical Interface Specification for LABAP Record

No.	XML Tag	XPath	Attribute	Element Name	Mandatory (M) / Optional(O)	Remarks
2.3	Reference	Signature/SignedInfo/Reference		Reference element for the whole HL7 document	M	
			@ URI	URI	M	Fixed Value: “” (<i>Empty String</i>). Apply the signature to the whole HL7 document
2.3.1	Transforms	Signature/SignedInfo/Reference/Transforms		Transforms	M	
2.3.1.1	Transform	Signature/SignedInfo/Reference/Transforms/Transform		Transform	M	
			@Algorithm	Algorithm	M	Fixed Value: “ http://www.w3.org/2000/09/xmldsig#enveloped-signature ”
2.3.2	DigestMethod	Signature/SignedInfo/Reference/DigestMethod			M	
			@Algorithm	Algorithm	M	Fixed Value: “ http://www.w3.org/2001/04/xmlenc#sha512 ”
2.3.3	DigestValue	Signature/SignedInfo/Reference/DigestValue		Digest Value	M	Message's Digest Value

Technical Interface Specification for LABAP Record

No.	XML Tag	XPath	Attribute	Element Name	Mandatory (M) / Optional(O)	Remarks
3	SignatureValue	Signature/SignatureValue		Signature value	M	Canonicalize and then calculate the SignatureValue over SignedInfo based on algorithms specified in SignedInfo as specified in XML Signature [XMLDSIG]
4	KeyInfo	Signature/KeyInfo		Key Info	M	
4.1	X509Data	Signature/KeyInfo/ X509Data		X509 Data	M	
4.1.1	X509SubjectName	Signature/KeyInfo/ X509Data/ X509SubjectName		X509 Subject Name	M	Distinguished name (DN) that contains the information for both the owner or requestor of the certificate (called the Subject DN) and the CA that issues the certificate (called the Issuer DN)
4.1.2	X509Certificate	Signature/KeyInfo/ X509Data/ X509Certificate		Certificate	M	base64-encoded [X509v3] certificate <i>(Please refer to the content of X509Data in “XML Signature Syntax and Processing (Second Edition)” provided by W3C Recommendation 10 June 2008)</i>

Example

```
<?xml version="1.0" encoding="UTF-8"?>
<ORU_R01 xmlns="..." xmlns:xsi="..." xsi:schemaLocation="...">
  <MSH>...</MSH>
  <ORU_R01.PATIENT_RESULT>
    <ORU_R01.ORDER_OBSERVATION>
      <OBR>...</OBR>
      <ORU_R01.OBSERVATION>
        <OBX>...</OBX>
      </ORU_R01.OBSERVATION>
    </ORU_R01.ORDER_OBSERVATION>
  </ORU_R01.PATIENT_RESULT>
  <Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
    <SignedInfo>
      <CanonicalizationMethod Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315"/>
      <SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha512"/>
      <Reference URI="">
        <Transforms>
          <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
        </Transforms>
        <DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha512"/>
        <DigestValue>xxxxxx</DigestValue>
      </Reference>
    </SignedInfo>
    <SignatureValue>xxxxxxxxxxxx</SignatureValue>
    <KeyInfo>
      <X509Data>
        <X509SubjectName>xxxxxx</X509SubjectName>
        <X509Certificate>xxxxxxxxxxxx</X509Certificate>
      </X509Data>
    </KeyInfo>
  </Signature>
</ORU_R01>
```

**XML Digital
Signature**

10 CDA DOCUMENT

The HL7 Clinical Document Architecture (CDA) is a document mark-up standard that specifies the structure and semantics of "clinical documents" for the purpose of exchanging clinical information. It can be exchanged as a Multipurpose Internet Mail Extensions (MIME, RFC 2046) package, encoded as an encapsulated data type (ED). For the preparation of encoded MIME, please refer to Section 10 – *Preparation of Message for Data Transfer*.

10.1 CDA DOCUMENT STRUCTURE OVERVIEW

Under HL7-HK Message Standards, two types of information will be included in CDA document, which are:

- CDA General Information
- Clinical Information related to HCR Identity Information, Healthcare Provider Information and LABAP record data

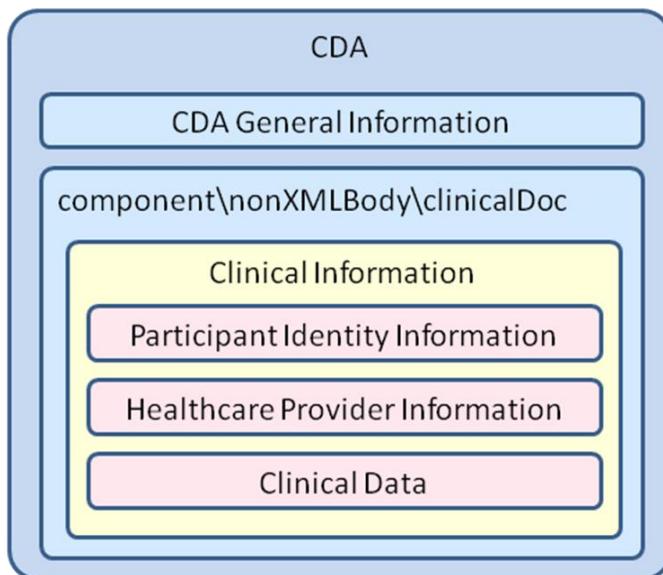


Figure 2 - *Overview of CDA for LABAP*

Clinical data of subject domain will be wrapped by the <nonXMLBody> element within the <component> element. In *Section 8.3 - CDA Document Skeleton* will introduce the structure and contents required in LABAP.

10.2 LABAP DATASET

Laboratory Result (AP Result) record may be constituted of laboratory test request data, more than one anatomical pathology diagnosis data, more than one anatomical pathology report details data and more than one laboratory test result report data. Each laboratory result record will have a unique record number.

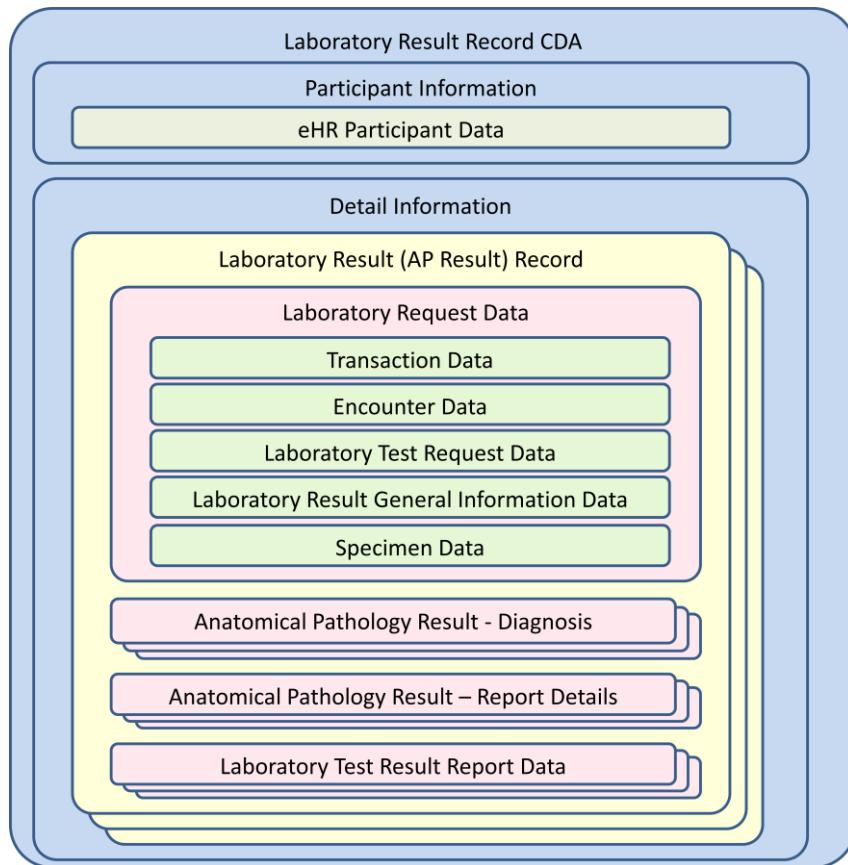


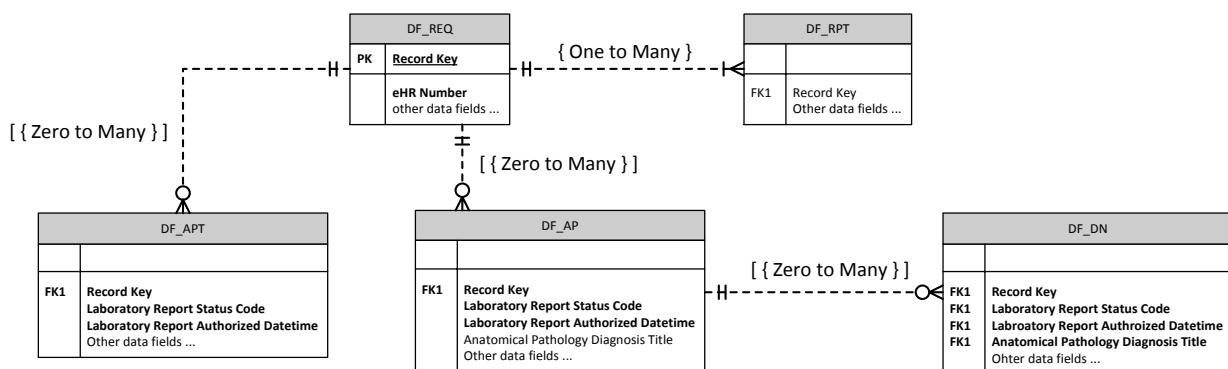
Figure 3 - *Overview of an LABAP record CDA*

Preliminary report, final report, amended report and supplement report will be accepted by eHR. These two kinds of result records belonging to the same laboratory request (record number) may be uploaded together to eHR within a single ORU HL7 Message in the OBX.5 segment. Please refer to Figure 1 - HL7 v2.5 Unsolicited Observation Message for Laboratory Result (AP Result) Record Transfer for the message structure.

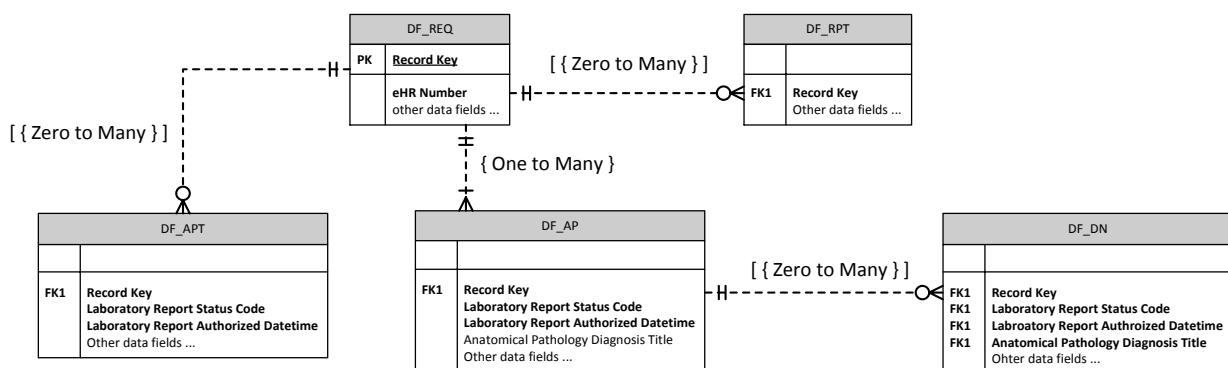
10.3 LABAP INTERFACE RELATIONSHIP DIAGRAMS

Below interface relationship diagrams describe the conceptual of data relationship in each data file of different scenarios in data compliance level 1 and 2. In general, data field “Record Key” is used as the key to cross-reference data files DF_REQ, DF_AP, DF_APT and DF_RPT. Data field “Record Key”, “Laboratory Report Status Code” and “Laboratory Report Authorised Datetime” are used as the key to cross-reference DF_AP and DF_APT. Data field “Record Key”, “Laboratory Report Status Code”, “Laboratory Report Authorised Datetime” and “Anatomical Pathology Diagnosis Title” are used as the key to cross-reference DF_AP and DF_DN. And data field “eHR Number” is used as the key to cross-reference HCR list PL and data file DF_REQ.

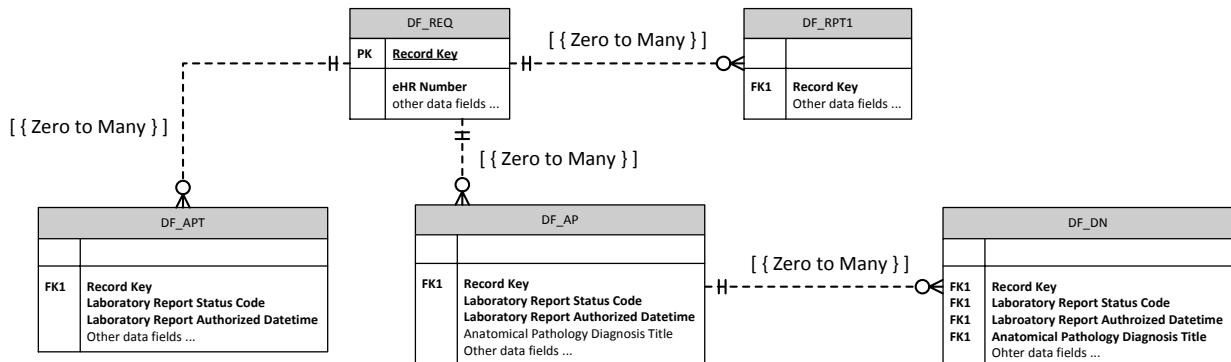
Interface Relationship Diagram on “New (S1)” / “Update (S2)” LABAP records in Data Compliance Level 1



Interface Relationship Diagram on “New (S1)” / “Update (S2)” LABAP records in Data Compliance Level 2 and 3



**Interface Relationship Diagram on “Delete (S3)” LABAP records in Data Compliance
Level 1, 2 and 3**



10.4 CDA DOCUMENT SKELETON

CDA Document Skeleton of LABAP for “New (S1) / Update (S2)” in Data Compliance Level 1

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns="urn:hl7-org:v3" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="">
<!--
*****
CDA Header
*****
-->
<typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
<id/>
<code code="LABAP"/>
<title>Laboratory Anatomical Pathology Result</title>
<effectiveTime/>
<confidentialityCode/>
<recordTarget>
<patientRole>
<id/>
</patientRole>
</recordTarget>
<author>
<time/>
<assignedAuthor>
<id/>
</assignedAuthor>
</author>
<custodian>
<assignedCustodian>
<representedCustodianOrganization>
<id/>
</representedCustodianOrganization>
</assignedCustodian>
</custodian>
<!--
*****
Clinical Information
*****
-->
<component>
<nonXMLBody>
<clinicalDoc>
<participant>
<ehr_no/>
<hkid/>
<doc_type/>
<doc_no/>
<person_eng_surname/>
<person_eng_given_name/>
<person_eng_full_name/>
<sex/>
<birth_date/>
</participant>
<detail>
<lab_req_data>
<record_key/>
<transaction_dtm/>
<transaction_type/>
<last_update_dtm/>
<episode_no/>
<attendance_inst_id/>
<request_no/>
```

Technical Interface Specification for LABAP Record

```
<request_participant_inst_id/>
<request_participant_inst_name/>
<request_participant_inst_lt_desc/>
<order_no/>
<lab_category_cd/>
<lab_category_desc/>
<lab_category_lt_desc/>
<perform_lab_name/>
<report_reference_dtm/>
<lab_report_comment/>
<file_ind/>
<record_creation_dtm/>
<record_creation_inst_id/>
<record_creation_inst_name/>
<record_update_dtm/>
<record_update_inst_id/>
<record_update_inst_name/>
</lab_req_data>
<lab_report_data>
<record_key/>
<report_status_cd/>
<report_status_desc/>
<report_status_lt_desc/>
<report_auth_dtm/>
<report_dtm/>
<file_name/>
<report_text/>
</lab_report_data>
</detail>
</clinicalDoc>
<text/>
</nonXMLBody>
</component>
</ClinicalDocument>
```

**CDA Document Skeleton of LABAP for “New (S1) / Update (S2)” in Data Compliance
Level 2**

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns="urn:hl7-org:v3" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="">
<!--
*****
CDA Header
*****
-->
<typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
<id/>
<code code="LABAP"/>
<title>Laboratory Anatomical Pathology Result</title>
<effectiveTime/>
<confidentialityCode/>
<recordTarget>
<patientRole>
<id/>
</patientRole>
</recordTarget>
<author>
<time/>
<assignedAuthor>
<id/>
</assignedAuthor>
</author>
<custodian>
<assignedCustodian>
<representedCustodianOrganization>
<id/>
</representedCustodianOrganization>
</assignedCustodian>
</custodian>
<!--
*****
Clinical Information
*****
-->
<component>
<nonXMLBody>
<clinicalDoc>
<participant>
<ehr_no/>
<hkid/>
<doc_type/>
<doc_no/>
<person_eng_surname/>
<person_eng_given_name/>
<person_eng_full_name/>
<sex/>
<birth_date/>
</participant>
<detail>
<lab_req_data>
<record_key/>
<transaction_dtm/>
<transaction_type/>
<last_update_dtm/>
<episode_no/>
<attendance_inst_id/>
<request_no/>
<request_doctor/>
<request_participant_inst_id/>
<request_participant_inst_name/>
<request_participant_inst_lt_desc/>
```

```
<order_no/>
<lab_category_cd/>
<lab_category_desc/>
<lab_category_lt_desc/>
<perform_lab_name/>
<report_reference_dtm/>
<clinical_info/>
<lab_report_comment/>
<specimen_type_lt_id/>
<specimen_type_lt_desc/>
<specimen_arrival_dtm/>
<specimen_collect_dtm/>
<specimen_details/>
<file_ind/>
<record_creation_dtm/>
<record_creation_inst_id/>
<record_creation_inst_name/>
<record_update_dtm/>
<record_update_inst_id/>
<record_update_inst_name/>
<ap_test_name/>
</lab_req_data>
<labap_result_data>
<record_key/>
<report_status_cd/>
<report_status_desc/>
<report_status_lt_desc/>
<report_auth_dtm/>
<ap_diagnosis_title/>
<ap_diagnosis_text/>
<panel_lt_cd/>
<panel_lt_desc/>
<report_auth_staff_id/><!--Retained for backward compatibility to v1.0.0-->
<report_auth_staff_eng_name/>
<report_auth_staff_eng_given_name/><!--Retained for backward compatibility to v1.0.0-->
<report_auth_staff_eng_name_prefix/><!--Retained for backward compatibility to v1.0.0-->
<report_auth_staff_chi_name/>
<report_auth_staff_chi_name_suffix/><!--Retained for backward compatibility to v1.0.0-->
</labap_result_data>
<labap_apt_result_data>
<record_key/>
<report_status_cd/>
<report_status_desc/>
<report_status_lt_desc/>
<report_auth_dtm/>
<apt_detail_title_cd/>
<apt_detail_title_desc/>
<apt_detail_title_lt_desc/>
<apt_detail_content/>
<report_status_cd/>
</labap_apt_result_data>
<labap_dn_result_data>
<record_key/>
<report_status_cd/>
<report_status_desc/>
<report_status_lt_desc/>
<report_auth_dtm/>
<ap_diagnosis_title/>
<topography_lt_cd/>
<topography_lt_desc/>
<finding_lt_cd/>
<finding_lt_desc/>
</labap_dn_result_data>
<lab_report_data>
<record_key/>
<report_status_cd/>
<report_status_desc/>
```

```
<report_status_lt_desc/>
<report_auth_dtm/>
<report_dtm/>
<file_name/>
<report_text/>
</lab_report_data>
</detail>
</clinicalDoc>
<text/>
</nonXMLBody>
</component>
</ClinicalDocument>
```

CDA Document Skeleton of LABAP for “New (S1) / Update (S2)” in Data Compliance Level 3

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns="urn:hl7-org:v3" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="">
<!--
*****
CDA Header
*****
-->
<typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
<id/>
<code code="LABAP"/>
<title>Laboratory Anatomical Pathology Result</title>
<effectiveTime/>
<confidentialityCode/>
<recordTarget>
<patientRole>
<id/>
</patientRole>
</recordTarget>
<author>
<time/>
<assignedAuthor>
<id/>
</assignedAuthor>
</author>
<custodian>
<assignedCustodian>
<representedCustodianOrganization>
<id/>
</representedCustodianOrganization>
</assignedCustodian>
</custodian>
<!--
*****
Clinical Information
*****
-->
<component>
<nonXMLBody>
<clinicalDoc>
<participant>
<ehr_no/>
<hkid/>
<doc_type/>
<doc_no/>
<person_eng_surname/>
<person_eng_given_name/>
<person_eng_full_name/>
<sex/>
```

```
<birth_date/>
</participant>
<detail>
<lab_req_data>
<record_key/>
<transaction_dtm/>
<transaction_type/>
<last_update_dtm/>
<episode_no/>
<attendance_inst_id/>
<request_no/>
<request_doctor/>
<request_participant_inst_id/>
<request_participant_inst_name/>
<request_participant_inst_lt_desc/>
<order_no/>
<lab_category_cd/>
<lab_category_desc/>
<lab_category_lt_desc/>
<perform_lab_name/>
<report_reference_dtm/>
<clinical_info/>
<lab_report_comment/>
<specimen_type_lt_id/>
<specimen_type_lt_desc/>
<specimen_arrival_dtm/>
<specimen_collect_dtm/>
<specimen_details/>
<file_ind/>
<record_creation_dtm/>
<record_creation_inst_id/>
<record_creation_inst_name/>
<record_update_dtm/>
<record_update_inst_id/>
<record_update_inst_name/>
<ap_test_name/>
</lab_req_data>
<labap_result_data>
<record_key/>
<report_status_cd/>
<report_status_desc/>
<report_status_lt_desc/>
<report_auth_dtm/>
<ap_diagnosis_title/>
<ap_diagnosis_text/>
<panel_lt_cd/>
<panel_lt_desc/>
<report_auth_staff_id/><!--Retained for backward compatibility to v1.0.0-->
<report_auth_staff_eng_name/>
<report_auth_staff_eng_given_name/><!--Retained for backward compatibility to v1.0.0-->
<report_auth_staff_eng_name_prefix/><!--Retained for backward compatibility to v1.0.0-->
<report_auth_staff_chi_name/>
<report_auth_staff_chi_name_suffix/><!--Retained for backward compatibility to v1.0.0-->
</labap_result_data>
<labap_apt_result_data>
<record_key/>
<report_status_cd/>
<report_status_desc/>
<report_status_lt_desc/>
<report_auth_dtm/>
<apt_detail_title_cd/>
<apt_detail_title_desc/>
<apt_detail_title_lt_desc/>
<apt_detail_content/>
<report_status_cd/>
</labap_apt_result_data>
<labap_dn_result_data>
```

Technical Interface Specification for LABAP Record

```
<record_key/>
<report_status_cd/>
<report_status_desc/>
<report_status_lt_desc/>
<report_auth_dtm/>
<ap_diagnosis_title/>
<topography_lt_cd/>
<topography_lt_desc/>
<finding_lt_cd/>
<finding_lt_desc/>
<topography_rt_name/>
<topography_rt_id/>
<topography_rt_desc/>
<finding_rt_name/>
<finding_rt_id/>
<finding_rt_desc/>
</labap_dn_result_data>
<lab_report_data>
<record_key/>
<report_status_cd/>
<report_status_desc/>
<report_status_lt_desc/>
<report_auth_dtm/>
<report_dtm/>
<file_name/>
<report_text/>
</lab_report_data>
</detail>
</clinicalDoc>
<text/>
</nonXMLBody>
</component>
</ClinicalDocument>
```

CDA Document Skeleton of LABAP for “Delete (S3)” in Data Compliance Level 1, 2 and 3

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns="urn:hl7-org:v3" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="">
<!--
*****
CDA Header
*****
-->
<typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
<id/>
<code code="LABAP"/>
<title>Laboratory Anatomical Pathology Result</title>
    <effectiveTime />
    <confidentialityCode/>
<recordTarget>
    <patientRole>
        <id/>
    </patientRole>
</recordTarget>
<author>
    <time/>
    <assignedAuthor>
        <id/>
    </assignedAuthor>
</author>
<custodian>
    <assignedCustodian>
        <representedCustodianOrganization>
            <id/>
        </representedCustodianOrganization>
    </assignedCustodian>
</custodian>
<!--
*****
Clinical Information
*****
-->
<component>
<nonXMLBody>
<clinicalDoc>
    <participant>
        <ehr_no/>
        <hkid/>
        <doc_type/>
        <doc_no/>
        <person_eng_surname/>
        <person_eng_given_name/>
        <person_eng_full_name/>
        <sex/>
        <birth_date/>
    </participant>
    <detail>
        <lab_req_data>
            <record_key/>
            <transaction_dtm/>
            <transaction_type/>
            <last_update_dtm/>
            <episode_no/>
            <attendance_inst_id/>
        </lab_req_data>
    </detail>
</clinicalDoc>
<text/>
</nonXMLBody>
```

Technical Interface Specification for LABAP Record

```
</component>
</ClinicalDocument>
```

10.5 DATA MAPPING IN CDA FOR HL7-HK MESSAGE STANDARDS

The CDA document is divided into 2 sections: ‘CDA General Information’ and ‘Clinical Information’. The data mapping of each CDA component will be described in following sections:

10.5.1 CDA General Information

A CDA document is wrapped by the <ClinicalDocument> element. Under HL7-HK Message Standards, same set of ‘CDA General Information’ of CDA is required for ALL Subject Domains. The following table shows the data requirements of CDA document requested by eHR. All the following tag elements and information are necessary to be present in the CDA.

Number	XML Tag	XPath	Attribute	Definition	Maximum Length	Cardinality	Remarks
1	ClinicalDocument	ClinicalDocument		A CDA document is wrapped by the <ClinicalDocument> element		1..1	
1.1			@xmlns	Message namespace	string(500)	1..1	Fixed value: xmlns=“urn:hl7-org:v3”
1.2			@xmlns:xsi	XML schema instance namespace	string(500)	1..1	Fixed value: xmlns:xsi=“http://www.w3.org/2001/XMLSchema-instance”
1.3			@xsi:schemaLocation	Physical location of schema documents	string(500)	1..1	Fixed value: xsi:schemaLocation=“urn:hl7-org:v3 CDA.xsd”
2	typeId	ClinicalDocument		A technology-neutral explicit		1..1	

Technical Interface Specification for LABAP Record

Number	XML Tag	XPath	Attribute	Definition	Maximum Length	Cardinality	Remarks
		/ typeId		reference to the CDA, Release 2 specification			
2.1			@root	The OID for HL7 Registered models	string(500)	1..1	Fixed value: “2.16.840.1.113883.1.3”
2.2			@extension	The unique identifier for the CDA, Release 2 Hierarchical description	string(255)	1..1	Fixed value: “POCD_HD000040”
<hr/>							
3	id	ClinicalDocument /id		It represents the unique instance identifier (UID) of a clinical document		1..1	Leave the tag blank, i.e. <id/>. Please refer to Section 8.5 <i>Additional Mandatory Elements in CDA for HL7-HK Message Standards</i> .
<hr/>							
4	code	ClinicalDocument /code		It represents the unique code of the document type		1..1	
4.1			@code	The code specifying the particular kind of document	string(20)	1..1	Fixed value: “LABAP”
<hr/>							
5	title	ClinicalDocument /title		It represents the title of the document	string(30)	1..1	Fixed value: “Laboratory Anatomical Pathology Result”
<hr/>							
6	effectiveTime	ClinicalDocument				1..1	Leave the tag blank, i.e.

Technical Interface Specification for LABAP Record

Number	XML Tag	XPath	Attribute	Definition	Maximum Length	Cardinality	Remarks
		/effectiveTime					<effectiveTime/>. Please refer to Section 8.5 Additional Mandatory Elements in CDA for HL7-HK Message Standards.
6.1			@value	Document creation datetime	string(14)	1..1	In format: YYYYMMDDhhmmss
7	confidentialityCode	ClinicalDocument /confidentialityCode		Confidentiality of the clinical document		1..1	Leave the tag blank, i.e. <confidentialityCode/>. Please refer to Section 8.5 Additional Mandatory Elements in CDA for HL7-HK Message Standards.
8	recordTarget	ClinicalDocument /recordTarget		The recordTarget represents the medical record that this document belongs to		1..1	Please refer to Section 8.5 Additional Mandatory Elements in CDA for HL7-HK Message Standards.
9	patientRole	ClinicalDocument /recordTarget/patientRole		A recordTarget is represented as a relationship between a person and an organization, where the person is in a patient role		1..1	Please refer to Section 8.5 Additional Mandatory Elements in CDA for HL7-HK Message Standards.
10	id	ClinicalDocument /recordTarget/patientRole/id		Unique identifier of the patient role		1..1	Leave the tag blank, i.e. <id/>. Please refer to Section 8.5 Additional Mandatory Elements in CDA for HL7-HK Message Standards.

Technical Interface Specification for LABAP Record

Number	XML Tag	XPath	Attribute	Definition	Maximum Length	Cardinality	Remarks
							Standards.
<hr/>							
11	author	ClinicalDocument /author		It represents the humans and/or machines that authored the document		1..1	Please refer to Section 8.5 <i>Additional Mandatory Elements in CDA for HL7-HK Message Standards.</i>
12	time	ClinicalDocument /author/time		It represents the day and time of the authoring of the original content		1..1	Please refer to Section 8.5 <i>Additional Mandatory Elements in CDA for HL7-HK Message Standards.</i>
13	assignedAuthor	ClinicalDocument /author/assignedAuthor		An author is a person in the role of an assigned author		1..1	Please refer to Section 8.5 <i>Additional Mandatory Elements in CDA for HL7-HK Message Standards.</i>
14	id	ClinicalDocument /author/assignedAuthor/id		Unique identifier of the assigned author		1..1	Leave the tag blank, i.e. <id/>. Please refer to Section 8.5 <i>Additional Mandatory Elements in CDA for HL7-HK Message Standards.</i>
<hr/>							
15	custodian	ClinicalDocument /custodian		The custodian is the steward that is entrusted with the care of the document		1..1	Please refer to Section 8.5 <i>Additional Mandatory Elements in CDA for HL7-HK Message Standards.</i>
16	assignedCustodi	ClinicalDocument		A custodian is a scoping		1..1	Please refer to Section 8.5

Technical Interface Specification for LABAP Record

Number	XML Tag	XPath	Attribute	Definition	Maximum Length	Cardinality	Remarks
	an	/custodian/assignedCustodian		organization in the role of an assigned custodian. The steward organization is an entity scoping the role of AssignedCustodian.			<i>Additional Mandatory Elements in CDA for HL7-HK Message Standards.</i>
17	representedCustodianOrganization	ClinicalDocument /custodian/assignedCustodian/representedCustodianOrganization		It is the represented custodian organization that is entrusted with the care of the document.		1..1	Please refer to Section 8.5 <i>Additional Mandatory Elements in CDA for HL7-HK Message Standards.</i>
18	id	ClinicalDocument /custodian/assignedCustodian/representedCustodianOrganization/id		Unique identifier of represented custodian organization		1..1	Leave the tag blank, i.e. <id/>. Please refer to Section 8.5 <i>Additional Mandatory Elements in CDA for HL7-HK Message Standards.</i>
<hr/>							
19	text	ClinicalDocument /component/nonXMLEBody/text		It is used to reference data that is stored externally to the CDA document or to encode the data directly inline		1..1	Leave the tag blank, i.e. <text/>. Please refer to Section 8.5 <i>Additional Mandatory Elements in CDA for HL7-HK Message Standards.</i>

10.5.2 Clinical Information

In general, the clinical information can be divided into TWO sections: ‘HCR’ and ‘Detail’.

In the ‘HCR’ section, information includes:

- HCR Data

In the ‘Detail’ section, clinical information of the subject domain will be included:

- Laboratory Test Request Data
 - Transaction Data
 - Encounter Data
 - Laboratory Test Request Data
 - Laboratory Result General Information Data
 - Specimen Data
 - Laboratory Result Record Creation Data
 - Laboratory Result Record Update Data
- Anatomical Pathology Result – Diagnosis Data
- Anatomical Pathology Result – Diagnosis Topography and Finding Data
- Anatomical Pathology Result – Report Details Data
- Laboratory Report Data

It is assumed that only THREE scenarios will trigger the transfer of laboratory result (AP result) data. They are:

- Uploading a new Laboratory AP Result Record (S1)
- Overriding an existing Laboratory AP Result Record (S2)
- Deletion of existing Laboratory AP Result Record (S3)

For details of these scenarios, please refer to *Data Requirement Specification for LABAP Record*.

The data mappings of elements in ‘HCR’ and ‘Detail’ sections will be described as below:

<HCR> Section

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality			Remarks
					S1	S2	S3	
1 “HCR Identity Data” Related Tags								
1.1	eHR Number	ehr_no	participant/ehr_no	string(12)		1..1		Fixed length
1.2	eHR Participant HKIC Number	hkid	participant/hkid	string(30)	0..1 if [Identity Document Number] is given 1..1 if [Identity Document Number] is blank			
1.3	Type of Identity Document	doc_type	participant/doc_type	string(6)	0..1 if [Identity Document Number] is blank 1..1 if [Identity Document Number] is given			Refer to the code set of “Type of identity document” in eHR Office website.
1.4	Identity Document Number	doc_no	participant/doc_no	string(30)	0..1 if [eHR Participant HKIC Number] is given 1..1 if [eHR Participant HKIC Number] is blank			
1.5	eHR Participant English Surname	person_eng_surname	participant/person_eng_surname	string(40)	0..1 if [eHR Participant English Full Name] is not blank 1..1 if [eHR Participant English Full Name] is blank			
1.6	eHR Participant English Given Name	person_eng_given_name	participant/person_eng_given_name	string(40)	0..1 if [eHR Participant English Full Name] is not blank 1..1 if [eHR Participant English Full Name] is blank			

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocum ent/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality			Remarks
					S1	S2	S3	
1.7	eHR Participant English Full Name	person_eng_full_name	participant/person_eng_full_name	string(100)	0..1 if [eHR Participant English Surname] or [eHR Participant English Given Name] is not blank 1..1 if [eHR Participant English Surname] or [eHR Participant English Given Name] is blank			Format: [Surname]+[,] + 1 white space +[Given Name] e.g. CHAN, TAI MAN
1.8	Sex	sex	participant/sex	string(1)		1..1		Refer to the code set of “Sex” in eHR Office website.

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocum ent/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality			Remarks
					S1	S2	S3	
1.9	Date of Birth	birth_date	participant/birth_date	string(23)		1..1		<p>In format: YYYY-MM-DD hh:mm:ss.sss</p> <p>If birth time cannot be provided, the time should be in fixed value “00:00:00.000”.</p> <p>e.g. 2010-01-31 00:00:00.000</p> <p>Remarks:</p> <ul style="list-style-type: none"> • If date is exact to ‘Year’ (e.g. 2010), the unknown month and day is suggested to be set as ’01-01’ e.g. 2010-01-01 00:00:00.000 • If date is exact to ‘Month’(e.g. 2010-12), the unknown day is suggested to be set as ‘01’ e.g. 2010-12-01 00:00:00.000

<Detail> Section

The table below shows the data mapping of clinical information for Laboratory Result (AP Result) Record shown in Section 4.3 *CDA Document Skeleton*. The Detail Section mainly contains three parts: test request data, test result data and test report. In general, there are three data compliance levels (Level 1, Level 2 and Level 3). The following table shows the clinical information of Laboratory Result (AP Result) Record for compliance levels (Level 1, Level 2 and Level 3) in the three scenarios (S1,S2 and S3).

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonXMLEBody/clinicalDoc/)	Maximum Length	Cardinality									Remarks	
					Not Applicable (N/A – Data field should not be submitted)										
					Level 1			Level 2			Level 3				
					S1	S2	S3	S1	S2	S3	S1	S2	S3		
“Laboratory Test Request Data” Related Tags															
	Laboratory Test Request Data	lab_req_data	detail/lab_req_data		1..*	1..*	1..*	1..*	1..*	1..*	1..*	1..*	1..*	Parent Tag	
1.1	Record Key	record_key	detail/lab_req_data/record_key	string(50)	1..1	1..1	1..1	1..1	1..1	1..1	1..1	1..1	1..1		
1.2	Transaction Datetime	transaction_dt	detail/lab_req_data/transaction_dtm	string(23)	1..1	1..1	1..1	1..1	1..1	1..1	1..1	1..1	1..1	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality								Remarks	
					Not Applicable (N/A – Data field should not be submitted)									
					Level 1			Level 2			Level 3			
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
1.3	Transaction Type	transaction_type	detail/lab_req_data/transaction_type	string(1)	1..1	1..1	1..1	1..1	1..1	1..1	1..1	1..1	I : Insert operation U : Update operation D : Delete operation Remarks: <i>'U' and 'D' are not accepted in materialisation mode.</i>	
1.4	Last Update Datetime	last_update_dtm	detail/lab_req_data/last_update_dtm	string(23)	1..1	1..1	1..1	1..1	1..1	1..1	1..1	1..1	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	
1.5	Episode Number	episode_no	detail/lab_req_data/episode_no	string(20)	0..1	0..1	0..1	0..1	0..1	0..1	0..1	0..1		
1.6	Attendance Institution Identifier	attendance_inst_id	detail/lab_req_data/attendance_inst_id	string(10)	0..1	0..1	0..1	0..1	0..1	0..1	0..1	0..1	Fixed length	
1.7	Laboratory Test Request Number	request_no	detail/lab_req_data/request_no	string(40)	1..1	N/A	1..1	N/A	1..1	N/A				

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality								Remarks	
					Not Applicable (N/A – Data field should not be submitted)									
					Level 1		Level 2		Level 3					
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
1.8	Laboratory Test Requesting Doctor	request_doctor	detail/lab_req_data/request_doctor	string(100)	N/A	N/A	0..1	N/A	0..1	N/A				
1.9	Laboratory Test Request Healthcare Institution Identifier	request_participant_inst_id	detail/lab_req_data/request_participant_inst_id	string(10)	0..1	N/A	0..1	N/A	0..1	N/A				
1.10	Laboratory Test Request Healthcare Institution Long Name	request_participant_inst_name	detail/lab_req_data/request_participant_inst_name	string(255)	0..1	N/A	0..1	N/A	0..1	N/A				
1.11	Laboratory Test Request Healthcare Institution Local Name	request_participant_inst_lt_desc	detail/lab_req_data/request_participant_inst_lt_desc	string(255)	1..1	N/A	1..1	N/A	1..1	N/A				

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality								Remarks	
					Not Applicable (N/A – Data field should not be submitted)									
					Level 1			Level 2			Level 3			
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
1.12	Laboratory Test Order Number	order_no	detail/lab_req_data/order_no	string(40)	0..1	0..1	0..1	0..1	0..1	0..1	0..1	0..1	If this laboratory request is referred by other HCP, please follow the convention : Referring HCP ID:Referral document reference number e.g 8088450656:12345678900000000306	
1.13	Laboratory Category Code	lab_category_cd	detail/lab_req_data/lab_category_cd	string(10)	1..1	N/A	1..1	N/A	1..1	N/A	1..1	N/A		
1.14	Laboratory Category Description	lab_category_desc	detail/lab_req_data/lab_category_desc	string(255)	1..1	N/A	1..1	N/A	1..1	N/A	1..1	N/A		
1.15	Laboratory Category Local Description	lab_category_lt_desc	detail/lab_req_data/lab_category_lt_desc	string(255)	1..1	N/A	1..1	N/A	1..1	N/A	1..1	N/A		
1.16	Laboratory Test Request Performing Laboratory Name	perform_lab_name	detail/lab_req_data/perform_lab_name	string(100)	1..1	N/A	1..1	N/A	1..1	N/A	1..1	N/A		

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality								Remarks	
					Not Applicable (N/A – Data field should not be submitted)									
					Level 1		Level 2		Level 3					
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
1.17	Laboratory Report Reference Datetime	report_reference_dtm	detail/lab_req_data/report_reference_dtm	string(23)	1..1	N/A	1..1	N/A	1..1	N/A	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005			
1.18	Laboratory Test Request Clinical Information	clinical_info	detail/lab_req_data/clinical_info	string(2000)	N/A	N/A	0..1	N/A	0..1	N/A				
1.19	Laboratory Report Comment	lab_report_comment	detail/lab_req_data/lab_report_comment	string(2000)	0..1	N/A	0..1	N/A	0..1	N/A				
1.20	Specimen Type Local Code	specimen_type_lt_id	detail/lab_req_data/specimen_type_lt_id	string(30)	0..1	N/A	0..1	N/A	0..1	N/A				
1.21	Specimen Type Local Description	specimen_type_lt_desc	detail/lab_req_data/specimen_type_lt_desc	string(255)	0..1	N/A	0..1	N/A	0..1	N/A				
1.22	Specimen Arrival Datetime	specimen_arrival_dtm	detail/lab_req_data/specimen_arrival_dtm	string(23)	N/A	N/A	0..1	N/A	0..1	N/A	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005			

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality								Remarks	
					Not Applicable (N/A – Data field should not be submitted)									
					Level 1			Level 2			Level 3			
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
1.23	Specimen Collection Datetime	specimen_collect_dtm	detail/lab_req_data/specimen_collect_dtm	string(23)	N/A	N/A	0..1	N/A	0..1	N/A	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005			
1.24	Specimen Details	specimen_details	detail/lab_req_data/specimen_details	string(255)	0..1	N/A	0..1	N/A	0..1	N/A				
1.25	File Indicator	file_ind	detail/lab_req_data/file_ind	string(1)	1..1	N/A	1..1	N/A	1..1	N/A				
1.29	Record Creation Datetime	record_creation_dtm	detail/lab_req_data/record_creation_dtm	string(23)	0..1	N/A	0..1	N/A	0..1	N/A	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005			
1.30	Record Creation Institution Identifier	record_creation_inst_id	detail/lab_req_data/record_creation_inst_id	string(10)	0..1	N/A	0..1	N/A	0..1	N/A	Fixed length			
1.31	Record Creation Institution Name	record_creation_inst_name	detail/lab_req_data/record_creation_inst_name	string(255)	0..1	N/A	0..1	N/A	0..1	N/A				

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality								Remarks	
					Not Applicable (N/A – Data field should not be submitted)									
					Level 1		Level 2		Level 3					
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
1.32	Record Last Update Datetime	record_update_dtm	detail/lab_req_data/record_update_dtm	string(23)	0..1	N/A	0..1	N/A	0..1	N/A	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005			
1.33	Record Update Institution Identifier	record_update_inst_id	detail/lab_req_data/record_update_inst_id	string(10)	0..1	N/A	0..1	N/A	0..1	N/A	Fixed length			
1.34	Record Update Institution Name	record_update_inst_name	detail/lab_req_data/record_update_inst_name	string(255)	0..1	N/A	0..1	N/A	0..1	N/A				
1.35	Anatomical Pathology Test Name	ap_test_name	detail/lab_req_data/ap_test_name	string(1000)	1..1	N/A	1..1	N/A	1..1	N/A				
“Anatomical Pathology Result - Diagnosis Data” Related Tags														
	Anatomical Pathology Test Result Data	labap_result_data	detail/labap_result_data		N/A	N/A	1..*	N/A	1..*	N/A	Parent Tag			
2.1	Record Key	record_key	detail/labap_result_data/record_key	string(50)	N/A	N/A	1..1	N/A	1..1	N/A	The key to cross-reference laboratory test request data			

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality Not Applicable (N/A – Data field should not be submitted)								Remarks	
					Level 1			Level 2			Level 3			
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
2.2	Report Status Code	report_status_cd	detail/labap_result_data/report_status_cd	string(5)	N/A	N/A	N/A	1..1	N/A	N/A	1..1	N/A	N/A	Refer to the code set of “Laboratory report status” in eHR Office website
2.3	Report Status Description	report_status_desc	detail/labap_result_data/report_status_desc	string(255)	N/A	N/A	N/A	1..1	N/A	N/A	1..1	N/A	N/A	
2.4	Report Status Local Description	report_status_lt_desc	detail/labap_result_data/report_status_lt_desc	string(255)	N/A	N/A	N/A	1..1	N/A	N/A	1..1	N/A	N/A	
2.5	Laboratory Report Authorised Datetime	report_auth_dtm	detail/labap_result_data/report_auth_dtm	string(23)	N/A	N/A	N/A	1..1	N/A	N/A	1..1	N/A	N/A	
2.6	Anatomical Pathology Diagnosis Title	ap_diagnosis_title	detail/labap_result_data/ap_diagnosis_title	string(255)	N/A	N/A	N/A	1..1	N/A	N/A	1..1	N/A	N/A	
2.7	Anatomical Pathology Diagnosis Text Result	ap_diagnosis_text	detail/labap_result_data/ap_diagnosis_text	string(2000)	N/A	N/A	N/A	1..1	N/A	N/A	1..1	N/A	N/A	
2.8	Panel Local Code	panel_lt_cd	detail/labap_result_data/panel_lt_cd	string(50)	0..1	N/A	N/A	0..1	N/A	N/A	0..1	N/A	N/A	

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality Not Applicable (N/A – Data field should not be submitted)								Remarks	
					Level 1			Level 2			Level 3			
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
2.9	Panel Local Description	panel_lt_desc	detail/labap_result_data /panel_lt_desc	string(255)	0..1	N/A	0..1	N/A	0..1	N/A				
2.10	Laboratory Report Authorised Healthcare Staff English Name	report_auth_staff_eng_name	detail/labap_result_data /report_auth_staff_eng_name	string(100)	N/A	N/A	0..1	N/A	0..1	N/A				
2.11	Laboratory Report Authorised Healthcare Staff Chinese Name	report_auth_staff_chi_name	detail/labap_result_data /report_auth_staff_chi_name	string(10)	N/A	N/A	0..1	N/A	0..1	N/A	Maximum 10 Chinese characters			
“Anatomical Pathology Result – Diagnosis Topography and Finding Data” Related Tags														
/	Anatomical Pathology Daignosis Result Data	labap_dn_result	detail/labap_dn_result_data		N/A	N/A	1..*	N/A	1..*	N/A	Parent Tag			
3.1	Record Key	record_key	detail/labap_dn_result_data/record_key	string(50)	N/A	N/A	1..1	N/A	1..1	N/A	The key to cross-reference laboratory test request data			

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality								Remarks	
					Not Applicable (N/A – Data field should not be submitted)									
					Level 1			Level 2			Level 3			
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
3.2	Report Status Code	report_status_cd	detail/labap_dn_result_data/report_status_cd	string(5)	N/A	N/A		1..1	N/A		1..1	N/A	Refer to the code set of “Laboratory report status” in eHR Office website	
3.3	Report Status Description	report_status_desc	detail/labap_dn_result_data/report_status_desc	string(255)	N/A	N/A		1..1	N/A		1..1	N/A		
3.4	Report Status Local Description	report_status_lt_desc	detail/labap_dn_result_data/report_status_lt_desc	string(255)	N/A	N/A		1..1	N/A		1..1	N/A		
3.5	Laboratory Report Authorised Datetime	report_auth_dtm	detail/labap_dn_result_data/report_auth_dtm	string(23)	N/A	N/A		1..1	N/A		1..1	N/A		
3.6	Anatomical Pathology Diagnosis Title	ap_diagnosis_title	detail/labap_dn_result_data/ap_diagnosis_title	string(255)	N/A	N/A		1..1	N/A		1..1	N/A		
3.7	Topography Local Code	topography_lt_cd	detail/labap_dn_result_data/topography_lt_cd	string(30)	N/A	N/A		0..1	N/A		0..1	N/A		

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality Not Applicable (N/A – Data field should not be submitted)								Remarks	
					Level 1			Level 2			Level 3			
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
3.8	Topography Local Description	topography_lt_desc	detail/labap_dn_result_data/topography_lt_desc	string(255)	N/A	N/A	0..1	N/A	1..1 if [Diagnosis topography identifier - recognised terminology] is given N/A if [Diagnosis topography identifier - recognised terminology] is blank	N/A				
3.9	Anatomical Pathology Finding Local Code	finding_lt_cd	detail/labap_dn_result_data/finding_lt_cd	string(30)	N/A	N/A	0..1	N/A	0..1	N/A				
3.10	Anatomical Pathology Finding Local Description	finding_lt_desc	detail/labap_dn_result_data/finding_lt_desc	string(255)	N/A	N/A	0..1	N/A	1..1	N/A				

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality Not Applicable (N/A – Data field should not be submitted)								Remarks	
					Level 1			Level 2			Level 3			
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
3.11	Diagnosis Topography - Recognised Terminology Name	topography_rt_name	detail/labap_dn_result_data/topography_rt_name	string(20)	N/A	N/A	N/A	N/A	N/A	1..1 if [Diagnosis topography identifier - recognised terminology] is given N/A if [Diagnosis topography identifier - recognised terminology] is blank	N/A			
3.12	Diagnosis Topography Identifier - Recognised Terminology	topography_rt_id	detail/labap_dn_result_data/topography_rt_id	string(30)	N/A	N/A	N/A	N/A	N/A	0..1	N/A			

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality Not Applicable (N/A – Data field should not be submitted)								Remarks	
					Level 1			Level 2			Level 3			
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
3.13	Diagnosis Topography Description - Recognised Terminology	topography_rt_desc	detail/labap_dn_result_data/topography_rt_desc	string(255)	N/A	N/A	N/A	N/A	N/A	N/A	1..1 if [Diagnosis topography identifier - recognised terminology] is given N/A if [Diagnosis topography identifier - recognised terminology] is blank	N/A		
3.14	Diagnosis Finding - Recognised Terminology Name	finding_rt_name	detail/labap_dn_result_data/finding_rt_name	string(20)	N/A	N/A	N/A	N/A	N/A	N/A	1..1	N/A		
3.15	Diagnosis Finding Identifier - Recognised Terminology	finding_rt_id	detail/labap_dn_result_data/finding_rt_id	string(30)	N/A	N/A	N/A	N/A	N/A	N/A	1..1	N/A		
3.16	Diagnosis Finding Description - Recognised Terminology	finding_rt_desc	detail/labap_dn_result_data/finding_rt_desc	string(255)	N/A	N/A	N/A	N/A	N/A	N/A	1..1	N/A		

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality Not Applicable (N/A – Data field should not be submitted)								Remarks	
					Level 1			Level 2			Level 3			
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
“Anatomical Pathology Result – Report Details Data” Related Tags														
	Anatomical Pathology Other Text Result Data	labap_apt_result_data	detail/labap_apt_result_data		N/A	N/A	0..1	N/A	0..1	N/A	N/A	N/A	Parent Tag	
4.1	Record Key	record_key	detail/labap_apt_result_data/record_key	string(50)	N/A	N/A	1..1	N/A	1..1	N/A	The key to cross-reference anatomical pathology test result data			
4.2	Report Status Code	report_status_cd	detail/labap_apt_result_data/report_status_cd	string(5)	N/A	N/A	1..1	N/A	1..1	N/A	The key to cross-reference anatomical pathology test result data			
4.3	Report Status Description	report_status_desc	detail/labap_apt_result_data/report_status_desc	string(255)	N/A	N/A	1..1	N/A	1..1	N/A				
4.4	Report Status Local Description	report_status_lt_desc	detail/labap_apt_result_data/report_status_lt_desc	string(255)	N/A	N/A	1..1	N/A	1..1	N/A				
4.5	Laboratory Report Authorised Datetime	report_auth_dtm	detail/labap_apt_result_data/report_auth_dtm	string(23)	N/A	N/A	1..1	N/A	1..1	N/A	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005			

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality Not Applicable (N/A – Data field should not be submitted)								Remarks	
					Level 1			Level 2			Level 3			
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
4.6	Anatomical Pathology Report Details - Title Code	apt_detail_title_cd	detail/labap_apt_result_data/apt_detail_title_cd	string(10)	N/A	N/A	1..1 if [Anatomical Pathology Report Details – Content] is not blank	N/A	1..1 if [Anatomical Pathology Report Details – Content] is not blank	N/A	N/A			
4.7	Anatomical Pathology Report Details - Title Description	apt_detail_title_desc	detail/labap_apt_result_data/apt_detail_title_desc	string(255)	N/A	N/A	1..1 if [Anatomical Pathology Report Details - Title Code] is not blank	N/A	1..1 if [Anatomical Pathology Report Details - Title Code] is not blank	N/A	N/A			
4.8	Anatomical Pathology Report Details - Title Local Description	apt_detail_title_lt_desc	detail/labap_apt_result_data/apt_detail_title_lt_desc	string(255)	N/A	N/A	1..1 if [Anatomical Pathology Report Details - Title Code] is not blank	N/A	1..1 if [Anatomical Pathology Report Details - Title Code] is not blank	N/A	N/A			
4.9	Anatomical Pathology Report Details – Content	apt_detail_content	detail/labap_apt_result_data/apt_detail_content	string(2000)	N/A	N/A	0..1	N/A	0..1	N/A	N/A			
“Laboratory Report Data” Related Tags														
	Laboratory Report	lab_report_data	detail/lab_report_data		1..*	N/A	0..*	N/A	0..*	N/A				

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality								Remarks	
					Not Applicable (N/A – Data field should not be submitted)									
					Level 1			Level 2			Level 3			
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
5.1	Record Key	record_key	detail/lab_report_data/r ecord_key	string(50)	1..1	N/A	1..1	N/A	1..1	N/A	The key to cross- reference laboratory test request data			
5.2	Report Status Code	report_status_cd	detail/lab_report_data/r eport_status_cd	string(5)	1..1	N/A	1..1	N/A	1..1	N/A	Refer to the code set of “Laboratory Report Status” in eHR Office website			
5.3	Report Status Description	report_status_desc	detail/lab_report_data/r eport_status_desc	string(255)	1..1	N/A	1..1	N/A	1..1	N/A				
5.4	Report Status Local Description	report_status_lt_desc	detail/lab_report_data/r eport_status_lt_desc	string(255)	1..1	N/A	1..1	N/A	1..1	N/A				
5.5	Laboratory Report Authorised Datetime	report_auth_dtm	detail/lab_report_data/r eport_auth_dtm	string(23)	1..1	N/A	1..1	N/A	1..1	N/A	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005			
5.6	Laboratory Report Date	report_dtm	detail/lab_report_data/r eport_dtm	string(23)	0..1	N/A	0..1	N/A	0..1	N/A	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005			

Technical Interface Specification for LABAP Record

Number	Data Field	XML Tag	XPath (prefix:ClinicalDocument/component/nonX MLBody/clinicalDoc/)	Maximum Length	Cardinality								Remarks	
					Not Applicable (N/A – Data field should not be submitted)									
					Level 1			Level 2			Level 3			
					S1	S2	S3	S1	S2	S3	S1	S2	S3	
5.7	File Name	file_name	detail/lab_report_data/file_name	string(255)	N/A if [Laboratory Report (PDF)] is not given 1..1 if [Laboratory Report (PDF)] is given	N/A	N/A if [Laboratory Report (PDF)] is not given 1..1 if [Laboratory Report (PDF)] is given	N/A	N/A if [Laboratory Report (PDF)] is not given 1..1 if [Laboratory Report (PDF)] is given	N/A	N/A	N/A	File Name with file extension	
5.8	Laboratory Report (Text)	report_text	detail/lab_report_data/report_text	string(32768)	0..1	N/A	0..1	N/A	0..1	N/A	N/A	N/A	Please refer to Data Field [Laboratory Report (PDF)] at the end of table for more details.	
	Laboratory Report (PDF)				1..*	N/A	N/A if [File Indicator] = 0 1..1 if [File Indicator] = 1	N/A	N/A if [File Indicator] = 0 1..1 if [File Indicator] = 1	N/A	N/A	N/A	Please refer to Data Field [Laboratory Report (Text)] for more details. The report image is Base64 and MIME encoded and embedded in HL7 ORU Message OBX.5.	

10.6 ADDITIONAL MANDATORY ELEMENTS IN CDA FOR HL7-HK MESSAGE STANDARDS

A CDA document is wrapped by the <ClinicalDocument> element. From Section 8.3 *CDA Document Skeleton*, tag elements which are mandatory under CDA schema but NOT REQUIRED by eHR are highlighted. Required tag elements of CDA under HL7-HK Message Standards will be introduced in Section 8.4 *Data Mapping in CDA under HL7-HK Message Standards*.

For the tag elements which are mandatory under CDA schema but not required by eHR, the value of this tag is allowed to be ‘Blank’. For example, tag element “id” is allowed to be ‘Blank’ in HL7-HK Message Standards, the tag element should be presented as “<id/>” in the CDA.

The table below shows the tag elements which is mandatory under CDA schema but NOT REQUIRED by eHR.

XML Tag	XPath	Definition	Cardinality	Remarks
id	ClinicalDocument/id	It represents the unique instance identifier (UID) of a clinical document	1..1	
confidentialityCode	ClinicalDocument/confidentialityCode	Confidentiality of the clinical document	1..1	
recordTarget	ClinicalDocument/recordTarget	The recordTarget represents the medical record that this document belongs to	1..1	
patientRole	ClinicalDocument/recordTarget/patientRole	A recordTarget is represented as a relationship between a person and an organization, where the person is in a patient role	1..1	
id	ClinicalDocument/recordTarget/patientRole/id	Unique identifier of the patient role	1..1	
author	ClinicalDocument/author	It represents the humans and/or machines that authored the document	1..1	
time	ClinicalDocument/author/time	It represents the day and time of the authoring of the original content	1..1	
assignedAuthor	ClinicalDocument/author/a	An author is a person in the role	1..1	

Technical Interface Specification for LABAP Record

XML Tag	XPath	Definition	Cardinality	Remarks
	ssignedAuthor	of an assigned author		
id	ClinicalDocument/author/a ssignedAuthor/id	Unique identifier of the assigned author	1..1	
<hr/>				
custodian	ClinicalDocument/custodia n	The custodian is the steward that is entrusted with the care of the document	1..1	
assignedCustodian	ClinicalDocument/custodia n/assignedCustodian	A custodian is a scoping organization in the role of an assigned custodian. The steward organization is an entity scoping the role of AssignedCustodian.	1..1	
representedCustodi anOrganization	ClinicalDocument/custodia n/assignedCustodian/repre sentedCustodianOrganizati on	It is the represented custodian organization that is entrusted with the care of the document.	1..1	
id	ClinicalDocument/custodia n/assignedCustodian/repre sentedCustodianOrganizati on/id	Unique identifier of represented custodian organization	1..1	
<hr/>				
text	ClinicalDocument/compon ent/nonXMLBody/text	It is used to reference data that is stored externally to the CDA document or to encode the data directly inline	1..1	

11 OTHER REQUIREMENTS

11.1 CHARACTER SET AND ENCODING

Unicode Transformation Format – 8 bit (UTF-8) will be used in eHR Clinical Data Sharing data exchange. HCP is required to ensure the file that sent to eHR should use UTF-8 encoding as below:

Data File Type	Charset and Encoding	Version
HL7 message (e.g. ORU^R01)	UTF-8	XML 1.0
CDA in MIME package	UTF-8 base64	MIME 1.0

11.2 XML PREDEFINED ENTITIES

Extensible Markup Language (XML) is adopted in eHR Clinical Data Sharing data exchange using HL7 messages. The XML specification defines five "predefined entities" representing special characters, and requires that all XML processors honor them. To render the character, the format `&name;` must be used. For example, `&` renders as the character `&`. The table below lists the 5 predefined entities in XML:

Name	Character	Entity Reference	Description
gt	>	>	Greater than
lt	<	<	Less than
amp	&	&	Ampersand
apos	'	'	Apostrophe
quot	"	"	Quotation mark

The prefix of namespace in XML in HL7 message is not expected.

12 PREPARATION OF MESSAGE FOR DATA TRANSFER

12.1 BASIC REQUIREMENTS

- CDA XSD
- CDA document
- MIME encoder or base64 encoder
- HL7 version 2.5 ORU Message

12.2 HL7 MESSAGE STRUCTURE APPLIED

- Event Type: ORU
- Event Code: R01
- Event Name: Unsolicited Observation Message
- Usage: It provides structured HCR-oriented clinical data between systems.

12.3 PREPARE A HL7 ORU MESSAGE WITH CDA & IMAGE

DOCUMENT

1. Prepare CDA document with clinical data and report images according to the message structure and data mapping in this Technical Interface Specification for eHR Laboratory Result (AP Result) Record and Data Requirement for eHR Laboratory Result (AP Result) Record.
2. Prepare HL7 ORU Message complying to HL7 message structure and data mapping specified in this specification.
3. Use MIME encoder or base64 encoder to encode the CDA and Image files (if exists) in Base64.
4. Embed the encoded CDA document in MIME format into OBX.5.5 – ED.5 of the ORU Message. (*Refer to Section 7.4 - Data Mapping for MIME Package for the details of MIME standards*)
5. Save the file of HL7 message, CDA document and image complying with the file naming convention defined in *Section 8 - File Naming Convention*.
6. Send out the ORU Message via ebMS to the eHR system

12.4 DATA MAPPING FOR MIME PACKAGE (CDA)

Below shows the basic structure of a MIME Package. Explanation of the elements inside the MIME package will be shown in the following table.

```
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=<boundary_value>

--<boundary_value>
Content-Type: text/xml; charset=UTF-8;
name="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Disposition: attachment;
filename="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Transfer-Encoding: base64

<base64 encoded string of CDA>

--<boundary_value>
Content-Type: text/xml; charset=UTF-8;
name="8088450656.BRANCHA.LABAP.PWH019999.123.pdf.201000000001.20110702084530"
Content-Disposition: attachment;
filename="8088450656.BRANCHA.LABAP.PWH019999.123.pdf.201000000001.20110702084530"
Content-Transfer-Encoding: base64

<base64 encoded string of image report>

--<boundary_value>--
```

Header	Attribute	Mandatory (M) / Optional(O)	Default Value	Remarks
MIME-Version		M	1.0	
Content-Type		M	multipart/mixed	
	boundary	M	<boundary string>	<boundary string>: typically a long random string that doesn't clash with the body text
<blank line>				
CDA Document	--<boundary_value>			
	Content-Type	M	text/xml	
	charset	M	UTF-8	
	name	O	<file name>	<file name>: The file's original name Format of the file name should be complied with the naming convention specified in Section 8.2 CDA Document Name
	Content-Disposition	M	attachment	
	filename	M	<file name>	<file name>: The file's original name Format of the file name should be complied with the naming convention specified in Section 8.2 CDA Document

Technical Interface Specification for LABAP Record

					Name		
Content-Transfer-Encoding		M	base64				
<blank line>							
<BASE64 Content String>							
--<boundary_value>							
Content-Type		M	application/pdf				
	charset	M	UTF-8				
	name	O	<file name>	<file name>: The file's original name Format of the file name should be complied with the naming convention specified in Section 8.3 Image File Name			
Content-Disposition		M	attachment				
	filename	M	<file name>	<file name>: The file's original name Format of the file name should be complied with the naming convention specified in Section 8.3 Image File Name			
Content-Transfer-Encoding		M	base64	N/A			
<blank line>							
<BASE64 Content String>							
--<boundary_value>--							

Remarks:

1. There will be only one CDA Document which must be the first attachment of the MIME.
2. The existence of [Laboratory Report (PDF)] depends on the data compliance level as specified above.

Data Field	Mandatory (M) / Optional (O) / Not Applicable (N/A – Data field should not be submitted)					
	Level 1			Level 3		
	S1	S2	S3	S1	S2	S3
Laboratory Report (PDF)	Either [Laboratory Report (PDF)] or [Laboratory Report (Text)] or BOTH	N/A	O			N/A

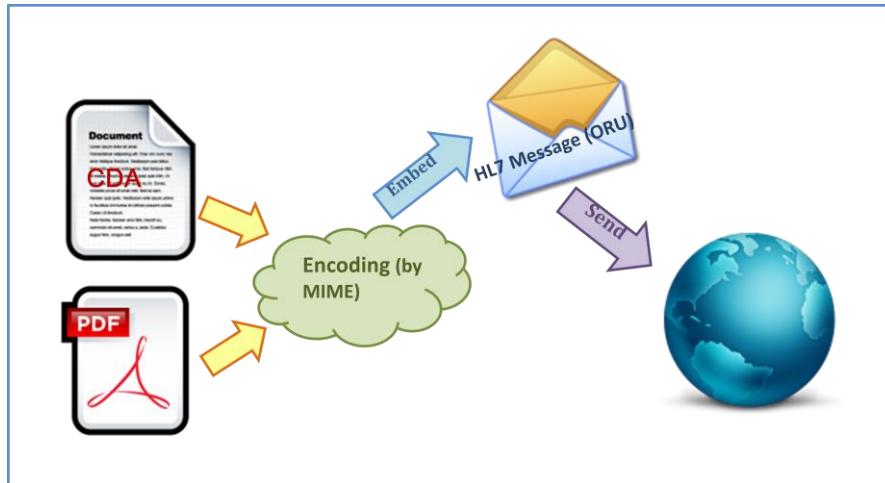


Figure 4 - CDA Document Exchange in HL7 Message

13 FILE NAMING CONVENTION

This section describes the file naming standards of the files included in HL7 message under HL7-HK Message Standards. The file components include:

- HL7 Message File
- CDA Document
- Image File

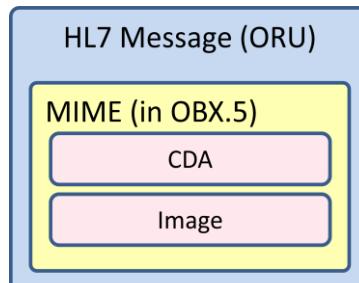


Figure 5- *File Components in HL7 Message*

13.1 HL7 MESSAGE FILE NAME

The naming convention of the file which is carrying the HL7 message is specified as below:

Format

With Sending Location Code,

<*HCP ID*>.<*Sending Location Code*>.<*Record Type*>.HL7.<*Message Control ID*>

Example

e.g. 8088450656.BRANCHA.LABAP.HL7.20110701230000

Naming Convention

1. The file name should be in capital letters.
2. The value of each file name component should not contain dot “.”
3. Message Control ID refers to the value in MSH.10
4. If the <**Sending Location code**> cannot be provided, its value can be set as same as <**HCP ID**>.
5. The value of the <**Sending Location code**> can be in any combination of alphanumeric characters i.e. [A-Z][a-z][0-9][-_]

The following table shows the components of file name and the respective definitions:

Sequence	Component	Definition	Maximum Length	Remarks
1	HCP ID	A unique identifier assigned by	string(10)	

Technical Interface Specification for LABAP Record

		eHR Healthcare Provider Index to each healthcare institution for participation in eHR Sharing System		
2	Sending Location Code	A code to indicate the location where the data is sending from. The format should be agreed before the interface is on production.	string(20)	
3	Record Type	A standardised short term to distinguish the sharable dataset	string(20)	Fixed value: LABAP
4	HL7	HL7 File	string(3)	Fixed value: HL7
5	Message Control ID	Message Control ID refers to the value in MSH.10 of HL7 file	string(14)	In format: YYYYMMDDhhmmss Fixed length

13.2 CDA DOCUMENT NAME

The naming convention of the file which is carrying the CDA document is specified as below:

Format

With Sending Location Code,

<HCP ID>. <Sending Location Code>. <Record Type>. CDA. <Generation Date>

Example

e.g. 8088450656.BRANCHA.LABAP.CDA.20110702084530

Naming Convention

1. The file name should be in capital letters.
2. Generation date provided in the file name should be in YYYYMMDDhhmmss format (YYYY:year; MM:month; DD:day; hh:hour; mm:minute; ss:second).
3. The value of each file name component should not contain dot “.”
4. If the *<Sending Location code>* cannot be provided, its value can be set as same as *<HCP ID>*.
5. The value of the *<Sending Location code>* can be in any combination of alphanumeric characters i.e. [A-Z][a-z][0-9][-_]

Technical Interface Specification for LABAP Record

The following table shows the components of file name and the respective definitions:

Sequence	Component	Definition	Maximum Length	Remarks
1	HCP ID	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution for participation in eHR Sharing System	string(10)	
2	Sending Location Code	A code to indicate the location where the data is sending from. The format should be agreed before the interface is on production.	string(20)	
3	Record Type	A standardised short term to distinguish the sharable dataset	string(20)	Fixed value: LABAP
4	CDA	CDA File	string(3)	Fixed value: CDA
5	Generation Date	File generation date	string(14)	In format: YYYYMMDDhhmmss

13.3 Image File Name

Image file or plain text file are accepted for all data compliance levels of eHR sharable datasets. All files should be named according to the standarised file naming convention.

Format

With file extension,

<HCP ID>.<Sending Location Code>.<Record Type>.<Record Key>.<Original File Name>.<File Extension>.<eHR Number>.<Generation Date>

Example

e.g. 8088450656.BRANCHA.LABAP.PW999.122.pdf.20100000001.20110702084530

Naming Convention

1. The file name should be in capital letters except pdf extension.
2. Generation date provided in the file name should be in YYYYMMDDhhmmss format (YYYY:year; MM:month; DD:day; hh:hour; mm:minute; ss:second).
3. The value of each file name component should not contain dot “.”
4. If the *<Sending Location code>* cannot be provided, its value can be set as same as *<HCP ID>*.
5. The value of the *<Sending Location Code>*, *<Record Key>* and *<Original File Name>* can be in any combination of alphanumeric characters i.e. [A-Z][a-z][0-9][-_]

Technical Interface Specification for LABAP Record

The following table shows the components of file name and the respective definitions:

Sequence	Component	Definition	Maximum Length	Remarks
1	HCP ID	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution for participation in eHR Sharing System	string(10)	Fixed length
2	Sending Location Code	A code to indicate the location where the data is sending from. The format should be agreed before the interface is on production.	string(20)	
3	Record Type	A standardised short term to distinguish the sharable dataset	string(20)	Fixed value: LABAP
4	Record Key	The key to identify and map the structured data record	string(50)	
5	Original File Name	The file name used in source institution	string(100)	
6	File Extension	pdf (Portable Document Format File)	string(3)	
7	eHR Number	A unique eHR healthcare recipient identifier assigned to each patient for each participation in the Hong Kong eHR	string(12)	Fixed length
8	Generation Date	File generation date	string(14)	In format: YYYYMMDDhhmmss

14 EXAMPLE OF HL7-HK MESSAGE STANDARDS

14.1 EXAMPLES FOR DATA COMPLIANCE LEVEL 1

Example Data

Insert / Update / Delete a laboratory result (AP result) of a HCR. The record is composed of a request data and two report data.

HCR Data	
eHR Number	201000000001
HKIC Number	A1234563
Type of Document	ID
Document Number	A1234563
English Surname	CHAN
English Given Name	TAI MAN
English Full Name	CHAN, TAI MAN
Sex	M
Birth date	1999-01-01 00:00:00.000
Laboratory Test Request Data (ReqA)	
Record Key	PYN LAB APS 000123
Transaction Datetime	2012-05-01 00:00:00.000
Transaction Type	I : New (S1) U : Update (S2) D : Delete (S3)
Last Update Datetime	2012-05-01 00:00:00.000
Episode Number	EP-12345
Attendance Institution Identifier	8088450656
Laboratory Test Request Number	11-CC123456
Laboratory Test Request Institution of Participant – Code	1735455950
Laboratory Test Request Institution of Participant – Description	Prince of Wales Hospital
Laboratory Test Request Institution of Patient - Local Description	Prince of Wales Hospital
Laboratory Test Order Number	CC1234567
Laboratory Category Code	PATH
Laboratory Category Description	Anatomical Pathology Laboratory
Laboratory Category Local Description	Anatomical Pathology Laboratory
Laboratory Test Request Performing Laboratory Name	Kowloon Bay Clinical Laboratory
Laboratory Report Reference Datetime	2009-11-20 14:10:00.000
File Indicator	1
Laboratory Report Comment	
Record Creation Datetime	2010-06-08 15:22:00.000
Record Creation Institution Identifier	8088450656
Record Creation Institution Name	Princess Margaret Hospital
Record Last Update Datetime	2010-06-08 15:22:00.000
Record Update Institution Identifier	8088450656
Record Update Institution Name	Princess Margaret Hospital
Laboratory Report Data (ReqA_RptA)	
Record Key	PYN LAB APS 000123
Report Status Code	F
Report Status Description	Final report
Report Status Local Description	Final Report
Laboratory Report Date	2009-11-20 14:10:00.000
Laboratory Report Authorised Datetime	2009-11-20 14:10:00.000

Technical Interface Specification for LABAP Record

File Name	8088450656.BRANCHA.LABAP.PYN_LABAPS_0001 23.123.pdf. 201000000001.20110702084530
Laboratory Report – Text	
Laboratory Report Data (ReqA_RptB)	
Record Key	PYN_LABAPS_000123
Report Status Code	F
Report Status Description	Final report
Report Status Local Description	Final Report
Laboratory Report Date	2009-11-21 14:10:00.000
Laboratory Report Authorised Datetime	2009-11-21 14:10:00.000
File Name	8088450656.BRANCHA.LABAP.PYN_LABAPS_0001 23.124.pdf. 201000000001.20110702084530
Laboratory Report – Text	

14.1.1 CDA Example for New (S1) in Data Compliance Level 1

8088450656.BRANCHA.LABAP.CDA.20110702084530

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" xmlns="urn:hl7-org:v3"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <!--
  ****
  CDA General Information
  ****
  -->
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
  <id/>
  <code code="LABAP"/>
  <title>Laboratory Anatomical Pathology Result </title>
  <effectiveTime/>
  <confidentialityCode/>
  <recordTarget>
    <patientRole>
      <id/>
    </patientRole>
    <recordTarget>
      <author>
        <time/>
        <assignedAuthor>
          <id/>
        </assignedAuthor>
        <author>
          <time/>
          <assignedAuthor>
            <id/>
          </assignedAuthor>
          <author>
            <custodian>
              <assignedCustodian>
                <representedCustodianOrganization>
                  <id/>
                </representedCustodianOrganization>
                <assignedCustodian>
                  <representedCustodianOrganization>
                    <id/>
                  </representedCustodianOrganization>
                <assignedCustodian>
                  <custodian>
                </assignedCustodian>
                <!--
                ****
                Clinical Information
                ****
                -->
                <component>
                  <nonXMLBody>
                    <clinicalDoc>
                      <participant>
                        <ehr_no>201000000001</ehr_no>
                        <hkid>A1234563</hkid>
                        <doc_type>ID</doc_type>
                        <doc_no>A1234563</doc_no>
                        <person_eng_surname>CHAN </person_eng_surname>
                        <person_eng_given_name>TAI MAN</person_eng_given_name>
                        <person_eng_full_name>CHAN, TAI MAN</person_eng_full_name>
                        <sex>M</sex>
                        <birth_date>1999-01-01 00:00:00.000</birth_date>
                      </participant>
                      <detail>
                        <lab_req_data>
                          <record_key>PYN_LABAPS_000123</record_key>
                          <transaction_dtm>2012-05-01 00:00:00.000</transaction_dtm>
                          <transaction_type>I</transaction_type>
                          <last_update_dtm>2012-05-01 00:00:00.000</last_update_dtm>
                          <episode_no>EP-12345</episode_no>
                          <attendance_inst_id>8088450656</attendance_inst_id>
                          <request_no>11-CC123456</request_no>
                          <request_participant_inst_id>1735455950</request_participant_inst_id>
                          <request_participant_inst_name>PWH Prince of Wales Hospital </request_participant_inst_name>
                          <request_participant_inst_lt_desc>PWH Prince of Wales Hospital </request_participant_inst_lt_desc>
                          <order_no>CC1234567</order_no>
                          <lab_category_cd>PATH</lab_category_cd>
                          <lab_category_desc>Anatomical Pathology</lab_category_desc>
                          <lab_category_lt_desc>Anatomical Pathology Laboratory</lab_category_lt_desc>
                          <perform_lab_name>Kowloon Bay Clinical Laboratory</perform_lab_name>
                          <report_reference_dtm>2009-11-20 14:10:00.000</report_reference_dtm>
                          <lab_report_comment></lab_report_comment>
                        </lab_req_data>
                      </detail>
                    </clinicalDoc>
                  </nonXMLBody>
                </component>
              </representedCustodianOrganization>
            </assignedCustodian>
          </custodian>
        </author>
      </recordTarget>
    </patientRole>
  </recordTarget>
</ClinicalDocument>
```

Technical Interface Specification for LABAP Record

```
<file_ind>1</file_ind>
<record_creation_dtm>2010-06-08 15:22:00.000</record_creation_dtm>
<record_creation_inst_id>8088450656</record_creation_inst_id>
<record_creation_inst_name>Princess Margaret Hospital</record_creation_inst_name>
<record_update_dtm>2010-06-08 15:22:00.000</record_update_dtm>
<record_update_inst_id>8088450656</record_update_inst_id>
<record_update_inst_name>Princess Margaret Hospital</record_update_inst_name>
</lab_req_data>
</lab_report_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>P</report_status_cd>
<report_status_desc>Provisional/Preliminary report</report_status_desc>
<report_status_lt_desc>Provisional/Preliminary Report</report_status_lt_desc>
<report_auth_dtm>2009-11-20 14:10:00.000</report_auth_dtm>
<report_dtm>2009-11-20 14:10:00.000</report_dtm>
<file_name>8088450656.BRANCHALABAP.PYN_LABAPS_000123.123.pdf.20100000001.20110702084530</file_name>
<report_text></report_text>
</lab_report_data>
</lab_report_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<report_dtm>2009-11-21 14:10:00.000</report_dtm>
<file_name>8088450656.BRANCHALABAP.PYN_LABAPS_000123.124.pdf.20100000001.20110702084530</file_name>
<report_text></report_text>
</lab_report_data>
</detail>
</clinicalDoc>
<text/>
</nonXMLBody>
</component>
</ClinicalDocument>
```

14.1.2 HL7 Message Example for scenario New (S1) in Data Compliance Level 1

8088450656.BRANCHA.LABAP.HL7.20110702084530

```
<?xml version="1.0" encoding="utf-8"?>
<ORU_R01 xmlns="urn:hl7-org:v2xml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:hl7-org:v2xml \\\\hoehrsv01\\eHR\\CE4\\MESSAG~1\\EHR\\HL7SAM~1\\V25SCH~1\\xsd\\ORU_R01.xsd">
  <MSH>
    <MSH.1></MSH.1>
    <MSH.2>^~\&lt;></MSH.2>
    <MSH.3>
      <HD.1>CMS 3.0</HD.1>
    </MSH.3>
    <MSH.4>
      <HD.1>8088450656</HD.1>
    </MSH.4>
    <MSH.5>
      <HD.1>EIF</HD.1>
    </MSH.5>
    <MSH.6>
      <HD.1>eHR</HD.1>
    </MSH.6>
    <MSH.7>
      <TS.1>20110427181041</TS.1>
    </MSH.7>
    <MSH.8>1</MSH.8>
    <MSH.9>
      <MSG.1>ORU</MSG.1>
      <MSG.2>R01</MSG.2>
      <MSG.3>ORU_R01</MSG.3>
    </MSH.9>
    <MSH.10>20110702084530</MSH.10>
    <MSH.11>
      <PT.1>P</PT.1>
    </MSH.11>
    <MSH.12>
      <VID.1>2.5</VID.1>
    </MSH.12>
    <MSH.15>NE</MSH.15>

      1.1.1.1 <MSH.21>
      1.1.1.2 <EI.1>eRSS-2.0.0</EI.1>
      1.1.1.3 </MSH.21>

  </MSH>
  <ORU_R01.PATIENT_RESULT>
  <ORU_R01.ORDER_OBSERVATION>
    <OBR>
      <OBR.4>
        <CE.1> LABAP </CE.1>
      </OBR.4>
    </OBR>
    <ORU_R01.OBSERVATION>
      <OBX>
        <OBX.2>ED</OBX.2>
        <OBX.3>
          <CE.1> LABAP </CE.1>
        </OBX.3>
        <OBX.4>NBL</OBX.4>
        <OBX.5>
      <ED.2>multipart</ ED.2>
      <ED.4>A</ ED.4>
      <ED.5>
        MIME-Version: 1.0
        Content-Type: multipart/mixed; boundary=00163630f5f354355b046be66f6d
        --00163630f5f354355b046be66f6d
        Content-Type: text/xml; charset=UTF-8; name="8088450656.BRANCHA.LABAP.CDA.20110702084530"
        Content-Disposition: attachment; filename="8088450656.BRANCHA.LABAP.CDA.20110702084530"
        Content-Transfer-Encoding: base64
        X-Attachment-Id: f_fvqdehi70
    
```

Technical Interface Specification for LABAP Record

PD94bWwgdmVyc2lvbj0iMS4wliBlbmNvZGluZz0iVVRLTgiPz4NCjwhLS0gQ0RBIFNhXBs
ZSBmb3IgSEtISFlgSW50ZXJvcGVyYWJpbGl0eSATLT4NCg0KPCeLSBD63B5cmInaHQ6fFRo
ZSBvd25lcNoaXAgb2YgdGhpcyBkb2N1bWVudCBzaG91bGQgYmUgUHJlcGFyYXRvcnkgR3Jv
dXAzb24gZUhSIENvbnRlbnQgJiTdTGFuZGMgdW5kZXIgZUhSIENvbnRlbnQgYW5kIElu
Zm9ybWF0aW9uIFN0YW5kYXJkcyBXb3JraW5nIEDyb3VwIGFuZCBmdXR1cmUgZUhSIG9mZmlj
.....
.....
aW9uPSJ1cm46aGw3LW9yZzp2MyBDREEueHNkliBjbGFzc0NvZGU9IkRPQ0NMSU4iIG1vb2RD
b2RIP SJF V k4iPg0KDQo8IS0tIA0KKioqKioqKioqKioqKioqKioqKioqKioq
KioqKg0KSGVhZGVyIEluZm9ybWF0aW9uDQoqKioqKioqKioqKioqKioqKioq
KioqKioqDQotLT4JDQoNCgk8dHlwZUIkIHJvb3Q9IjlMTYuODQwLjEuMTEzODgzLjEu
MyIgZXh0ZW5zaW9uPSJQT0NEX0hEMDAwMDQwIi8+DQoJPCEtLSB0ZW1wbGF0ZUIkIHJvb3Q9
IjlMTYuODQwLjEuMTEzODg2LjEwLjIwLjEiLyAtLT4NCgkNCgk8IS0tIERVY3VtZW50IEIE
Ljg0MC4xLjExMzg4My42LjEiGV4dGVuc2lvbj0iMTIzNDU2NzgiLz4NCgkNCgk8Y29kZSBj
b2RIP SJzNDEzMy05liBjb2RIU3IzdGVtPSIyLjE2Ljg0MC4xLjExMzg4My42LjEiIGRpC3Bs
dW1lbnQ+DQo=
--00163630f5f354355b046be66f6d
Content-Type: application/pdf;
name="8088450656.BRANCHA.LABAP.PYN_LAB_AP_S_000123.123.pdf.201000000001.20110702084530"
Content-Disposition: attachment;
filename="8088450656.BRANCHA.LABAP.PYN_LAB_AP_S_000123.123.pdf.201000000001.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdeflx1

JVBERi0xLjUNCiW1tbW1DQoxIDAgb2JqDQo8PC9UeXBIL0NhdGFsb2cvUGFnZXMGMiAwIFIv
TG FU Zyh6aC1UVykgL1N0cnVjdFRyZWSb290IDM2OSAwIFIvTWFya0luZm88PC9NYXJrZWQg
dHJ1ZT4+Pj4NCmVuZG9iag0KMiAwIG9iag0KPDwvVHlwZS9QYWdIcy9Db3VudCA0L0tpZHNb
IDMgMCBSIDEzMSAwIFIgMjQwIDAgUiAzNjAgMCBSXSA+Pg0KZW5kb2JqDQozIDAgb2JqDQo8
bWFnZTIxIDIxIDAgUi9jbWFnZTIzIDzIDAgUi9jbWFnZTI1IDI1IDAgUi9jbWFnZTI3IDI3
IDAgUi9jbWFnZTI5IDI5IDA gUi9jbWFnZTMxIDAgUi9jbWFnZTMzIDAgUi9jbWFn
.....
.....
ZTM1IDM1IDA gUi9jbWFnZTM3IDM3IDA gUi9jbWFnZTM5IDM5IDA gUi9jbWFnZTQxIDQxIDA g
Ui9jbWFnZTQzIDQzIDAgUi9jbWFnZTQ1IDQ1IDA gUi9jbWFnZTQ3IDQ3IDA gUi9jbWFnZTQ5
gMDAwMDAgbg0KMDAwMDI5NjUzMSAwMDAwMCBuDQowMDAwMjk2NTYwIDA wMDAwIG4NCjAwMDAy
OTY1ODkgMDAwMDAgbg0KMDAwMDMzODQ1MSAwMDAwMCBuDQp0cmFpbGVyDQo8PC9TaXplIDEy
RDBDMDYyRT48RDE5Rj5MjRDETAIllyNza0NUJFQkVENEYxMUQuwQzA2MkU+XSAvUHJldiAzNDE1
MjEvWFJIZIN0bSaZMzg0NTE+Pg0Kc3RhcnR4cmVmDQozNjY4NDQNCiUIUR9G
--00163630f5f354355b046be66f6d
Content-Type: application/pdf;
name="8088450656.BRANCHA.LABAP.PYN_LAB_AP_S_000123.124.pdf.201000000001.20110702084530"
Content-Disposition: attachment;
filename="8088450656.BRANCHA.LABAP.PYN_LAB_AP_S_000123.124.pdf.201000000001.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdeflx1

Mwk1NAzWCGBN2ouJy61BybH4UaoKL1HAaNkdofsSbEuuNiogI61iyySAXsOQx+E0wbbC4W
djJK8iCDvFu1e5CTm5sQNIhewXIWK6sbt0RGNm57YkP0roiYGx0VtkXoNyGimUrVteTKXr
x521xJq9s/WLO58mDd04GgQz2AEY91dNAhScRwEGhb2qe1PZ9tUTkdi+JpFT/3oIDfvvCv3o
WOu151HARLyYDNyZu6OAatV0FLCdytHTL4w+FhYWNjcRYrBSGwtOnf4DUt2RF5XTguNSJidX
.....
.....
sRnIO8JmAG96dcWbjPXLHx++HPDdpPXde1z8N2CBB8ve/45ZZNeD3aGPA0CNOdkF9v5z9PZP
8ePvz0+/vRbC+Tf/Zu/8fz0PSLsKLKDggnG+Brlt6/Y18fCrqFkL+IxAxwli7S7gZKrmgQ7
JCEP5HbzontUOEIxbCljkYmRW9Tzmy5WN2dMCcVcWxN6n8sDYIFLKrEELLW0abk0uuHSjrj0
JJeIe7mMPe0i90sMOVS+RdyeQDMudRUWe23DNVQqWxDZRhQqYgKEnGQSofdl1+jUnfDyJRK
iQHTvYTKA2CSrKAllxbjyWFNgGVY8i5lhKKnrEgGxKoQIqlmwdbD3CpqMHbM83MEfatUN6
LHYI+cJDogAWDomc7mJFdD0lIRom3YhJquQ0gTtx9Cfo/XhxrjtDyxTIU0IcPBiwdhvVz4/J
dK/87JiU1y87ppgfkYGasSxK/CujUsKW5UTIX50mYykIw4InaO3K8x+VD1ofCkXsbkAbDA
--00163630f5f354355b046be66f6d--
< ED.5>
 </OBX.5>
 <OBX.11></OBX.11>
 </OBX>
 </ORU_R01.OBSERVATION>
 </ORU_R01.ORDER_OBSERVATION>
 </ORU_R01.PATIENT_RESULT>
</ORU_R01>

14.1.3 CDA Example for scenario Update (S2) in Data Compliance Level 1

8088450656.BRANCHA.LABAP.CDA.20110702084530

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" xmlns="urn:hl7-org:v3"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <!--
  ****
  CDA General Information
  ****
  -->
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
  <id/>
  <code code="LABAP"/>
  <title>Laboratory Anatomical Pathology Result </title>
  <effectiveTime/>
  <confidentialityCode/>
  <recordTarget>
    <patientRole>
      <id/>
    </patientRole>
    <recordTarget>
      <author>
        <time/>
        <assignedAuthor>
          <id/>
        </assignedAuthor>
        <author>
          <time/>
          <assignedAuthor>
            <id/>
          </assignedAuthor>
          <author>
            <custodian>
              <assignedCustodian>
                <representedCustodianOrganization>
                  <id/>
                </representedCustodianOrganization>
                <assignedCustodian>
                  <representedCustodianOrganization>
                    <id/>
                  </representedCustodianOrganization>
                <assignedCustodian>
                  <custodian>
                </assignedCustodian>
                <!--
                ****
                Clinical Information
                ****
                -->
                <component>
                  <nonXMLBody>
                    <clinicalDoc>
                      <participant>
                        <ehr_no>201000000001</ehr_no>
                        <hkid>A1234563</hkid>
                        <doc_type>ID</doc_type>
                        <doc_no>A1234563</doc_no>
                        <person_eng_surname>CHAN </person_eng_surname>
                        <person_eng_given_name>TAI MAN</person_eng_given_name>
                        <person_eng_full_name>CHAN, TAI MAN</person_eng_full_name>
                        <sex>M</sex>
                        <birth_date>1999-01-01 00:00:00.000</birth_date>
                      </participant>
                      <detail>
                        <lab_req_data>
                          <record_key>PYN_LABAPS_000123</record_key>
                          <transaction_dtm>2012-05-01 00:00:00.000</transaction_dtm>
                          <transaction_type>U</transaction_type>
                          <last_update_dtm>2012-05-01 00:00:00.000</last_update_dtm>
                          <episode_no>EP-12345</episode_no>
                          <attendance_inst_id>8088450656</attendance_inst_id>
                          <request_no>11-CC123456</request_no>
                          <request_participant_inst_id>1735455950</request_participant_inst_id>
                          <request_participant_inst_name>PWH Prince of Wales Hospital </request_participant_inst_name>
                          <request_participant_inst_lt_desc>PWH Prince of Wales Hospital </request_participant_inst_lt_desc>
                          <order_no>CC1234567</order_no>
                          <lab_category_cd>PATH</lab_category_cd>
                          <lab_category_desc>Anatomical Pathology</lab_category_desc>
                          <lab_category_lt_desc>Anatomical Pathology Laboratory</lab_category_lt_desc>
                          <perform_lab_name>Kowloon Bay Clinical Laboratory</perform_lab_name>
                          <report_reference_dtm>2009-11-20 14:10:00.000</report_reference_dtm>
                        </lab_req_data>
                      </detail>
                    </clinicalDoc>
                  </nonXMLBody>
                </component>
              </representedCustodianOrganization>
            </assignedCustodian>
          </custodian>
        </author>
      </recordTarget>
    </patientRole>
  </recordTarget>
</ClinicalDocument>
```

Technical Interface Specification for LABAP Record

```
<file_ind>1</file_ind>
<record_creation_dtm>2010-06-08 15:22:00.000</record_creation_dtm>
<record_creation_inst_id>8088450656</record_creation_inst_id>
<record_creation_inst_name>Princess Margaret Hospital</record_creation_inst_name>
<record_update_dtm>2010-06-08 15:22:00.000</record_update_dtm>
<record_update_inst_id>8088450656</record_update_inst_id>
<record_update_inst_name>Princess Margaret Hospital</record_update_inst_name>
</lab_req_data>
</lab_report_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>P</report_status_cd>
<report_status_desc>Provisional/Preliminary report</report_status_desc>
<report_status_lt_desc>Provisional/Preliminary Report</report_status_lt_desc>
<report_auth_dtm>2009-11-20 14:10:00.000</report_auth_dtm>
<report_dtm>2009-11-20 14:10:00.000</report_dtm>
<file_name>8088450656.BRANCHALABAP.PYN_LABAPS_000123.123.pdf.20100000001.20110702084530</file_name>
<report_text></report_text>
</lab_report_data>
</lab_report_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<report_dtm>2009-11-21 14:10:00.000</report_dtm>
<file_name>8088450656.BRANCHALABAP.PYN_LABAPS_000123.124.pdf.20100000001.20110702084530</file_name>
<report_text></report_text>
</lab_report_data>
</detail>
</clinicalDoc>
<text/>
</nonXMLBody>
</component>
</ClinicalDocument>
```

14.1.4 HL7 Message Example for scenario Update (S2) in Data Compliance Level 1

8088450656.BRANCHA.LABAP.HL7.20110702084530

```
<?xml version="1.0" encoding="utf-8"?>
<ORU_R01 xmlns="urn:hl7-org:v2xml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:hl7-org:v2xml \\\\hoehrsv01\\eHR\\CE4\\MESSAG~1\\EHR\\HL7SAM~1\\V25SCH~1\\xsd\\ORU_R01.xsd">
  <MSH>
    <MSH.1></MSH.1>
    <MSH.2>^~\&lt;></MSH.2>
    <MSH.3>
      <HD.1>CMS 3.0</HD.1>
    </MSH.3>
    <MSH.4>
      <HD.1>8088450656</HD.1>
    </MSH.4>
    <MSH.5>
      <HD.1>EIF</HD.1>
    </MSH.5>
    <MSH.6>
      <HD.1>eHR</HD.1>
    </MSH.6>
    <MSH.7>
      <TS.1>20110427181041</TS.1>
    </MSH.7>
    <MSH.8>1</MSH.8>
    <MSH.9>
      <MSG.1>ORU</MSG.1>
      <MSG.2>R01</MSG.2>
      <MSG.3>ORU_R01</MSG.3>
    </MSH.9>
    <MSH.10>20110702084530</MSH.10>
    <MSH.11>
      <PT.1>P</PT.1>
    </MSH.11>
    <MSH.12>
      <VID.1>2.5</VID.1>
    </MSH.12>
    <MSH.15>NE</MSH.15>
  <MSH.21>
    <EI.1>eHRSS-2.0.0</EI.1>
```

1.1.1.4 </MSH.21>

```
</MSH>
<ORU_R01>PATIENT_RESULT>
<ORU_R01>ORDER_OBSERVATION>
<OBR>
  <OBR.4>
    <CE.1> LABAP </CE.1>
  </OBR.4>
</OBR>
<ORU_R01>OBSERVATION>
<OBX>
  <OBX.2>ED</OBX.2>
  <OBX.3>
    <CE.1> LABAP </CE.1>
  </OBX.3>
  <OBX.4>NBL</OBX.4>
  <OBX.5>
<ED.2>multipart</ ED.2>
<ED.4>A</ ED.4>
<ED.5>
```

MIME-Version: 1.0

Content-Type: multipart/mixed; boundary=00163630f5f354355b046be66f6d

--00163630f5f354355b046be66f6d
Content-Type: text/xml; charset=UTF-8; name="8088450656.BRANCHA.LABAP.HL7.20110702084530"
Content-Disposition: attachment; filename="8088450656.BRANCHA.LABAP.HL7.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdehi70

PD94bWwgdmVyc2lvbj0iMS4wIiBlbmNvZGluZz0iVVRGLTgiPz4NCjwhLS0gQ0RBIFNhXBs
ZSBmb3IgSEtSFJgSW50ZXJvcGVyYWJpbGl0eSAtLT4NCg0KPCEtLSBDb3B5cmInaHQ6IFRo
ZSBvd25lcNoaXAgb2YgdGhpseyBkb2N1bVVudCBzaG91bGQgYmUgUHJlcGFyYXRvcnkR3Jv

Technical Interface Specification for LABAP Record

```
ZS4gQWxsIFJpZ2h0cyBSZXNlcnZlZC4gLS0+DQo8IS0tIERPc2NsYWltZXI6IFRoZSBJbmZv
IGZvcIBFcGlzb2RIIFN1bW1hcngd2hpY2ggYXR0YWNoZWQgdGhlIFBERiAgLS0+DQoNCjxDF0
.....
```

```
.....  
aW9uPSJ1cm46aGw3LW9yZzp2MyBDREEueHNkIiBjbGFzc0NvZGU9IkRPQ0NMSU4iIG1vb2RD  
b2RIPSFV4iPg0KDQo8IS0tIA0KKioqKioqKioqKioqKioqKioqKioqKioqKioqKioq  
KioqKg0KSGVhZGVyIEluZm9ybWF0aW9uDQoqKioqKioqKioqKioqKioqKioqKioq  
KioqKioqKioqDQoLT4JDQoNCgk8dHlwZUIkIHJvb3Q9jIuMTYuODQwLjEuMTEzODgZLjEuE2  
Ljg0MC4xLjExMzg4My42LjEiIGV4dGVuc2lvbj0iMTIzNDu2NzgjLz4NCgkNCgk8Y29kZSBj  
b2RIPSIzNDEzMy05iBjb2RIU3lzdGvtPSIyLjE2Ljg0MC4xLjExMzg4My42LjEiIGRp3Bs  
dW1lbnQ+DQo=
```

```
--00163630f5f354355b046be66f6d  
Content-Type: application/pdf;  
name="8088450656.BRANCHA.LABAP.PYN_LAB_AP_000123.123.pdf.201000000001.20110702084530"  
Content-Disposition: attachment;  
filename="8088450656.BRANCHA.LABAP.PYN_LAB_AP_000123.123.pdf.201000000001.20110702084530"  
Content-Transfer-Encoding: base64  
X-Attachment-Id: f_fvqdeflx1
```

```
JVBERi0xLjUNCiW1tbW1DQoxIDAcb2JqDQo8PC9UeXBIL0NhdGFsb2cvUGFnZXMGMiAwIFIv  
TGFuZyh6aC1UVykgL1N0cnVjdFRyZWSb290IDM2OSAwIFIvTWFya0luZm88PC9NYXJrZWQg  
dHJ1ZT4+Pj4NCmVuZG9iag0KMiaAwIG9iag0KPDwvVHiwZS9QYWdly9Db3VudCA0L0tpZHnb  
IDMgMCBSIDEzMSAwIFIgMjQwIDAgIuAzNjAgMCBSXSA-Pg0KZW5kb2JqDQozIDAcb2JqDQo8  
PC0UeXBIL1BhZ2UvUGFyZWS05IDigMCBSL1Jc291cmNlczw8L1hPYmplY3Q8PC9jBWFnZTUg  
NSAwIFIvSW1hZ2U3IDcgMCBSL0ltYWdiOSA5IDAgUi9jBWFnZTE3IDE3IDAcb2JbWFnZTEz  
IDEzIDAcb2JbWFnZTE1IDE1IDAcb2JbWFnZTE3IDE3IDAcb2JbWFnZTE5IDE5IDAcb2JbWFn  
bWFnZTlxDIxIDAcb2JbWFnZTlxDIxIDAcb2JbWFnZTl1IDAcb2JbWFnZTl1IDAcb2JbWFnZTl3  
IDAcb2JbWFnZTl5IDAcb2JbWFnZTMxIDAcb2JbWFnZTMzIDAcb2JbWFnZTMzIDAcb2JbWFn  
.....  
.....  
.....
```

```
ZTM1IDM1IDAcb2JbWFnZTM3IDM3IDAcb2JbWFnZTM5IDM5IDAcb2JbWFnZTQxIDQxIDAcb2  
Ui9jBWFnZTQzIDAcb2JbWFnZTQ1IDAcb2JbWFnZTQ3IDAcb2JbWFnZTQ5  
gMDAwMDAgbg0KMDAwMDI5NjUzMSAwMDAwMCBuDQowMDAwMjk2NTYwIDAcb2JbWFnZTQ  
OTY1ODkgMDAwMDAgbg0KMDAwMDMzODQ1MSAwMDAwMCBuDQp0cmFpbGVyDQo8PC9TaXplIDEy  
NTgvUm9vdCAXIDAcb2JbWFnZIDM2OCAwIFIvSURbPEQxOUYyOTi0QTg2MjcwNDVCRUJFRDRG  
MTFEMEMWnjFPjxEMTIGmjkyNEE4NjI3MDQ1QkVCRUQ0RjExRDBDMDYyRT5dID4+DQpzdGFy  
MjEvWFJIZIN0bSAzMzg0NTE+Pg0Kc3RhcnR4cmVmDQozNjY4NDQNCiUIUR9G
```

```
--00163630f5f354355b046be66f6d  
Content-Type: application/pdf;  
name="8088450656.BRANCHA.LABAP.PYN_LAB_AP_000123.124.pdf.201000000001.20110702084530"  
Content-Disposition: attachment;  
filename="8088450656.BRANCHA.LABAP.PYN_LAB_AP_000123.124.pdf.201000000001.20110702084530"  
Content-Transfer-Encoding: base64  
X-Attachment-Id: f_fvqdeflx1
```

```
Mwk1NAzWCGBNG2ouJgY61BybH4UaoKL1HAaNkdofsSbEuuNiogI61iyySAXsOQx+E0wbbC4W  
djJK8iCDvFu1e5CTm5sQNIhewXIWK6sb0RRGNm57YkP0roiYGxoVTkXoNyGimUrVteTKXr  
brJNWFJvUb3yjXo0KK6p1JPZQ5LtxJJ6Elaj3d9IgJSftmoynkgrki$XXLXUG/Sds3YyjUgg  
WOu151HARLyYDNgZu6OAatV0FLCdytHTL4w+FhYWNjcRyrBSGWtOnf4DUt2RF5XTguNSJidX  
.....  
.....  
.....
```

```
sRnIO8JmAG96dcWbjPXLHx++HPDdpPXde1z8N2CBB8ve/45ZZNeD3aGPA0CNOdkF9v5z9PZP  
8ePvz0+v/RbC+Tf/Zu/8fz0PSLsKLKDgggnG+Brlt6/Y18fCrqFkL+IxAxwl7S7gZKrmqQ7  
JCEP5HbzontUOEIxCljkYmRW9Tzmy5WN2dMCcVcWxN6n8sDYIFLKrEELLW0abk0uuHSjrj0  
JJeIe7mMPe0i90sMOVs+RdyQDMduRuwe23DNVQqWxDZRhQqYGkEnGQSofdl1+UnfDyLRK  
iQHTvYTKA2CBSrKAllxbfjyWFNgGVY8i5lhKKnrEgGxKoQIqlmwdbD3CpqMHbM83MEfatUN6  
LHYi+cJDOgAWDomc7mJFdD0IIRom3YhJquQ0gTtx9Cfo/XhxrjtDyxTIU0IcPBiwdhvVz4/J  
dK/87JiU1y87pgpgfkYGasSxK/CujUsKW5UTIX50mYykqIw4InaO3K8x+VD1ofCkXsbkAbDA  
JBU6sDQIIFSmrW6YNCMmydARcZA869Dx1yK8eSh4KO1fyOUBsMAI2dHGx6u25VLbhks/4pIs  
PCIOkqewiFuLw+ahuiM+DHoZlepGsrRU3YGXD9yFStktAADKi1zeEsceMGxwY1UGixe/JBK  
+1DdoeCFKa0CWKCSqjtiHFMXKqFJO2FUHFhNUgkIuekWqewOzmZUSqzp/Uuq4QpggUryaYfh
```

```
--00163630f5f354355b046be66f6d--
```

```
</ED.5>
</OBX.5>
<OBX.11>F</OBX.11>
</OBX>
</ORU_R01.OBSERVATION>
</ORU_R01.ORDER_OBSERVATION>
```

Technical Interface Specification for LABAP Record

```
</ORU_R01.PATIENT_RESULT>  
</ORU_R01>
```

14.1.5 CDA Example for scenario Delete (S3) in Data Compliance Level 1

8088450656.BRANCHA.LABAP.CDA.20110702084530

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" xmlns="urn:hl7-org:v3"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <!--
  ****
  CDA General Information
  ****
  -->
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
  <id/>
  <code code="LABAP"/>
  <title>Laboratory Anatomical Pathology Result </title>
  <effectiveTime/>
  <confidentialityCode/>
  <recordTarget>
    <patientRole>
      <id/>
      </patientRole>
    </recordTarget>
    <author>
      <time/>
      <assignedAuthor>
        <id/>
        <assignedAuthor>
          <author>
            <custodian>
              <assignedCustodian>
                <representedCustodianOrganization>
                  <id/>
                  <representedCustodianOrganization>
                    <assignedCustodian>
                      <custodian>
                        <assignedCustodian>
                          <representedCustodianOrganization>
                            <id/>
                            <representedCustodianOrganization>
                          </assignedCustodian>
                        </custodian>
                      </assignedCustodian>
                    </representedCustodianOrganization>
                  </assignedCustodian>
                </representedCustodianOrganization>
              </assignedCustodian>
            </custodian>
          </assignedCustodian>
        </author>
      </assignedAuthor>
    </author>
  </recordTarget>
  <!--
  ****
  Clinical Information
  ****
  -->
  <component>
    <nonXMLBody>
      <clinicalDoc>
        <participant>
          <ehr_no>201000000001</ehr_no>
          <hkid>A1234563</hkid>
          <doc_type>ID</doc_type>
          <doc_no>A1234563</doc_no>
          <person_eng_surname>CHAN </person_eng_surname>
          <person_eng_given_name>TAI MAN</person_eng_given_name>
          <person_eng_full_name>CHAN, TAI MAN</person_eng_full_name>
          <sex>M</sex>
          <birth_date>1999-01-01 00:00:00.000</birth_date>
        </participant>
        <detail>
          <lab_req_data>
            <record_key>PYN_LABAPS_000123</record_key>
            <transaction_dtm>2012-05-01 00:00:00.000</transaction_dtm>
            <transaction_type>D</transaction_type>
            <last_update_dtm>2012-05-01 00:00:00.000</last_update_dtm>
            <episode_no>EP-12345</episode_no>
            <attendance_inst_id>8088450656</attendance_inst_id>
          </lab_req_data>
        </detail>
      </clinicalDoc>
      <text/>
    </nonXMLBody>
  </component>
</ClinicalDocument>
```

14.1.6 HL7 Message Example for scenario Delete (S3) in Data Compliance Level 1

8088450656.BRANCHA.LABAP.HL7.20110702084530

```
<?xml version="1.0" encoding="utf-8"?>
<ORU_R01 xmlns="urn:hl7-org:v2xml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:hl7-org:v2xml \\\\hoehrsv01\\eHR\\CE4\\MESSAG~1\\EHR\\HL7SAM~1\\V25SCH~1\\xsd\\ORU_R01.xsd">
  <MSH>
    <MSH.1></MSH.1>
    <MSH.2>^~\&lt;></MSH.2>
    <MSH.3>
      <HD.1>CMS 3.0</HD.1>
    </MSH.3>
    <MSH.4>
      <HD.1>8088450656</HD.1>
    </MSH.4>
    <MSH.5>
      <HD.1>EIF</HD.1>
    </MSH.5>
    <MSH.6>
      <HD.1>eHR</HD.1>
    </MSH.6>
    <MSH.7>
      <TS.1>20110427181041</TS.1>
    </MSH.7>
    <MSH.8>-1</MSH.8>
    <MSH.9>
      <MSG.1>ORU</MSG.1>
      <MSG.2>R01</MSG.2>
      <MSG.3>ORU_R01</MSG.3>
    </MSH.9>
    <MSH.10>20110702084530</MSH.10>
    <MSH.11>
      <PT.1>P</PT.1>
    </MSH.11>
    <MSH.12>
      <VID.1>2.5</VID.1>
    </MSH.12>
    <MSH.15>NE</MSH.15>
  </MSH.21>
  <EI.1>eHRSS-2.0.0</EI.1>
</MSH.21>
</MSH>
<ORU_R01.PATIENT_RESULT>
<ORU_R01.ORDER_OBSERVATION>
  <OBR>
    <OBR.4>
      <CE.1> LABAP </CE.1>
    </OBR.4>
  </OBR>
<ORU_R01.OBSERVATION>
  <OBX>
    <OBX.2>ED</OBX.2>
    <OBX.3>
      <CE.1> LABAP </CE.1>
    </OBX.3>
    <OBX.4>NBL</OBX.4>
  </OBX.5>
<ED.2>multipart</ ED.2>
< ED.4>A</ ED.4>
< ED.5>
  MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=00163630f5f354355b046be66f6d
--00163630f5f354355b046be66f6d
Content-Type: text/xml; charset=UTF-8; name="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Disposition: attachment; filename="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdehi70
PD94bWwgdmVyc2lvbj0iMS4wIiBlbmNvZGluZz0iVVRGLTgiPz4NCjwhLS0gQ0RBIFNhBXBs
ZSBmb3IgSEtISFIgSW50ZXJvcGVyYWJpbGl0eSAAtLT4NCg0KPCEtLSBDb3B5cmlnaHQ6IFRo
ZSBvd25lcNoaXAgb2YgdGhpccyBkb2NlWVudCBzaG91bGQgYmUgUHJlcGFyYXRvcnkgR3Jv
dXAzb24gZUhSIENvbnnRlbnQgJiBTdGFuZGFyZHMgdW5kZXIgZUhSIENvbnnRlbnQgYW5kIElu
```

Technical Interface Specification for LABAP Record

```
Zm9ybWF0aW9uIFN0YW5kYXJkcyBXb3JraW5nIEdyb3VwIGFuZCBmdXR1cmUgZUhSIG9mZmlj
ZS4gQWxsIFJpZ2h0cyBSZXNlcnZlZC4gLS0+DQo8IS0tIERpc2NsYWltZXI6IFRoZSBJbmZv
IGZvciBFcGlzb2RIIFN1bW1hcncgd2hpY2ggYXR0YWNoZWQgdGhIFBERiAgLS0+DQoNCjxDF0
.....
.....
.....
aW9uPSJ1cm46aGw3LW9yZzp2MyBDREEueHNkIiBjbGFzc0NvZGU9IkRPQ0NMSU4iIG1vb2RD
b2RIPSJFVk4iPg0KDQo8IS0tIA0KKioqKioqKioqKioqKioqKioqKioqKioqKioq
KioqKg0KSGVhZGVyIEluZm9ybWF0aW9uDQoqKioqKioqKioqKioqKioqKioqKioq
KioqKioqDQoLT4JDQoNCgk8dHlwZUIkIHJvb3Q9IjluMTYuODQwLjEuMTEzODgzLjEu
MyIgZXh0ZW5zaW9uPSJQT0NEX0hEMDAwMDQwIi8+DQoJPCeLSB0ZW1wbGF0ZUlkIHJvb3Q9
IjluMTYuODQwLjEuMTEzODgzLjEwLjIwLjEiLyAtLT4NCgkNCgk8IS0tIERvY3VtZW50IEIE
OyB1bmxldWUsIGFzc2lnbmVkIGJ5IFByb3ZpZGVyL0N1c3RvZGlibwgcm9vdCBjb2RIIG9m
ICBQcm92aWRlc9DdXN0b2RpYW4gdG8gYmUgZGVmaW5lZC0tPg0KCTxpZCByb290PSIyLjE2
Ljg0MC4xLjExMzg4My42LjEiIGV4dGVuc2lvbj0tMTIzNDU2NzgiLz4NCgkNCgk8Y29kZSBj
b2RIPSIzNDEzMy05IiBjb2RIU3IzdGVtPSIyLjE2Ljg0MC4xLjExMzg4My42LjEiIGRp3Bs
dW1bnQ+DQo=-
--00163630f5f354355b046be66f6d--
< ED.5>
  </OBX.5>
  <OBX.11>F</OBX.11>
</OBX>
</ORU_R01.OBSERVATION>
</ORU_R01.ORDER_OBSERVATION>
</ORU_R01.PATIENT_RESULT>
</ORU_R01>
```

14.2 EXAMPLES FOR DATA COMPLIANCE LEVEL 2

Example Data

Insert / Update / Delete a laboratory result (AP result) record of a HCR. The record is composed of a request data, two AP result data and two report data.

HCR Data	
eHR Number	201000000001
HKIC Number	A1234563
Type of Document	ID
Document Number	A1234563
English Surname	CHAN
English Given Name	TAI MAN
English Full Name	CHAN, TAI MAN
Sex	M
Birth date	1999-01-01 00:00:00.000
Laboratory Test Request Data (ReqA)	
Record Key	PYN_LABAPS_000123
Transaction Datetime	2012-05-01 00:00:00.000
Transaction Type	I : New (S1) U : Update (S2) D : Delete (S3)
Last Update Datetime	2012-05-01 00:00:00.000
Episode Number	EP-12345
Attendance Institution Identifier	8088450656
Laboratory Test Request Number	11-CC123456
Laboratory Test Requesting Doctor	Dr. TM CHAN
Laboratory Test Request Institution of Participant – Code	1735455950
Laboratory Test Request Institution of Participant – Description	Prince of Wales Hospital
Laboratory Test Request Institution of Patient - Local Description	Prince of Wales Hospital
Laboratory Test Order Number	CC11234567
Laboratory Category Code	PATH
Laboratory Category Description	Anatomical Pathology Laboratory
Laboratory Category Local Description	Anatomical Pathology Laboratory
Laboratory Test Order Number	CC1234567
Laboratory Test Request - Performing Laboratory Name	Kowloon Bay Clinical Laboratory
Laboratory Report Reference Datetime	2009-11-20 14:10:00.000
Laboratory Test Request Clinical Information	
Laboratory Report -Result Comment	
Specimen Type Local Code	
Specimen Type Local Description	Vagina
Specimen - Arrival Datetime	2009-11-11 16:15:00.000
Specimen - Collect Datetime	2009-11-12 18:30:00.000
Specimen details	
File Indicator	1
Record Creation Datetime	2010-06-08 15:22:00.000
Record Creation Institution Identifier	8088450656
Record Creation Institution Name	Princess Margaret Hospital
Record Last Update Datetime	2010-06-08 15:22:00.000
Record Update Institution Identifier	8088450656
Record Update Institution Name	Princess Margaret Hospital

Technical Interface Specification for LABAP Record

Anatomical Pathology Test Name	Biopsy
Laboratory Report Data (ReqA_RptA)	
Record Key	PYN_LABAPS_000123
Report Status Code	P
Report Status Description	Provisional/Preliminary report
Report Status Local Description	Provisional/Preliminary report
Laboratory Report Date	2009-11-20 14:10:00.000
Laboratory Report Authorised Datetime	2009-11-20 14:10:00.000
File Name	8088450656.BRANCHALABAP.PYN_LAB_HMS_000 123.123.pdf.201000000001.20110702084530
Laboratory Report – Text	
Laboratory Report Data (ReqA_RptB)	
Record Key	PYN_LABAPS_000123
Report Status Code	F
Report Status Description	Final report
Report Status Local Description	Final Report
Laboratory Report Date	2009-11-21 14:10:00.000
Laboratory Report Authorised Datetime	2009-11-21 14:10:00.000
File Name	8088450656.BRANCHALABAP.PYN_LAB_HMS_000 123.124.pdf.201000000001.20110702084530
Laboratory Report – Text	
Anatomical Pathology Result – Diagnosis Data (ReqA_RptA_Ap)	
Record Key	PYN_LABAPS_000123
Report Status Code	P
Report Status Description	Provisional/Preliminary report
Report Status Local Description	Provisional/Preliminary report
Laboratory Report Authorised Datetime	2009-11-20 14:10:00.000
Anatomical Pathology Diagnosis Title	Biopsy Diagnosis
Anatomical Pathology Diagnosis Text Result	Vagina scraping
Panel Local Code	
Panel Local Description	Biopsy
Laboratory Report Authorised Healthcare Staff English Name	Jack Lee
Laboratory Report Authorised Healthcare Staff Chinese Name	李傑克
Anatomical Pathology Result (ReqA_RptB_Ap)	
Record Key	PYN_LABAPS_000123
Report Status Code	F
Report Status Description	Final report
Report Status Local Description	Final report
Laboratory Report Authorised Datetime	2009-11-21 14:10:00.000
Anatomical Pathology Diagnosis Title	Biopsy Diagnosis
Anatomical Pathology Diagnosis Text Result	Adenocarcinoma
Panel Local Code	
Panel Local Description	Biopsy
Laboratory Report Authorised Healthcare Staff English Name	Jack Lee
Laboratory Report Authorised Healthcare Staff Chinese Name	李傑克
Anatomical Pathology Result – Diagnosis Topography and Finding Data (ReqA_RptB_Ap_DnA)	
Record Key	PYN_LABAPS_000123
Report Status Code	F
Report Status Description	Final report
Report Status Local Description	Final Report
Laboratory Report Authorised Datetime	2009-11-21 14:10:00.000
Anatomical Pathology Diagnosis Title	Biopsy Diagnosis

Technical Interface Specification for LABAP Record

Topography Local Code	T-28000 01, 001
Topography Local Description	Adenocarcinoma, NOS
Finding Local Code	M-40000, 01, 001
Finding Local Description	INFLAMMATION
Anatomical Pathology Result – Report Details Data (ReqA_RptA_AptA)	
Record Key	PYN_LABAPS_000123
Report Status Code	P
Report Status Description	Provisional/Preliminary report
Report Status Local Description	Provisional/Preliminary report
Laboratory Report Authorised Datetime	2009-11-20 14:10:00.000
Anatomical Pathology Report Details - Title Code	COMM
Anatomical Pathology Report Details - Title Description	Comment
Anatomical Pathology Report Details - Title Local Description	Pathology Comment
Anatomical Pathology Report Details – Content	The specimen is unsatisfactory.
Anatomical Pathology Result – Report Details Data (ReqA_RptB_AptA)	
Record Key	PYN_LABAPS_000123
Report Status Code	F
Report Status Description	Final report
Report Status Local Description	Final Report
Laboratory Report Authorised Datetime	2009-11-21 14:10:00.000
Anatomical Pathology Report Details - Title Code	SPEC
Anatomical Pathology Report Details - Title Description	Specimen
Anatomical Pathology Report Details - Title Local Description	Specimen
Anatomical Pathology Report Details – Content	3 cm in diameter, red color.
Anatomical Pathology Result – Report Details Data (ReqA_RptB_AptB)	
Record Key	PYN_LABAPS_000123
Report Status Code	F
Report Status Description	Final report
Report Status Local Description	Final Report
Laboratory Report Authorised Datetime	2009-11-21 14:10:00.000
Anatomical Pathology Report Details - Title Code	MICRO
Anatomical Pathology Report Details - Title Description	Microscopic Examination
Anatomical Pathology Report Details - Title Local Description	Microscopic Examination
Anatomical Pathology Report Details – Content	Numerous polymorphs present.

14.2.1 CDA Example for scenario New (S1) in Data Compliance Level 2

8088450656.BRANCHA.LABAP.CDA.20110702084530

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" xmlns="urn:hl7-org:v3"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <!--
  ****
  CDA General Information
  ****
  -->
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
  <id/>
  <code code="LABAP"/>
  <title>Laboratory Anatomical Pathology Result </title>
  <effectiveTime/>
  <confidentialityCode/>
  <recordTarget>
    <patientRole>
```

Technical Interface Specification for LABAP Record

```
<id>
</patientRole>
</recordTarget>
<author>
<time/>
<assignedAuthor>
<id>
</assignedAuthor>
</author>
<custodian>
<assignedCustodian>
<representedCustodianOrganization>
<id>
</representedCustodianOrganization>
</assignedCustodian>
</custodian>
<!--
*****
Clinical Information
*****
-->
<component>
<nonXMLBody>
<clinicalDoc>
<participant>
<ehr_no>201000000001</ehr_no>
<hkid>A1234563</hkid>
<doc_type>ID</doc_type>
<doc_no>A1234563</doc_no>
<person_eng_surname>CHAN </person_eng_surname>
<person_eng_given_name>TAI MAN</person_eng_given_name>
<person_eng_full_name>CHAN, TAI MAN</person_eng_full_name>
<sex>M</sex>
<birth_date>1999-01-01 00:00:00.000</birth_date>
</participant>
<detail>
<lab_req_data>
<record_key>PYN_LABAPS_000123</record_key>
<transaction_dtm>2012-05-01 00:00:00.000</transaction_dtm>
<transaction_type>I</transaction_type>
<last_update_dtm>2012-05-01 00:00:00.000</last_update_dtm>
<episode_no>EP-12345</episode_no>
<attendance_inst_id>8088450656</attendance_inst_id>
<request_no>11-CC123456</request_no>
<request_doctor>Dr. TM CHAN</request_doctor>
<request_participant_inst_id>1735455950</request_participant_inst_id>
<request_participant_inst_name>PWPH Prince of Wales Hospital </request_participant_inst_name>
<request_participant_inst_lt_desc>PWPH Prince of Wales Hospital </request_participant_inst_lt_desc>
<order_no>CC1234567</order_no>
<lab_category_cd>PATH</lab_category_cd>
<lab_category_desc>Anatomical Pathology</lab_category_desc>
<lab_category_lt_desc>Anatomical Pathology Laboratory</lab_category_lt_desc>
<perform_lab_name>Kowloon Bay Clinical Laboratory</perform_lab_name>
<report_reference_dtm>2009-11-20 14:10:00.000</report_reference_dtm>
<clinical_info></clinical_info>
<lab_report_comment></lab_report_comment>
<specimen_type_lt_id></specimen_type_lt_id>
<specimen_type_lt_desc>Vagina</specimen_type_lt_desc>
<specimen_arrival_dtm>2009-11-11 16:15:00.000</specimen_arrival_dtm>
<specimen_collect_dtm>2009-11-12 18:30:00.000</specimen_collect_dtm>
<specimen_details></specimen_details>
<file_ind>1</file_ind>
<record_creation_dtm>2010-06-08 15:22:00.000</record_creation_dtm>
<record_creation_inst_id>8088450656</record_creation_inst_id>
<record_creation_inst_name>Princess Margaret Hospital</record_creation_inst_name>
<record_update_dtm>2010-06-08 15:22:00.000</record_update_dtm>
<record_update_inst_id>8088450656</record_update_inst_id>
<record_update_inst_name>Princess Margaret Hospital</record_update_inst_name>
<ap_test_name>Biopsy</ap_test_name>
</lab_req_data>
<labap_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>P</report_status_cd>
<report_status_desc>Provisional/Preliminary report</report_status_desc>
<report_status_lt_desc>Provisional/Preliminary Report</report_status_lt_desc>
```

Technical Interface Specification for LABAP Record

```
<report_auth_dtm>2009-11-20 14:10:00.000</report_auth_dtm>
<ap_diagnosis_title>Biopsy Diagnosis</ap_diagnosis_title>
<ap_diagnosis_text>Vagina scraping </ap_diagnosis_text>
<panel_lt_cd></panel_lt_cd>
<panel_lt_desc>Vagina</panel_lt_desc>
<report_auth_staff_eng_name>Jack Lee</report_auth_staff_eng_name>
<report_auth_staff_chi_name>李傑克</report_auth_staff_chi_name>
</labap_result_data>
<labap_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<ap_diagnosis_title>Biopsy Diagnosis</ap_diagnosis_title>
<ap_diagnosis_text>Adenocarcinoma </ap_diagnosis_text>
<panel_lt_cd></panel_lt_cd>
<panel_lt_desc>Vagina</panel_lt_desc>
<report_auth_staff_eng_name>Jack Lee</report_auth_staff_eng_name>
<report_auth_staff_chi_name>李傑克</report_auth_staff_chi_name>
</labap_result_data>
<labap_dn_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<ap_diagnosis_title>Biopsy Diagnosis</ap_diagnosis_title>
<topography_lt_cd> T-28000 01, 001</topography_lt_cd >
<topography_lt_desc>Adenocarcinoma, NOS</topography_lt_desc>
<finding_lt_cd>M-4000, 01, 001</finding_lt_cd>
<finding_lt_desc>INFLAMMATION</finding_lt_desc>
</labap_dn_result_data>
<labap_apt_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>P</report_status_cd>
<report_status_desc>Provisional/Preliminary report</report_status_desc>
<report_status_lt_desc>Provisional/Preliminary Report</report_status_lt_desc>
<report_auth_dtm>2009-11-20 14:10:00.000</report_auth_dtm>
<apt_detail_title_cd>COMM</apt_detail_title_cd >
<apt_detail_title_desc>Common </apt_detail_title_desc>
<apt_detail_title_lt_desc>Pathology Comment </apt_detail_title_lt_desc>
<apt_detail_content>The specimen is unsatisfactory. </apt_detail_content>
</labap_apt_result_data>
<labap_apt_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<apt_detail_title_cd>SPEC</apt_detail_title_cd >
<apt_detail_title_desc>Specimen </apt_detail_title_desc>
<apt_detail_title_lt_desc>Specimen </apt_detail_title_lt_desc>
<apt_detail_content>3 cm in diameter, red color. </apt_detail_content>
</labap_apt_result_data>
<labap_apt_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<apt_detail_title_cd>MICRO</apt_detail_title_cd >
<apt_detail_title_desc>Microscopic Examination </apt_detail_title_desc>
<apt_detail_title_lt_desc>Microscopic Examination </apt_detail_title_lt_desc>
<apt_detail_content>Numerous polymorphs present.</apt_detail_content>
</labap_apt_result_data>
<lab_report_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>P</report_status_cd>
<report_status_desc>Provisional/Preliminary report</report_status_desc>
<report_status_lt_desc>Provisional/Preliminary Report</report_status_lt_desc>
<report_auth_dtm>2009-11-20 14:10:00.000</report_auth_dtm>
<report_dtm>2009-11-20 14:10:00.000</report_dtm>
<file_name>8088450656.BRANCHALABAP.PYN_LABAPS_000123.123.pdf.201000000001.20110702084530</file_name>
<report_text></report_text>
```

Technical Interface Specification for LABAP Record

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</lab_report_data>
<lab_report_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<report_dtm>2009-11-21 14:10:00.000</report_dtm>
<file_name>8088450656.BRANCHALABAP.PYN_LABAPS_000123.124.pdf.20100000001.20110702084530</file_name>
<report_text></report_text>
</lab_report_data>
</detail>
</clinicalDoc>
<text/>
</nonXMLBody>
</component>
</ClinicalDocument>
```

14.2.2 HL7 Message Example for scenario New (S1) in Data Compliance Level 2

8088450656.BRANCHA.LABAP.HL7.20110702084530

```
<?xml version="1.0" encoding="utf-8"?>
<ORU_R01 xmlns="urn:hl7-org:v2xml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:hl7-org:v2xml \\\\hoehrsv01\\eHR\\CE4\\MESSAG~1\\EHR\\HL7SAM~1\\V25SCH~1\\xsd\\ORU_R01.xsd">
  <MSH>
    <MSH.1></MSH.1>
    <MSH.2>^~\&lt;></MSH.2>
    <MSH.3>
      <HD.1>CMS 3.0</HD.1>
    </MSH.3>
    <MSH.4>
      <HD.1>8088450656</HD.1>
    </MSH.4>
    <MSH.5>
      <HD.1>EIF</HD.1>
    </MSH.5>
    <MSH.6>
      <HD.1>eHR</HD.1>
    </MSH.6>
    <MSH.7>
      <TS.1>20110427181041</TS.1>
    </MSH.7>
    <MSH.8>2</MSH.8>
    <MSH.9>
      <MSG.1>ORU</MSG.1>
      <MSG.2>R01</MSG.2>
      <MSG.3>ORU_R01</MSG.3>
    </MSH.9>
    <MSH.10>20110702084530</MSH.10>
    <MSH.11>
      <PT.1>P</PT.1>
    </MSH.11>
    <MSH.12>
      <VID.1>2.5</VID.1>
    </MSH.12>
    <MSH.15>NE</MSH.15>
  <MSH.21>
    <EI.1>eHRSS-2.0.0</EI.1>
  </MSH.21>
  </MSH>
  <ORU_R01.PATIENT_RESULT>
  <ORU_R01.ORDER_OBSERVATION>
    <OBR>
      <OBR.4>
        <CE.1> LABAP </CE.1>
      </OBR.4>
    </OBR>
    <ORU_R01.OBSERVATION>
      <OBX>
        <OBX.2>ED</OBX.2>
        <OBX.3>
          <CE.1> LABAP </CE.1>
        </OBX.3>
        <OBX.4>NBL</OBX.4>
      </OBX.5>
    <ED.2>multipart</ ED.2>
    <ED.4>A</ ED.4>
  <ED.5>
    MIME-Version: 1.0
    Content-Type: multipart/mixed; boundary=00163630f5f354355b046be66f6d
--00163630f5f354355b046be66f6d
Content-Type: text/xml; charset=UTF-8; name="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Disposition: attachment; filename="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdehi70
PD94bWwgdmVyc2lvbj0iMS4wIiBlbmNvZGluZz0iVVRGLTgiPz4NCjwhLS0gQ0RBIFNhBXBs
ZSBmb3IgSEtISFIgSW50ZXJvcGVyYWJpbGl0eSAAtLT4NCg0KPCEtLSBDb3B5cmlnaHQ6IFRo
ZSBvd25lcNoaXAgb2YgdGhpccyBkb2NlWVudCBzaG91bGQgYmUgUHJlcGFyYXRvcnkgR3Jv
dXAgb24gZUhSIENvbnnRlbnQgJiBTdGFuZGFyZHMgdW5kZXIgZUhSIENvbnnRlbnQgYW5kIElu
```

Technical Interface Specification for LABAP Record

Zm9ybWF0aW9uIFN0YW5kYXJkcyBXb3JraW5nIEdyb3VwIGFuZCBmdXR1cmUgZUhSIG9mZmljZS4gQWxsIFJpZ2h0cyBSZXNlcnZlZC4gLS0+DQo8IS0tIERpc2NsYWltZXI6IFRoZSBjbmZvIGZvcIBFcGlzb2RIIFN1bW1hcngd2hpY2ggYXR0YWNoZWQgdGhlIFBERiAgLS0+DQoNCjxDF0.....

aW9uPSJ1cm46aGw3LW9yZzp2MyBDREEueHNkIbjBgfzc0NvZGU9IkRPQ0NMSU4iIG1vb2RD
b2RIPSJVfk4P0KDQo8IS0tIA0KKioqKioqKioqKioqKioqKioqKioqKioqKioqKioq
KioqKg0KSGVhZGVyIEluZm9ybWF0aW9uDQoqKioqKioqKioqKioqKioqKioq
KioqKioqDQoLT4JDQoNCgk8dHlwZUIkIHJvb3Q9JluMTYuODQwLjEuMTEzODg2LjEu
MyIgZXh0ZW5zaW9uPSJQT0NEX0hEMDAwMDQwI8+DQoJPCETLSB0ZW1wbGF0ZUlkIHJvb3Q9
IjlJuODQwLjEuMTEzODg2LjEwLjIwLjEiLyAtLT4NCgk8IS0tIERvY3VtZW50IEIE
OyB1bmxldWUsIGFzcInbmVkJG15IFByb3ZpZGVyL0N1c3RvZGlbhwcm9vdCBjb2RIIG9m
ICBQcm92aWRlcI9DdXN0b2RpyW4gldG8gYmUgZGVmaW5lZC0tPg0KCTxpZCByb290PSIyLjE2
Ljg0MC4xLjExMzg4My42LjEiIGV4dGVuc2lvbj0tMTIzNDU2NzgiLz4NCgkNCgk8Y29kZSBj
b2RIPSIZNDEzMy05IiBjb2RIU3IzdGVtPSIyLjE2Ljg0MC4xLjExMzg4My42LjEiIGRp3Bs
dW1bnQ+DQo=

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Content-Type: application/pdf;
name="8088450656.BRANCHA.LABAP.PYN_LAB_AP_000123.123.pdf.201000000001.20110702084530"
Content-Disposition: attachment;
filename="8088450656.BRANCHA.LABAP.PYN_LAB_AP_000123.123.pdf.201000000001.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdeflx1

JVBERi0xLjUNCiW1tbW1DQoxIDAgb2JqDQo8PC9UeXBIL0NhdGFsb2cvUGFnZXMcMiAwIFIv
TGFuZyh6aC1UVykgL1N0cnVjdFRyZWSb290IDM2OSAwIFIvTWFya0luZm88PC9NYXJrZWQg
dHJ1ZT4+Pj4NCmVuZG9iag0KMiAwIG9iag0KPDwvVHlwZS9QYWdlcy9Db3VudCA0L0tpZHNb
IDMgMCBSIDEzMSAwIFIgMjQwIDAuAzNjAgMCBSXSA+Pg0KZW5kb2JqDQozIDAuB2JqDQo8
PC9UeXBIL1BhZ2UvUGFyZW50IDigMCBSL1Jlc291cmNlczw8L1hPYmplY3Q8PC9JbWFnZTUg
NSAwIFIvSW1hZ2U3IDcgMCBSL0ltYWdlOSA5IDAu9JbWFnZTE3IDE3IDAu9JbWFnZTE5IDE5IDAu9J
IDEzIDAu9JbWFnZTE1IDE1IDAu9JbWFnZTE3IDE3IDAu9JbWFnZTE5IDE5IDAu9J
bWFnZTIxIDIxIDAu9JbWFnZTIzIDzIDAu9JbWFnZTI1IDI1IDAu9JbWFnZTI3IDI3
IDAu9JbWFnZTI5IDI5IDAu9JbWFnZTMxIDMxIDAu9JbWFnZTMzIDMzIDAu9JbWFn
.....

ZTM1IDM1IDAu9JbWFnZTM3IDM3IDAu9JbWFnZTM5IDM5IDAu9JbWFnZTQxIDQxIDA
U9JbWFnZTQzIDQzIDAu9JbWFnZTQ1IDQ1IDAu9JbWFnZTQ3IDQ3IDAu9JbWFnZTQ5
gMDAwMDAgbg0KMDAwMDI5NjUzMSAwMDAwMCBuDQo1MSAwMDAwMCBuDQp0cmFpbGvyDQo8PC9TaXplIDEy
OTY1ODkgMDAwMDAgbg0KMDAwMDMzODQ1MSAwMDAwMCBuDQp0cmFpbGvyDQo8PC9TaXplIDEy
NTgyUm9vdCAxIDAu9JbmfZvIDM2OCAwIFIvSURbPEQxOUYyOTI0Tg2MjcwNDVCRUJFRDRG
MTFEMEMWnJJFPjxEMTIGMjkyNEE4NjI3MDQ1QkVCRUQ0RjExRDBDMDYyRT5dID4+DQpzdGFy
dHhyZWYNCjM0MTUyMQ0KJSVFT0YNCnyZWYNCjAgMA0KdHJhaWxlcg0KPDwvU2l6ZSAXMjU4
L1Jvb3QgMSAwIFIvSW5mbAyNjggMCBSL0lEWzxEMTIGMjkyNEE4NjI3MDQ1QkVCRUQ0RjEx
RDBDMDYyRT48RDE5Rj5MjRBODYyNzA0NUJFQkVENEYxMUQwQzA2MkU+XSAvUHJldiAzNDE1
MjEvWFJIIZIN0bSAzMzg0NTE+Pg0Kc3RhcnR4cmVmDQozNjY4NDQNCiUIUR9G

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Content-Type: application/pdf;
name="8088450656.BRANCHA.LABAP.PYN_LAB_AP_000123.124.pdf.201000000001.20110702084530"
Content-Disposition: attachment;
filename="8088450656.BRANCHA.LABAP.PYN_LAB_AP_000123.124.pdf.201000000001.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdeflx1

Mwk1NAzWCGBNG2ouJgY61BybH4UaoKL1HAaNkdofsSbEuuNiogI61iyySAXsOQx+E0wbbC4W
djJK8iCDvFu1e5CTm5sQNIlhewXIWK6sb0RRGNm57YkP0roiYGxoVtkXoNyGimUrVteTKXr
brJNWFJvUb3yjXo0KK6pJPZQ5LtxJ6Eja3d9IgJSftmoynkgrki5XXLXUG/Sds3YyjUgg
mi+efJVkpAhchKtyOpVIKISvKcd7rArxEiQWzp2t03Vxd0Qd3hJBWz16AsxiJdilglUMxc
L4imC7Abd1lSsXsNykv8tWqj48VU+jJN4vId07aL1fZ0B5FRdw17afKCDzHZH9RPnDnSf17
x521xjq9s/WLO58mDd04GgQz2AEY91dNAhScRwEGhb2qe1PZ9tUTkdi+JpFT/3oIDfvvCv3o
WOU151HARLyYDNyZu6OAtV0FLCdytHTL4w+FhYWNjcRYrBSGWtOnf4DUt2RF5XTguNSJidX
.....

sRnIO8JmAG96dcWbjPXLHx++HPDdpPXde1z8N2CBB8ve/45ZZNeD3aGPA0CNOdkF9v5z9PZP
8ePvz0+/vRbC+Tf/Zu/8fz0PSLsKLKDggG+Brlt6/Y18fCrqFkL+IxAxwli7S7gZKrmgQ7
JBU6sDQIIFsmrW6YNCMmydARcZA869Dx1yK8eSh4KO1fyOUBsMAI2dHGx6u25VLbhks/4pIs
PCIOkqewiFuLw+ahuiM+DHoZlepGsrRU3YGX9yFStktAADKi1ZeEsceMGxwY1UGux/JBK
+1DoeCFKa0CWKCSqjtiHFMXKqFJO2FUHFhNUGkiUekWqewOzmZUSqzp/Uuq4QpggUryaYfh

--00163630f5f354355b046be66f6d--

Technical Interface Specification for LABAP Record

```
</ ED.5>
</OBX.5>
<OBX.11>F</OBX.11>
</OBX>
</ORU_R01.OBSERVATION>
</ORU_R01.ORDER_OBSERVATION>
</ORU_R01.PATIENT_RESULT>
</ORU_R01>
```

14.2.3 CDA Example for scenario Update (S2) in Data Compliance Level 2

8088450656.BRANCHA.LABAP.CDA.20110702084530

```

<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" xmlns="urn:hl7-org:v3"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<!--
*****
CDA General Information
*****
-->
<typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
<id/>
<code code="LABAP"/>
<title>Laboratory Anatomical Pathology Result </title>
<effectiveTime/>
<confidentialityCode/>
<recordTarget>
<patientRole>
<id/>
</patientRole>
</recordTarget>
<author>
<time/>
<assignedAuthor>
<id/>
</assignedAuthor>
</author>
<custodian>
<assignedCustodian>
<representedCustodianOrganization>
<id/>
</representedCustodianOrganization>
<assignedCustodian>
</custodian>
<!--
*****
Clinical Information
*****
-->
<component>
<nonXMLBody>
<clinicalDoc>
<participant>
<ehr_no>201000000001</ehr_no>
<hkid>A1234563</hkid>
<doc_type>ID</doc_type>
<doc_no>A1234563</doc_no>
<person_eng_surname>CHAN </person_eng_surname>
<person_eng_given_name>TAI MAN</person_eng_given_name>
<person_eng_full_name>CHAN, TAI MAN</person_eng_full_name>
<sex>M</sex>
<birth_date>1999-01-01 00:00:00.000</birth_date>
</participant>
<detail>
<lab_req_data>
<record_key>PYN_LABAPS_000123</record_key>
<transaction_dtm>2012-05-01 00:00:00.000</transaction_dtm>
<transaction_type>U</transaction_type>
<last_update_dtm>2012-05-01 00:00:00.000</last_update_dtm>
<episode_no>EP-12345</episode_no>
<attendance_inst_id>8088450656</attendance_inst_id>
<request_no>11-CC123456</request_no>
<request_doctor>Dr. TM CHAN</request_doctor>
<request_participant_inst_id>1735455950</request_participant_inst_id>
<request_participant_inst_name>PWH Prince of Wales Hospital </request_participant_inst_name>
<request_participant_inst_lt_desc>PWH Prince of Wales Hospital </request_participant_inst_lt_desc>
<order_no>CC1234567</order_no>
<lab_category_cd>PATH</lab_category_cd>
<lab_category_desc>Anatomical Pathology</lab_category_desc>
<lab_category_lt_desc>Anatomical Pathology Laboratory</lab_category_lt_desc>
<perform_lab_name>Kowloon Bay Clinical Laboratory</perform_lab_name>
<report_reference_dtm>2009-11-20 14:10:00.000</report_reference_dtm>

```

Technical Interface Specification for LABAP Record

```
<clinical_info></clinical_info>
<lab_report_comment></lab_report_comment>
<specimen_type_lt_id></specimen_type_lt_id>
<specimen_type_lt_desc>Vagina</specimen_type_lt_desc>
<specimen_arrival_dtm>2009-11-11 16:15:00.000</specimen_arrival_dtm>
<specimen_collect_dtm>2009-11-12 18:30:00.000</specimen_collect_dtm>
<specimen_details></specimen_details>
<file_ind>1</file_ind>
<record_creation_dtm>2010-06-08 15:22:00.000</record_creation_dtm>
<record_creation_inst_id>8088450656</record_creation_inst_id>
<record_creation_inst_name>Princess Margaret Hospital</record_creation_inst_name>
<record_update_dtm>2010-06-08 15:22:00.000</record_update_dtm>
<record_update_inst_id>8088450656</record_update_inst_id>
<record_update_inst_name>Princess Margaret Hospital</record_update_inst_name>
<ap_test_name>Biopsy</ap_test_name>
</lab_req_data>
<labap_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>P</report_status_cd>
<report_status_desc>Provisional/Preliminary report</report_status_desc>
<report_status_lt_desc>Provisional/Preliminary Report</report_status_lt_desc>
<report_auth_dtm>2009-11-20 14:10:00.000</report_auth_dtm>
<ap_diagnosis_title>Biopsy Diagnosis</ap_diagnosis_title>
<ap_diagnosis_text>Vagina scraping </ap_diagnosis_text>
<panel_lt_cd></panel_lt_cd>
<panel_lt_desc>Vagina</panel_lt_desc>
<report_auth_staff_eng_name>Jack Lee</report_auth_staff_eng_name>
<report_auth_staff_chi_name>李傑克</report_auth_staff_chi_name>
</labap_result_data>
<labap_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<ap_diagnosis_title>Biopsy Diagnosis</ap_diagnosis_title>
<ap_diagnosis_text>Adenocarcinoma </ap_diagnosis_text>
<panel_lt_cd></panel_lt_cd>
<panel_lt_desc>Vagina</panel_lt_desc>
<report_auth_staff_eng_name>Jack Lee</report_auth_staff_eng_name>
<report_auth_staff_chi_name>李傑克</report_auth_staff_chi_name>
</labap_result_data>
<labap_dn_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<ap_diagnosis_title>Biopsy Diagnosis</ap_diagnosis_title>
<topography_lt_cd>T-28000 01, 001</topography_lt_cd>
<topography_lt_desc>Adenocarcinoma, NOS</topography_lt_desc>
<finding_lt_cd>M-4000, 01, 001</finding_lt_cd>
<finding_lt_desc>INFLAMMATION</finding_lt_desc>
</labap_dn_result_data>
<labap_apt_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>P</report_status_cd>
<report_status_desc>Provisional/Preliminary report</report_status_desc>
<report_status_lt_desc>Provisional/Preliminary Report</report_status_lt_desc>
<report_auth_dtm>2009-11-20 14:10:00.000</report_auth_dtm>
<apt_details_title_cd>COMM</apt_details_title_cd>
<apt_details_title_desc>Common </apt_details_title_desc>
<apt_details_title_lt_desc>Pathology Comment </apt_details_title_lt_desc>
<apt_details_content>The specimen is unsatisfactory. </apt_details_content>
</labap_apt_result_data>
<labap_apt_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<apt_details_title_cd>SPEC</apt_details_title_cd>
<apt_details_title_desc>Specimen </apt_details_title_desc>
<apt_details_title_lt_desc>Specimen </apt_details_title_lt_desc>
<apt_details_content>3 cm in diameter, red color. </apt_details_content>
```

Technical Interface Specification for LABAP Record

```
</labap_apt_result_data>
<labap_apt_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<apt_details_title_cd>MICRO</apt_details_title_cd>
<apt_details_title_desc>Microscopic Examination </apt_details_title_desc>
<apt_details_title_lt_desc>Microscopic Examination </apt_details_title_lt_desc>
<apt_details_content>Numerous polymorphs present.</apt_details_content>
</labap_apt_result_data>
<lab_report_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>P</report_status_cd>
<report_status_desc>Provisional/Preliminary report</report_status_desc>
<report_status_lt_desc>Provisional/Preliminary Report</report_status_lt_desc>
<report_auth_dtm>2009-11-20 14:10:00.000</report_auth_dtm>
<report_dtm>2009-11-20 14:10:00.000</report_dtm>
<file_name>8088450656.BRANCHALABAP.PYN_LABAPS_000123.123.pdf.201000000001.20110702084530</file_name>
<report_text></report_text>
</lab_report_data>
<lab_report_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<report_dtm>2009-11-21 14:10:00.000</report_dtm>
<file_name>8088450656.BRANCHALABAP.PYN_LABAPS_000123.124.pdf.201000000001.20110702084530</file_name>
<report_text></report_text>
</lab_report_data>
</detail>
</clinicalDoc>
<text/>
</nonXMLBody>
</component>
</ClinicalDocument>
```

14.2.4 HL7 Message Example for scenario Update (S2) in Data Compliance Level 2

8088450656.BRANCHA.LABAP.HL7.20110702084530

```
<?xml version="1.0" encoding="utf-8"?>
<ORU_R01 xmlns="urn:hl7-org:v2xml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:hl7-org:v2xml \\\\hoehrsv01\\eHR\\CE4\\MESSAG~1\\EHR\\HL7SAM~1\\V25SCH~1\\xsd\\ORU_R01.xsd">
  <MSH>
    <MSH.1></MSH.1>
    <MSH.2>^~\&lt;></MSH.2>
    <MSH.3>
      <HD.1>CMS 3.0</HD.1>
    </MSH.3>
    <MSH.4>
      <HD.1>8088450656</HD.1>
    </MSH.4>
    <MSH.5>
      <HD.1>EIF</HD.1>
    </MSH.5>
    <MSH.6>
      <HD.1>eHR</HD.1>
    </MSH.6>
    <MSH.7>
      <TS.1>20110427181041</TS.1>
    </MSH.7>
    <MSH.8>2</MSH.8>
    <MSH.9>
      <MSG.1>ORU</MSG.1>
      <MSG.2>R01</MSG.2>
      <MSG.3>ORU_R01</MSG.3>
    </MSH.9>
    <MSH.10>20110702084530</MSH.10>
    <MSH.11>
      <PT.1>P</PT.1>
    </MSH.11>
    <MSH.12>
      <VID.1>2.5</VID.1>
    </MSH.12>
    <MSH.15>NE</MSH.15>
  </MSH>
  <ORU_R01.PATIENT_RESULT>
    <ORU_R01.ORDER_OBSERVATION>
      <OBR>
        <OBR.4>
          <CE.1> LABAP </CE.1>
        </OBR.4>
      </OBR>
    <ORU_R01.OBSERVATION>
      <OBX>
        <OBX.2>ED</OBX.2>
        <OBX.3>
          <CE.1> LABAP </CE.1>
        </OBX.3>
        <OBX.4>NBL</OBX.4>
      </OBX>
    <ED.2>multipart</ ED.2>
    <ED.4>A</ ED.4>
  <ED.5>
    MIME-Version: 1.0
    Content-Type: multipart/mixed; boundary=00163630f5f354355b046be66f6d
--00163630f5f354355b046be66f6d
Content-Type: text/xml; charset=UTF-8; name="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Disposition: attachment; filename="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdehi70
PD94bWwgdmVyc2lvbj0iMS4wIiBlbmNvZGluZz0iVVRGLTgiPz4NCjwhLS0gQ0RBIFNhBXBs
ZSBmb3IgSEtISFIgSW50ZXJvcGVyYWJpbGl0eSAAtLT4NCg0KPCEtLSBDb3B5cmlnaHQ6IFRo
ZSBvd25lcNoaXAgb2YgdGhpccyBkb2NlWVudCBzaG91bGQgYmUgUHJlcGFyYXRvcnkgR3Jv
dXAzb24gZUhSIENvbRlnQgJiBTdGFuZGFyZHMgdW5kZXIgZUhSIENvbRlnQgYW5kIElu
```

Technical Interface Specification for LABAP Record

Zm9ybWF0aW9uIFN0YW5kYXJkcyBXb3JraW5nIEdyb3VwIGFuZCBmdXR1cmUgZUhSIG9mZmljZS4gQWxsIFJpZ2h0cyBSZXNlcnZlZC4gLS0+DQo8IS0tIERpc2NsYWltZXI6IFRoZSBJbmZvIGZvcIBFcGlzb2RIIFN1bW1hcncgd2hpY2ggYXR0YWNoZWQgdGhlIFBERiAgLS0+DQoNCjxDf0.....
.....
.....
aW9uPSJ1cm46aGw3LW9yZzp2MyBDREEueHNkIbjbGFzc0NvZGU9IkRPQ0NMSU4iIG1vb2RD
b2RIPSJVfk4iPg0KDQo8IS0tIA0KKioqKioqKioqKioqKioqKioqKioqKioqKioqKioq
KioqKg0KSGVhZGVyIEluZm9ybWF0aW9uDQoqKioqKioqKioqKioqKioqKioqKioq
KioqKioqDQoLT4JDQoNCgk8dHlwZUIkIHJvb3Q9JluMTYuODQwLjEuMTEzODg2LjEu
MyIgZXh0ZW5zaW9uPSJQT0NEX0hEMDQwIi8+DQoJPCEtLSB0ZW1wbGF0ZUlkIHJvb3Q9
IjlJuODQwLjEuMTEzODg2LjEwLjIwLjEiLyAtLT4NCgkNCgk8IS0tIERvY3VtZW50IE
OyB1bmxldWUsIGFzcInbmVkJG51FBy3ZpZGVyL0N1c3RvZGlbhwcm9vdCBjb2RIIG9m
ICBQcm92aWRlc9DdXN0b2RpyW4glG8gYmUgZGVmaW5lZC0tPg0KCTxpZCByb290PSIyLjE2
Ljg0MC4xLjExMzg4My42LjEiIGV4dGVuc2lvbj0tMTIzNDU2NzgiLz4NCgkNCgk8Y29kZSBj
b2RIPSIZNDEzMy05iBjb2RIU3IzdGVtPSIyLjE2Ljg0MC4xLjExMzg4My42LjEiIGRp3Bs
dW1lbnQ+DQo=

--00163630f5f354355b046be66f6d
Content-Type: application/pdf;
name="8088450656.BRANCHA.LABAP.PYN_LAB_AP000123.123.pdf.201000000001.20110702084530"
Content-Disposition: attachment;
filename="8088450656.BRANCHA.LABAP.PYN_LAB_AP000123.123.pdf.201000000001.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdeflx1

JVBERi0xLjUNCiW1tbW1DQoxIDAgb2JqDQo8PC9UeXBIL0NhdGFsb2cvUGFnZXMGMiAwIFIv
TGxFuZyh6aC1UVykgL1N0cnVjdFRyZWSVs290IDM2OSAwIFIvTWFya0luZm88PC9NYXJrZWQg
dHJ1ZT4+Pj4NCmVuZG9iag0KMiAwIG9iag0KPDwvVHlwZS9QYWdlcy9Db3VudCA0L0tpZHNb
IDMgMCBSIDEzMSAwIFIgMjQwIDAuUiAzNjAgMCBSXSA+Pg0KZW5kb2JqDQozIDAuB2JqDQo8
PC9UeXBIL1BhZ2UvUGFyZW50IDigMCBSL1Jlc291cmNlczw8L1hPYmplY3Q8PC9JbWFnZTug
NSAwIFIvSW1hZ2U3IDcgMCBSL0ltYWdlOSA5IDAu9JbWFnZTE3IDE3IDAu9JbWFnZTE5IDE5IDAu9J
IDEzIDAu9JbWFnZTE1IDE1IDAu9JbWFnZTE3IDE3IDAu9JbWFnZTE5IDE5IDAu9J
bWFnZT1xIDIxIDAu9JbWFnZT1zIDzIDAu9JbWFnZT11ID11IDAu9JbWFnZT13IDI1
IDAu9JbWFnZT15IDI5IDAu9JbWFnZTMxIDMxIDAu9JbWFnZTMzIDMzIDAu9JbWFn
.....
.....
.....
ZTM1IDM1IDAu9JbWFnZTM3IDM3IDAu9JbWFnZTM5IDM5IDAu9JbWFnZTQxIDQxIDA
U9JbWFnZTQzIDQzIDAu9JbWFnZTQ1IDQ1IDAu9JbWFnZTQ3IDQ3IDAu9JbWFnZTQ5
gMDAwMDAgbg0KMDAwMDI5NjUzMSAwMDAwMCBuDQwMDAwMjk2NTYwIDAuMDAwIG4NCjAwMDA
OTY1ODkgMDAwMDAgbg0KMDAwMDMzODQ1MSAwMDAwMCBuDQp0cmFpbGVyDQo8PC9TaXplIDEy
NTgyUm9vdCAxIDAu9JbmfZvIDM2OCAwIFIvSURbPEQxOUYyOTI0QTg2MjcwNDVCRUJFRDRG
MTFEMEMWnJJFPjxEMTIGMjkyNEE4NjI3MDQ1QkVCRUQ0RjExRDBDMDYyRT5dID4+DQpzdGFy
dHhyZWYNCjM0MTUyMQ0KJSVFT0YNCnyZWYNCjAgMA0KdHJhaWxlcg0KPDwvU2l6ZSAXMjU4
L1Jvb3QgMSAwIFIvSW5mbAyNjggMCBSL0lEWzxEMTIGMjkyNEE4NjI3MDQ1QkVCRUQ0RjEx
RDBDMDYyRT48RDE5Rj5MjRBODYyNzA0NUJFQkVENEYxMUQwQzA2MkU+XSAvUHJldiAzNDE1
MjEvWFJIZIN0bSAzMzg0NTE+Pg0Kc3RhcnR4cmVmDQozNjY4NDQNCiUIUR9G

--00163630f5f354355b046be66f6d
Content-Type: application/pdf;
name="8088450656.BRANCHA.LABAP.PYN_LAB_AP000123.124.pdf.201000000001.20110702084530"
Content-Disposition: attachment;
filename="8088450656.BRANCHA.LABAP.PYN_LAB_AP000123.124.pdf.201000000001.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdeflx1

Mwk1NAzWCGBNG2ouJgY61BybH4UaoKL1HAaNkdofsSbEuuNiogI61iyySAXsOQx+E0wbbC4W
djJK8iCDvFu1e5CTm5sQNIlhewXIWK6sb0RRGNm57YkP0roiYGx0VtKx0NyGimUrVteTKXr
brJNWFJvUb3yjXo0KK6pJPZQ5LtxJ6Eja3d9IgJSftmoynkgrki5sXXLXUG/Sds3YyjUgg
mi+efJVkpAhchKtyOpVIKISvKcd7rArxEiQWzp2t03VXd0Qd3hJBWz16AsxiJdilglUMxc
L4imC7Abd1lSsXsNykv8tWqj48VU+jJN4vId07aL1fZ0B5FRdw17afKCDzHZH9RPnDnSf17
x521xjq9s/WLO58mDd04GgQz2AEY91dNAhScRwEGhb2qe1PZ9tUTkdi+JpFT/3oIDfvvCv3o
WOU151HARLydNyZu6OAtV0FLCdytHTL4w+FhYWNjcRYrBSGWtOnf4DUt2RF5XTguNSJidX
.....
.....
.....
sRnIO8JmAG96dcWbjPXLHx++HPDdpPXde1z8N2CBB8ve/45ZZNeD3aGPA0CNOdkF9v5z9PZP
8ePvz0+/vRbC+Tf/Zu/8fz0PSLsKLKDggnG+Brlt6/Y18fCrqFkL+IxAxwli7S7gZKrmgQ7
JCEP5HbzontUOEIxClkjYmRW9Tzmy5WN2dMCcVcWxN6n8sDYIFLKrEELLW0abk0uuHSjrj0
JJelE7mMPe0i90sMOVS+RdyeQDMudRUwe23DNVQqWxDZRhQqYGkEnGQSofd1+jUnfDyJRK
PCIOkqewiFuLw+ahuiM+DHoZlepGsrRU3YGD9yFStktAADKi1ZeESceMGxwY1UGuxE/JBK
+1doeCFKa0CWKCSqjtIHFMXKqFJO2FUHFhNUgkijUekWqewOzmZUSQzp/Uuq4QpggUryaYfh

Technical Interface Specification for LABAP Record

```
--00163630f5f354355b046be66f6d--  
</ED.5>  
  </OBX.5>  
    <OBX.11>F</OBX.11>  
  </OBX>  
  </ORU_R01.OBSERVATION>  
  </ORU_R01.ORDER_OBSERVATION>  
  </ORU_R01.PATIENT_RESULT>  
</ORU_R01>
```

14.2.5 CDA Example for scenario Delete (S3) in Data Compliance Level 2

8088450656.BRANCHA.LABAP.CDA.20110702084530

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" xmlns="urn:hl7-org:v3"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <!--
  ****
  CDA General Information
  ****
  -->
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
  <id/>
  <code code="LABAP"/>
  <title>Laboratory Anatomical Pathology Result</title>
  <effectiveTime/>
  <confidentialityCode/>
  <recordTarget>
    <patientRole>
      <id/>
      </patientRole>
    </recordTarget>
    <author>
      <time/>
      <assignedAuthor>
        <id/>
        <assignedAuthor>
          <author>
            <custodian>
              <assignedCustodian>
                <representedCustodianOrganization>
                  <id/>
                  <representedCustodianOrganization>
                    <assignedCustodian>
                      <custodian>
                        <assignedCustodian>
                          <representedCustodianOrganization>
                            <id/>
                            <representedCustodianOrganization>
                          </assignedCustodian>
                        </custodian>
                      <!--
                      ****
                      Clinical Information
                      ****
                      -->
                      <component>
                        <nonXMLBody>
                          <clinicalDoc>
                            <participant>
                              <ehr_no>201000000001</ehr_no>
                              <hkid>A1234563</hkid>
                              <doc_type>ID</doc_type>
                              <doc_no>A1234563</doc_no>
                              <person_eng_surname>CHAN </person_eng_surname>
                              <person_eng_given_name>TAI MAN</person_eng_given_name>
                              <person_eng_full_name>CHAN, TAI MAN</person_eng_full_name>
                              <sex>M</sex>
                              <birth_date>1999-01-01 00:00:00.000</birth_date>
                            </participant>
                            <detail>
                              <lab_req_data>
                                <record_key>PYN_LAB_HMS_000123</record_key>
                                <transaction_dtm>2012-05-01 00:00:00.000</transaction_dtm>
                                <transaction_type>D</transaction_type>
                                <last_update_dtm>2012-05-01 00:00:00.000</last_update_dtm>
                                <episode_no>EP-12345</episode_no>
                                <attendance_inst_id>8088450656</attendance_inst_id>
                              </lab_req_data>
                            </detail>
                          </clinicalDoc>
                          <text/>
                        </nonXMLBody>
                      </component>
                    </ClinicalDocument>
                  <!--
                  ****
                  -->
                <!--
                ****
                Clinical Information
                ****
                -->
                <component>
                  <nonXMLBody>
                    <clinicalDoc>
                      <participant>
                        <ehr_no>201000000001</ehr_no>
                        <hkid>A1234563</hkid>
                        <doc_type>ID</doc_type>
                        <doc_no>A1234563</doc_no>
                        <person_eng_surname>CHAN </person_eng_surname>
                        <person_eng_given_name>TAI MAN</person_eng_given_name>
                        <person_eng_full_name>CHAN, TAI MAN</person_eng_full_name>
                        <sex>M</sex>
                        <birth_date>1999-01-01 00:00:00.000</birth_date>
                      </participant>
                      <detail>
                        <lab_req_data>
                          <record_key>PYN_LAB_HMS_000123</record_key>
                          <transaction_dtm>2012-05-01 00:00:00.000</transaction_dtm>
                          <transaction_type>D</transaction_type>
                          <last_update_dtm>2012-05-01 00:00:00.000</last_update_dtm>
                          <episode_no>EP-12345</episode_no>
                          <attendance_inst_id>8088450656</attendance_inst_id>
                        </lab_req_data>
                      </detail>
                    </clinicalDoc>
                    <text/>
                  </nonXMLBody>
                </component>
              </ClinicalDocument>
            <!--
            ****
            Clinical Information
            ****
            -->
          <!--
          ****
          Clinical Information
          ****
          -->
        <!--
        ****
        Clinical Information
        ****
        -->
      <!--
      ****
      Clinical Information
      ****
      -->
    <!--
    ****
    Clinical Information
    ****
    -->
  <!--
  ****
  Clinical Information
  ****
  -->
</ClinicalDocument>
```

14.2.6 HL7 Message Example for scenario Delete (S3) in Data Compliance Level 2

8088450656.BRANCHA.LABAP.HL7.20110702084530

```
<?xml version="1.0" encoding="utf-8"?>
<ORU_R01 xmlns="urn:hl7-org:v2xml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:hl7-org:v2xml \\\\hoehrsv01\\eHR\\CE4\\MESSAG~1\\EHR\\HL7SAM~1\\V25SCH~1\\xsd\\ORU_R01.xsd">
  <MSH>
    <MSH.1></MSH.1>
    <MSH.2>^~\&lt;></MSH.2>
    <MSH.3>
      <HD.1>CMS 3.0</HD.1>
    </MSH.3>
    <MSH.4>
      <HD.1>8088450656</HD.1>
    </MSH.4>
    <MSH.5>
      <HD.1>EIF</HD.1>
    </MSH.5>
    <MSH.6>
      <HD.1>eHR</HD.1>
    </MSH.6>
    <MSH.7>
      <TS.1>20110427181041</TS.1>
    </MSH.7>
    <MSH.8>2</MSH.8>
    <MSH.9>
      <MSG.1>ORU</MSG.1>
      <MSG.2>R01</MSG.2>
      <MSG.3>ORU_R01</MSG.3>
    </MSH.9>
    <MSH.10>20110702084530</MSH.10>
    <MSH.11>
      <PT.1>P</PT.1>
    </MSH.11>
    <MSH.12>
      <VID.1>2.5</VID.1>
    </MSH.12>
    <MSH.15>NE</MSH.15>
  </MSH.21>
  <EI.1>eHRSS-2.0.0</EI.1>
</MSH.21>
</MSH>
<ORU_R01.PATIENT_RESULT>
<ORU_R01.ORDER_OBSERVATION>
  <OBR>
    <OBR.4>
      <CE.1> LABAP </CE.1>
    </OBR.4>
  </OBR>
<ORU_R01.OBSERVATION>
  <OBX>
    <OBX.2>ED</OBX.2>
    <OBX.3>
      <CE.1> LABAP </CE.1>
    </OBX.3>
    <OBX.4>NBL</OBX.4>
  </OBX.5>
<ED.2>multipart</ ED.2>
< ED.4>A</ ED.4>
< ED.5>
  MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=00163630f5f354355b046be66f6d
--00163630f5f354355b046be66f6d
Content-Type: text/xml; charset=UTF-8; name="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Disposition: attachment; filename="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdehi70
PD94bWwgdmVyc2lvbj0iMS4wIiBlbmNvZGluZz0iVVRGLTgiPz4NCjwhLS0gQ0RBIFNhBXBs
ZSBmb3IgSEtISFIgSW50ZXJvcGVyYWJpbGl0eSAAtLT4NCg0KPCEtLSBDb3B5cmlnaHQ6IFRo
ZSBvd25lcNoaXAgb2YgdGhpccyBkb2NlWVudCBzaG91bGQgYmUgUHJlcGFyYXRvcnkgR3Jv
dXAzb24gZUhSIENvbnnRlbnQgJiBTdGFuZGFyZHMgdW5kZXIgZUhSIENvbnnRlbnQgYW5kIElu
```

Technical Interface Specification for LABAP Record

```
Zm9ybWF0aW9uIFN0YW5kYXJkcyBXb3JraW5nIEdyb3VwIGFuZCBmdXR1cmUgZUhSIG9mZmlj
ZS4gQWxsIFJpZ2h0cyBSZXNlcnZlZC4gLS0+DQo8IS0tIERpc2NsYWltZXI6IFRoZSBJbmZv
IGZvcIBFcGlzb2RIIFN1bW1hcncgd2hpY2ggYXR0YWNoZWQgdGhlIFBERiAgLS0+DQoNCjxDF0
.....
.....
aW9uPSJ1cm46aGw3LW9yZzp2MyBDREEueHNkIiBjbGFzc0NvZGU9IkRPQ0NMSU4iIG1vb2RD
b2RIPSJVfk4iPg0KDQo8IS0tIA0KKioqKioqKioqKioqKioqKioqKioqKioqKioq
KioqKg0KSGVhZGVyIEluZm9ybWF0aW9uDQoqKioqKioqKioqKioqKioqKioqKioq
KioqKioqDQoLT4JDQoNCgk8dHlwZUIkIHJvb3Q9IjluMTYuODQwLjEuMTEzODgZLjEu
MyIgZXh0ZW5zaW9uPSJQT0NEX0hEMDAwMDQwI8+DQoJPCeLSB0ZW1wbGF0ZUlkIHJvb3Q9
IjluMTYuODQwLjEuMTEzODgZLjEwLjIwLjEiLyAtLT4NCgkNCgk8IS0tIERvY3VtZW50IEIE
OyB1bmxldWUsIGFzc2lnbmVkJG51FByb3ZpZGVyL0N1c3RvZGlibiwgcm9vdCBjb2RIIG9m
ICBQcm92aWRlci9DdXN0b2RpYW4gdG8gYmUgZGVmaW5lZC0tPg0KCTxpZCByb290PSIyLjE2
Ljg0MC4xLjExMzg4My42LjEiIGV4dGVuc2lvbj0tMTIzNDU2NzgiLz4NCgkNCgk8Y29kZSBj
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< ED.5>
</OBX.5>
<OBX.11>F</OBX.11>
</OBX>
</ORU_R01.OBSERVATION>
</ORU_R01.ORDER_OBSERVATION>
</ORU_R01.PATIENT_RESULT>
</ORU_R01>
```

14.3 EXAMPLES FOR DATA COMPLIANCE LEVEL 3

Example Data

Insert / Update / Delete a laboratory result (AP result) record of a HCR. The record is composed of a request data, two AP result data and two report data.

HCR Data	
eHR Number	201000000001
HKIC Number	A1234563
Type of Document	ID
Document Number	A1234563
English Surname	CHAN
English Given Name	TAI MAN
English Full Name	CHAN, TAI MAN
Sex	M
Birth date	1999-01-01 00:00:00.000
Laboratory Test Request Data (ReqA)	
Record Key	PYN_LABAPS_000123
Transaction Datetime	2012-05-01 00:00:00.000
Transaction Type	I : New (S1) U : Update (S2) D : Delete (S3)
Last Update Datetime	2012-05-01 00:00:00.000
Episode Number	EP-12345
Attendance Institution Identifier	8088450656
Laboratory Test Request Number	11-CC123456
Laboratory Test Requesting Doctor	Dr. TM CHAN
Laboratory Test Request Institution of Participant – Code	1735455950
Laboratory Test Request Institution of Participant – Description	Prince of Wales Hospital
Laboratory Test Request Institution of Patient - Local Description	Prince of Wales Hospital
Laboratory Test Order Number	CC11234567

Technical Interface Specification for LABAP Record

Laboratory Category Code	PATH
Laboratory Category Description	Anatomical Pathology Laboratory
Laboratory Category Local Description	Anatomical Pathology Laboratory
Laboratory Test Order Number	CC1234567
Laboratory Test Request - Performing Laboratory Name	Kowloon Bay Clinical Laboratory
Laboratory Report Reference Datetime	2009-11-20 14:10:00.000
Laboratory Test Request Clinical Information	
Laboratory Report -Result Comment	
Specimen Type Local Code	S423
Specimen Type Local Description	Biopsy
Specimen - Arrival Datetime	2009-11-11 16:15:00.000
Specimen - Collect Datetime	2009-11-12 18:30:00.000
Specimen details	
File Indicator	1
Record Creation Datetime	2010-06-08 15:22:00.000
Record Creation Institution Identifier	8088450656
Record Creation Institution Name	Princess Margaret Hospital
Record Last Update Datetime	2010-06-08 15:22:00.000
Record Update Institution Identifier	8088450656
Record Update Institution Name	Princess Margaret Hospital
Anatomical Pathology Test Name	Biopsy all embedded
Laboratory Report Data	
Record Key	PYN_LABAPS_000123
Report Status Code	F
Report Status Description	Final report
Report Status Local Description	Final Report
Laboratory Report Date	2009-11-21 14:10:00.000
Laboratory Report Authorised Datetime	2009-11-21 14:10:00.000
File Name	8088450656.BRANCHALABAP.PYN_LAB_HMS_000 123.124.pdf.201000000001.20110702084530
Laboratory Report – Text	
Anatomical Pathology Result – Diagnosis Data	
Record Key	PYN_LABAPS_000123
Report Status Code	F
Report Status Description	Final report
Report Status Local Description	Final
Laboratory Report Authorised Datetime	2009-11-20 14:10:00.000
Anatomical Pathology Diagnosis Title	Frozen Section Diagnosis
Anatomical Pathology Diagnosis Text Result	Adenocarcinoma of right lung
Panel Local Code	BX
Panel Local Description	Biopsy
Laboratory Report Authorised Healthcare Staff English Name	Jack Lee
Laboratory Report Authorised Healthcare Staff Chinese Name	李傑克
Anatomical Pathology Result – Diagnosis Topography and Finding Data	
Record Key	PYN_LABAPS_000123
Report Status Code	F
Report Status Description	Final report
Report Status Local Description	Final
Laboratory Report Authorised Datetime	2009-11-21 14:10:00.000
Anatomical Pathology Diagnosis Title	Frozen Section Diagnosis
Topography Local Code	T-28100,01,001
Topography Local Description	Lung, right
Finding Local Code	M-81402,01,001

Technical Interface Specification for LABAP Record

Finding Local Description	Adenocarcinoma in-situ
Diagnosis topography - recognised terminology name	HKCTT
Diagnosis topography identifier - recognised terminology	8003046
Diagnosis topography description - recognised terminology	Right lung structure
Diagnosis finding - recognised terminology name	HKCTT
Diagnosis finding identifier - recognised terminology	8002624
Diagnosis finding description - recognised terminology	Adenocarcinoma in situ
Anatomical Pathology Result – Report Details Data	
Record Key	PYN_LABAPS_000123
Report Status Code	F
Report Status Description	Final report
Report Status Local Description	Final
Laboratory Report Authorised Datetime	2009-11-21 14:10:00.000
Anatomical Pathology Report Details - Title Code	OTH
Anatomical Pathology Report Details - Title Description	Other
Anatomical Pathology Report Details - Title Local Description	Molecular Pathology
Anatomical Pathology Report Details – Content	HC-2 Test for high risk HPV group(positive).

14.3.1 CDA Example for scenario New (S1) in Data Compliance Level 3

8088450656.BRANCHA.LABAP.CDA.20110702084530

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<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" xmlns="urn:hl7-org:v3"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<!--
*****
CDA General Information
*****
-->
<typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
<id/>
<code code="LABAP"/>
<title>Laboratory Anatomical Pathology Result </title>
<effectiveTime/>
<confidentialityCode/>
<recordTarget>
<patientRole>
<id/>
</patientRole>
</recordTarget>
<author>
<time/>
<assignedAuthor>
<id/>
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</author>
<custodian>
<assignedCustodian>
<representedCustodianOrganization>
<id/>
</representedCustodianOrganization>
</assignedCustodian>
</custodian>
<!--
*****
Clinical Information
*****
-->
<component>
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Technical Interface Specification for LABAP Record

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<doc_type>ID</doc_type>
<doc_no>A1234563</doc_no>
<person_eng_surname>CHAN </person_eng_surname>
<person_eng_given_name>TAI MAN</person_eng_given_name>
<person_eng_full_name>CHAN, TAI MAN</person_eng_full_name>
<sex>M</sex>
<birth_date>1999-01-01 00:00:00.000</birth_date>
</participant>
<detail>
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<transaction_type>I</transaction_type>
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<request_no>11-CC123456</request_no>
<request_doctor>Dr. TM CHAN</request_doctor>
<request_participant_inst_id>1735455950</request_participant_inst_id>
<request_participant_inst_name>PWU Prince of Wales Hospital </request_participant_inst_name>
<request_participant_inst_lt_desc>PWU Prince of Wales Hospital </request_participant_inst_lt_desc>
<order_no>CC1234567</order_no>
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<lab_category_desc>Anatomical Pathology</lab_category_desc>
<lab_category_lt_desc>Anatomical Pathology Laboratory</lab_category_lt_desc>
<perform_lab_name>Kowloon Bay Clinical Laboratory</perform_lab_name>
<report_reference_dtm>2009-11-20 14:10:00.000</report_reference_dtm>
<clinical_info></clinical_info>
<lab_report_comment></lab_report_comment>
<specimen_type_lt_id>S423</specimen_type_lt_id>
<specimen_type_lt_desc>Biopsy</specimen_type_lt_desc>
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<specimen_collect_dtm>2009-11-12 18:30:00.000</specimen_collect_dtm>
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<record_update_inst_name>Princess Margaret Hospital</record_update_inst_name>
<ap_test_name>Biopsy all embedded</ap_test_name>
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<report_status_cd>P</report_status_cd>
<report_status_desc>Provisional/Preliminary report</report_status_desc>
<report_status_lt_desc>Provisional/Preliminary Report</report_status_lt_desc>
<report_auth_dtm>2009-11-20 14:10:00.000</report_auth_dtm>
<ap_diagnosis_title>Biopsy Diagnosis</ap_diagnosis_title>
<ap_diagnosis_text>Vagina scraping </ap_diagnosis_text>
<panel_lt_cd></panel_lt_cd>
<panel_lt_desc>Vagina</panel_lt_desc>
<report_auth_staff_eng_name>Jack Lee</report_auth_staff_eng_name>
<report_auth_staff_chi_name>李傑克</report_auth_staff_chi_name>
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<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<ap_diagnosis_title>Frozen Section Diagnosis </ap_diagnosis_title>
<ap_diagnosis_text>Adenocarcinoma of right lung</ap_diagnosis_text>
<panel_lt_cd>BX</panel_lt_cd>
<panel_lt_desc>Biopsy</panel_lt_desc>
<report_auth_staff_eng_name>Jack Lee</report_auth_staff_eng_name>
<report_auth_staff_chi_name>李傑克</report_auth_staff_chi_name>
</labap_result_data>
<labap_dn_result_data>
```

Technical Interface Specification for LABAP Record

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<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<ap_diagnosis_title>Frozen Section Diagnosis</ap_diagnosis_title>
<topography_lt_cd>T-28000 01, 001</topography_lt_cd>
<topography_lt_desc>Lung, right</topography_lt_desc>
<finding_lt_cd>M-81402,01,001</finding_lt_cd>
<finding_lt_desc> Adenocarcinoma in-situ </finding_lt_desc>
<topography_rt_name>HKCTT</topography_rt_name>
<topography_rt_id>8003046</topography_rt_id>
<topography_rt_desc>Right lung structure </topography_rt_desc>
<finding_rt_name>HKCTT</finding_rt_name>
<finding_rt_id>8002624</finding_rt_id>
<finding_rt_desc>Adenocarcinoma in situ </finding_rt_desc>
</labap_dn_result_data>
</labap_apr_result_data>
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<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final</report_status_lt_desc>
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<apt_detail_title_desc>Other</apt_detail_title_desc>
<apt_detail_title_lt_desc>Molecular Pathology</apt_detail_title_lt_desc>
<apt_detail_content>HC-2 Test for high risk HPV group(positive).</apt_detail_content>
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<lab_report_data>
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<report_status_desc>Final report</report_status_desc>
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<report_dtm>2009-11-21 14:10:00.000</report_dtm>
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<report_text></report_text>
</lab_report_data>
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</component>
</ClinicalDocument>
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14.3.2 HL7 Message Example for scenario New (S1) in Data Compliance Level 3

8088450656.BRANCHA.LABAP.HL7.20110702084530

```
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<ORU_R01 xmlns="urn:hl7-org:v2xml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:hl7-org:v2xml \\\\hoehrsv01\\eHR\\CE4\\MESSAG~1\\EHR\\HL7SAM~1\\V25SCH~1\\xsd\\ORU_R01.xsd">
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    <MSH.2>^~\&lt;></MSH.2>
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    </MSH.3>
    <MSH.4>
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    </MSH.4>
    <MSH.5>
      <HD.1>EIF</HD.1>
    </MSH.5>
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      <HD.1>eHR</HD.1>
    </MSH.6>
    <MSH.7>
      <TS.1>20110427181041</TS.1>
    </MSH.7>
    <MSH.8>3</MSH.8>
    <MSH.9>
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      <MSG.2>R01</MSG.2>
      <MSG.3>ORU_R01</MSG.3>
    </MSH.9>
    <MSH.10>20110702084530</MSH.10>
    <MSH.11>
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    </MSH.11>
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    </MSH.12>
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  </MSH>
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        </OBR.4>
      </OBR>
    <ORU_R01.OBSERVATION>
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        <OBX.3>
          <CE.1> LABAP </CE.1>
        </OBX.3>
        <OBX.4>NBL</OBX.4>
      </OBX.5>
    <ED.2>multipart</ ED.2>
    <ED.4>A</ ED.4>
  <ED.5>
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Content-Disposition: attachment; filename="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Transfer-Encoding: base64
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ZSBmb3IgSEtISFIgSW50ZXJvcGVyYWJpbGl0eSAAtLT4NCg0KPCEtLSBDb3B5cmlnaHQ6IFRo
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Technical Interface Specification for LABAP Record

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Content-Disposition: attachment;
filename="8088450656.BRANCHA.LABAP.PYN_LAB_AP_000123.123.pdf.201000000001.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdeflx1

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Content-Disposition: attachment;
filename="8088450656.BRANCHA.LABAP.PYN_LAB_AP_000123.124.pdf.201000000001.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdeflx1

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L4imC7Abd1lSsXsNykv8tWqj48VU+jJN4vId07aL1fZ0B5FRdw17afKCDzHZH9RPnDnSf17
x521xjq9s/WLO58mDd04GgQz2AEY91dNAhScRwEGhb2qe1PZ9tUTkdi+JpFT/3oIDfvvCv3o
WOU151HARLyYDNyZu6OAtV0FLCdytHTL4w+FhYWNjcRYrBSGWtOnf4DUt2RF5XTguNSJidX
.....

sRnIO8JmAG96dcWbjPXLHx++HPDdpPXde1z8N2CBB8ve/45ZZNeD3aGPA0CNOdkF9v5z9PZP
8ePvz0+/vRbC+Tf/Zu/8fz0PSLsKLKDggnG+Brlt6/Y18fCrqFkL+IxAxwli7S7gZKrmgQ7
JBU6sDQIIFsmrW6YNCMmydARcZA869Dx1yK8eSh4KO1fyOUBsMAI2dHGx6u25VLbhks/4pIs
PCIOkqewiFuLw+ahuiM+DHoZlepGsrRU3YGX9yFStktAADKi1ZeEsceMGxwY1UGux/JBK
+1DoeCFKa0CWKCSqjtiHFMXKqFJO2FUHFhNUGukiUekWqewOzmZUSqzp/Uuq4QpggUryaYfh

--00163630f5f354355b046be66f6d--

Technical Interface Specification for LABAP Record

```
</ ED.5>
</OBX.5>
<OBX.11>F</OBX.11>
</OBX>
</ORU_R01.OBSERVATION>
</ORU_R01.ORDER_OBSERVATION>
</ORU_R01.PATIENT_RESULT>
</ORU_R01>
```

14.3.3 CDA Example for scenario Update (S2) in Data Compliance Level 3

8088450656.BRANCHA.LABAP.CDA.20110702084530

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" xmlns="urn:hl7-org:v3"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <!--
  ****
  CDA General Information
  ****
  -->
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
  <id/>
  <code code="LABAP"/>
  <title>Laboratory Anatomical Pathology Result </title>
  <effectiveTime/>
  <confidentialityCode/>
  <recordTarget>
    <patientRole>
      <id/>
    </patientRole>
    <recordTarget>
      <author>
        <time/>
        <assignedAuthor>
          <id/>
        </assignedAuthor>
        <author>
          <time/>
          <assignedAuthor>
            <id/>
          </assignedAuthor>
          <author>
            <custodian>
              <assignedCustodian>
                <representedCustodianOrganization>
                  <id/>
                </representedCustodianOrganization>
                <assignedCustodian>
                  <custodian>
                    <assignedCustodian>
                      <representedCustodianOrganization>
                        <id/>
                      </representedCustodianOrganization>
                      <assignedCustodian>
                        <custodian>
                          <!--
                          ****
                          Clinical Information
                          ****
                          -->
                          <component>
                            <nonXMLBody>
                              <clinicalDoc>
                                <participant>
                                  <ehr_no>201000000001</ehr_no>
                                  <hkid>A1234563</hkid>
                                  <doc_type>ID</doc_type>
                                  <doc_no>A1234563</doc_no>
                                  <person_eng_surname>CHAN </person_eng_surname>
                                  <person_eng_given_name>TAI MAN</person_eng_given_name>
                                  <person_eng_full_name>CHAN, TAI MAN</person_eng_full_name>
                                  <sex>M</sex>
                                  <birth_date>1999-01-01 00:00:00.000</birth_date>
                                </participant>
                                <detail>
                                  <lab_req_data>
                                    <record_key>PYN_LABAPS_000123</record_key>
                                    <transaction_dtm>2012-05-01 00:00:00.000</transaction_dtm>
                                    <transaction_type>U</transaction_type>
                                    <last_update_dtm>2012-05-01 00:00:00.000</last_update_dtm>
                                    <episode_no>EP-12345</episode_no>
                                    <attendance_inst_id>8088450656</attendance_inst_id>
                                    <request_no>11-CC123456</request_no>
                                    <request_doctor>Dr. TM CHAN</request_doctor>
                                    <request_participant_inst_id>1735455950</request_participant_inst_id>
                                    <request_participant_inst_name>PWH Prince of Wales Hospital </request_participant_inst_name>
                                    <request_participant_inst_lt_desc>PWH Prince of Wales Hospital </request_participant_inst_lt_desc>
                                    <order_no>CC1234567</order_no>
                                    <lab_category_cd>PATH</lab_category_cd>
                                    <lab_category_desc>Anatomical Pathology</lab_category_desc>
                                    <lab_category_lt_desc>Anatomical Pathology Laboratory</lab_category_lt_desc>
                                    <perform_lab_name>Kowloon Bay Clinical Laboratory</perform_lab_name>
                                    <report_reference_dtm>2009-11-20 14:10:00.000</report_reference_dtm>
                                  </lab_req_data>
                                </detail>
                              </clinicalDoc>
                            </nonXMLBody>
                          </component>
                        <!--
                        ****
                        -->
                      </representedCustodianOrganization>
                    </assignedCustodian>
                  </custodian>
                </representedCustodianOrganization>
              </assignedCustodian>
            </custodian>
          </assignedCustodian>
        </author>
      </recordTarget>
    </patientRole>
  </recordTarget>
</ClinicalDocument>
```

Technical Interface Specification for LABAP Record

```
<clinical_info></clinical_info>
<lab_report_comment></lab_report_comment>
<specimen_type_lt_id>S423</specimen_type_lt_id>
<specimen_type_lt_desc>Biopsy</specimen_type_lt_desc>
<specimen_arrival_dtm>2009-11-11 16:15:00.000</specimen_arrival_dtm>
<specimen_collect_dtm>2009-11-12 18:30:00.000</specimen_collect_dtm>
<specimen_details></specimen_details>
<file_ind>1</file_ind>
<record_creation_dtm>2010-06-08 15:22:00.000</record_creation_dtm>
<record_creation_inst_id>8088450656</record_creation_inst_id>
<record_creation_inst_name>Princess Margaret Hospital</record_creation_inst_name>
<record_update_dtm>2010-06-08 15:22:00.000</record_update_dtm>
<record_update_inst_id>8088450656</record_update_inst_id>
<record_update_inst_name>Princess Margaret Hospital</record_update_inst_name>
<ap_test_name>Biopsy all embedded</ap_test_name>
</lab_req_data>
<labap_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>P</report_status_cd>
<report_status_desc>Provisional/Preliminary report</report_status_desc>
<report_status_lt_desc>Provisional/Preliminary Report</report_status_lt_desc>
<report_auth_dtm>2009-11-20 14:10:00.000</report_auth_dtm>
<ap_diagnosis_title>Biopsy Diagnosis</ap_diagnosis_title>
<ap_diagnosis_text>Vagina scraping </ap_diagnosis_text>
<panel_lt_cd></panel_lt_cd>
<panel_lt_desc>Vagina</panel_lt_desc>
<report_auth_staff_eng_name>Jack Lee</report_auth_staff_eng_name>
<report_auth_staff_chi_name>李傑克</report_auth_staff_chi_name>
</labap_result_data>
<labap_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<ap_diagnosis_title>Frozen Section Diagnosis </ap_diagnosis_title>
<ap_diagnosis_text>Adenocarcinoma of right lung</ap_diagnosis_text>
<panel_lt_cd>BX</panel_lt_cd>
<panel_lt_desc>Biopsy</panel_lt_desc>
<report_auth_staff_eng_name>Jack Lee</report_auth_staff_eng_name>
<report_auth_staff_chi_name>李傑克</report_auth_staff_chi_name>
</labap_result_data>
<labap_dn_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final Report</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<ap_diagnosis_title>Frozen Section Diagnosis</ap_diagnosis_title>
<topography_lt_cd>T-28000 01, 001</topography_lt_cd>
<topography_lt_desc>Lung, right</topography_lt_desc>
<finding_lt_cd>M-81402,01,001</finding_lt_cd>
<finding_lt_desc> Adenocarcinoma in-situ </finding_lt_desc>
<topography_rt_name>HKCTT</topography_rt_name>
<topography_rt_id>8003046</topography_rt_id>
<topography_rt_desc>Right lung structure </topography_rt_desc>
<finding_rt_name>HKCTT</finding_rt_name>
<finding_rt_id>8002624</finding_rt_id>
<finding_rt_desc>Adenocarcinoma in situ </finding_rt_desc>
</labap_dn_result_data>
<labap_apt_result_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
<report_status_lt_desc>Final</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<apt_detail_title_cd>OTH</apt_detail_title_cd>
<apt_detail_title_desc>Other</apt_detail_title_desc>
<apt_detail_title_lt_desc>Molecular Pathology</apt_detail_title_lt_desc>
<apt_detail_content>HC-2 Test for high risk HPV group(positive).</apt_detail_content>
</labap_apt_result_data>
<lab_report_data>
<record_key>PYN_LABAPS_000123</record_key>
<report_status_cd>F</report_status_cd>
<report_status_desc>Final report</report_status_desc>
```

Technical Interface Specification for LABAP Record

```
<report_status_lt_desc>Final</report_status_lt_desc>
<report_auth_dtm>2009-11-21 14:10:00.000</report_auth_dtm>
<report_dtm>2009-11-21 14:10:00.000</report_dtm>
<file_name>8088450656.BRANCHA.LABAP.PYN_LABAPS_000123.124.pdf.201000000001.20110702084530</file_name>
<report_text></report_text>
</lab_report_data>
</detail>
</clinicalDoc>
<text>
</nonXMLBody>
</component>
</ClinicalDocument>
```

14.3.4 HL7 Message Example for scenario Update (S2) in Data Compliance Level 3

8088450656.BRANCHA.LABAP.HL7.20110702084530

```
<?xml version="1.0" encoding="utf-8"?>
<ORU_R01 xmlns="urn:hl7-org:v2xml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:hl7-org:v2xml \\\\hoehrsv01\\eHR\\CE4\\MESSAG~1\\EHR\\HL7SAM~1\\V25SCH~1\\xsd\\ORU_R01.xsd">
  <MSH>
    <MSH.1></MSH.1>
    <MSH.2>^~\&lt;></MSH.2>
    <MSH.3>
      <HD.1>CMS 3.0</HD.1>
    </MSH.3>
    <MSH.4>
      <HD.1>8088450656</HD.1>
    </MSH.4>
    <MSH.5>
      <HD.1>EIF</HD.1>
    </MSH.5>
    <MSH.6>
      <HD.1>eHR</HD.1>
    </MSH.6>
    <MSH.7>
      <TS.1>20110427181041</TS.1>
    </MSH.7>
    <MSH.8>3</MSH.8>
    <MSH.9>
      <MSG.1>ORU</MSG.1>
      <MSG.2>R01</MSG.2>
      <MSG.3>ORU_R01</MSG.3>
    </MSH.9>
    <MSH.10>20110702084530</MSH.10>
    <MSH.11>
      <PT.1>P</PT.1>
    </MSH.11>
    <MSH.12>
      <VID.1>2.5</VID.1>
    </MSH.12>
    <MSH.15>NE</MSH.15>
  </MSH.21>
  <EI.1>eHRSS-2.0.0</EI.1>
</MSH.21>
</MSH>
<ORU_R01.PATIENT_RESULT>
<ORU_R01.ORDER_OBSERVATION>
  <OBR>
    <OBR.4>
      <CE.1> LABAP </CE.1>
    </OBR.4>
  </OBR>
<ORU_R01.OBSERVATION>
  <OBX>
    <OBX.2>ED</OBX.2>
    <OBX.3>
      <CE.1> LABAP </CE.1>
    </OBX.3>
    <OBX.4>NBL</OBX.4>
  </OBX.5>
<ED.2>multipart</ ED.2>
< ED.4>A</ ED.4>
< ED.5>
  MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=00163630f5f354355b046be66f6d
--00163630f5f354355b046be66f6d
Content-Type: text/xml; charset=UTF-8; name="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Disposition: attachment; filename="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdehi70
PD94bWwgdmVyc2lvbj0iMS4wIiBlbmNvZGluZz0iVVRGLTgiPz4NCjwhLS0gQ0RBIFNhXBs
ZSBmb3IgSEtISFIgSW50ZXJvcGVyYWJpbGl0eSAtLT4NCg0KPCEtLSBDb3B5cmlnaHQ6IFRo
ZSBvd25lcNoaXAgb2YgdGhpccyBkb2NlbWVudCBzaG91bGQgYmUgUHJlcGFyYXRvcnkgR3Jv
dXAzb24gZUhSIENvbnnRlbnQgJiBTdGFuZGFyZHMgdW5kZXIgZUhSIENvbnnRlbnQgYW5kIElu
```

Technical Interface Specification for LABAP Record

Zm9ybWF0aW9uIFN0YW5kYXJkcyBXb3JraW5nIEdyb3VwIGFuZCBmdXR1cmUgZUhSIG9mZmljZS4gQWxsIFJpZ2h0cyBSZXNlcnZlZC4gLS0+DQo8IS0tIERpc2NsYWltZXI6IFRoZSBJbmZvIGZvcIBFcGlzb2RIIFN1bW1hcncgd2hpY2ggYXR0YWNoZWQgdGhlIFBERiAgLS0+DQoNCjxDF0.....

aW9uPSJ1cm46aGw3LW9yZzp2MyBDREEueHNkIbjBFz0NvZGU9IkRPQ0NMSU4iIG1vb2RD
b2RIPSJVfk4P0KDQo8IS0tIA0KKioqKioqKioqKioqKioqKioqKioqKioqKioqKioq
KioqKg0KSGVhZGVyIEluZm9ybWF0aW9uDQoqKioqKioqKioqKioqKioqKioqKioq
KioqKioqDQoLT4JDQoNCgk8dHlwZUIkIHJvb3Q9JluMTYuODQwLjEuMTEzODg2LjEu
MyIgZXh0ZW5zaW9uPSJQT0NEX0hEMDQwI8+DQoJPCETsB0ZW1wbGF0ZUlkIHJvb3Q9
IjlJuODQwLjEutMEzODg2LjEwLjIwLjEiLyAtLT4NCgkNCgk8IS0tIERvY3VtZW50IEIE
OyB1bmxldWUsIGFz2lnbmVlIGI5IFByb3ZpZGVyL0N1c3RvZGlbhwcm9vdCBjb2RIIG9m
ICBQcm92aWRlci9DdXN0b2RpYW4gG8gYmUgZGVmaW5lZC0tPg0KCTxpZCByb290PSIyLjE2
Ljg0MC4xLjExMzg4My42LjEiIGV4dGVuc2lvbj0tMTIzNDU2NzgiLz4NCgkNCgk8Y29kZSBj
b2RIPSIZNDEzMy05IiBjb2RIU3IzdGVtPSIyLjE2Ljg0MC4xLjExMzg4My42LjEiIGRpc3Bs
dW1bnQ+DQo=

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Content-Type: application/pdf;
name="8088450656.BRANCHA.LABAP.PYN_LAB_AP0_000123.123.pdf.201000000001.20110702084530"
Content-Disposition: attachment;
filename="8088450656.BRANCHA.LABAP.PYN_LAB_AP0_000123.123.pdf.201000000001.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdeflx1

JVBERi0xLjUNCiW1tbW1DQoxIDAgb2JqDQo8PC9UeXBIL0NhdGFsb2cvUGFnZXMGMiAwIFIv
TGFuZyh6aC1UVykgL1N0cnVjdFRyZWSb290IDM2OSAwIFIvTWFya0luZm88PC9NYXJrZWQg
dHJ1ZT4+Pj4NCmVuZG9iag0KMiAwIG9iag0KPDwvVHlwZS9QYWdlcy9Db3VudCA0L0tpZHNb
IDMgMCBSIDEzMSAwIFIgMjQwIDAuUiAzNjAgMCBSXSA+Pg0KZW5kb2JqDQozIDAuB2JqDQo8
PC9UeXBIL1BhZ2UvUGFyZW50IDigMCBSL1Jlc291cmNlczw8L1hPYmplY3Q8PC9JbWFnZTug
NSAwIFIvSW1hZ2U3IDcgMCBSL0ltYWdlOSA5IDAgUi9JbWFnZTE1IDE3IDAgUi9JbWFnZTEz
IDEzIDAgUi9JbWFnZTE1IDE1IDAgUi9JbWFnZTE3IDAgUi9JbWFnZTE5IDE5IDAgUi9J
bWFnZT1xIDIxIDAgUi9JbWFnZT1zIDzIDAgUi9JbWFnZT11ID11IDAgUi9JbWFnZT13ID13
IDAu9JbWFnZT15IDI5IDAu9JbWFnZTMxIDMxIDAu9JbWFnZTMzIDMzIDAu9JbWFn
.....

ZTM1IDM1IDAu9JbWFnZTM3IDM3IDAu9JbWFnZTM5IDM5IDAu9JbWFnZTQxIDQxIDA
Ui9JbWFnZTQzIDQzIDAgUi9JbWFnZTQ1IDQ1IDAu9JbWFnZTQ3IDQ3IDAu9JbWFnZTQ5
gMDAwMDAgbg0KMDAwMDI5NjUzMSAwMDAwMCBuDQwMDAwMjk2NTYwIDAuMDAwIG4NCjAwMDA
OTY1ODkgMDAwMDAgbg0KMDAwMDMzODQ1MSAwMDAwMCBuDQp0cmFpbGVyDQ80PC9TaXplIDEy
NTgyUm9vdCAxIDAu9JbmfZvIDM2OCAwIFIvSURbPEQxOUYyOTI0QTg2MjcwNDVCRUJFRDRG
MTFEMEMWnJJFPjxEMTIGMjkyNEE4NjI3MDQ1QkVCRUQ0RjExRDBDMYyRT5dID4+DQpzdGFy
dHhyZWYNCjM0MTUyMQ0KJSVFT0YNCnyZWYNCjAgMA0KdHJhaWxlcg0KPDwvU2l6ZSAXMjU4
L1Jvb3QgMSAwIFIvSW5mbAyNjggMCBSL0lEWzxEMTIGMjkyNEE4NjI3MDQ1QkVCRUQ0RjEx
RDBDMYyRT48RDE5Rj5MjRBODYyNzA0NUJFQkVENEYxMUQwQzA2MkU+XSAvUHJldiAzNDE1
MjEvWFJIIZIN0bSAzMzg0NTE+Pg0Kc3RhcnR4cmVmDQozNjY4NDQNCiUIUR9G

--00163630f5f354355b046be66f6d

Content-Type: application/pdf;
name="8088450656.BRANCHA.LABAP.PYN_LAB_AP0_000123.124.pdf.201000000001.20110702084530"
Content-Disposition: attachment;
filename="8088450656.BRANCHA.LABAP.PYN_LAB_AP0_000123.124.pdf.201000000001.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdeflx1

Mwk1NAzWCGBNG2ouJgY61BybH4UaoKL1HAaNkdofsSbEuuNiogI61iyySAXsOQx+E0wbbC4W
djJK8iCDvFu1e5CTm5sQNIlhewXIWK6sb0RRGNm57YkP0roiYGx0VtKx0NyGimUrVteTKXr
brJNWFJvUb3yjXo0KK6pJPZQ5LtxJ6Eja3d9IgJSftmoynkgrki5sXXLXUG/Sds3YyjUgg
mi+efJVkpAhchKtyOpVIKISvKcd7rArxEiQWzp2t03Vxd0fQd3hJBWz16AsxiJdilglUMxc
L4imC7Abd1lSsXsNykv8tWqj48VU+jJN4vId07aL1fZ0B5FRdw17afKCDzHZH9RPnDnSf17
x521xjq9s/WLO58mDd04GgQz2AEY91dNAhScRwEghb2qe1PZ9tUTkdi+JpFT/3oIDfvvCv3o
WOU151HARLyYDNyZu6OAtV0FLCdytHTL4w+FhYWNjcRYrBSGWtOnf4DUt2RF5XTguNSJidX
.....

sRnIO8JmAG96dcWbjPXLHx++HPDdpPXde1z8N2CBB8ve/45ZZNeD3aGPA0CNOdkF9v5z9PZP
8ePvz0+/vRbC+Tf/Zu/8fz0PSLsKLKDggnG+Brlt6/Y18fCrqFkL+IxAxwli7S7gZKrmgQ7
JCEP5HbzontUOEIxbCljykYmRW9Tzmy5WN2dMCcVcWxN6n8sDYIFLKrEELLW0abk0uuHSjrj0
JJeIE7mMPe0i190sMOVS+RdyeQDMudRUwe23DNVQqWxDZRhQqYgkEnGQSofd1+jUnfDyJRK
PCIOkqewiFuLw+ahuiM+DHoZlepGsrRU3YGD9yFStktAADKi1ZeESceMGxwY1UGuxE/JBK
+1doeCFKa0CWKCSqjtIHFMXKqFJO2FUHFhNUgkijUekWqewOzmZUSqzp/Uuq4QpggUryaYfh

Technical Interface Specification for LABAP Record

```
--00163630f5f354355b046be66f6d--  
</ED.5>  
  </OBX.5>  
    <OBX.11>F</OBX.11>  
  </OBX>  
  </ORU_R01.OBSERVATION>  
  </ORU_R01.ORDER_OBSERVATION>  
  </ORU_R01.PATIENT_RESULT>  
</ORU_R01>
```

14.3.5 CDA Example for scenario Delete (S3) in Data Compliance Level 3

8088450656.BRANCHA.LABAP.CDA.20110702084530

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" xmlns="urn:hl7-org:v3"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <!--
  ****
  CDA General Information
  ****
  -->
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
  <id/>
  <code code="LABAP"/>
  <title>Laboratory Anatomical Pathology Result</title>
  <effectiveTime/>
  <confidentialityCode/>
  <recordTarget>
    <patientRole>
      <id/>
      </patientRole>
    </recordTarget>
    <author>
      <time/>
      <assignedAuthor>
        <id/>
        <assignedAuthor>
          <author>
            <custodian>
              <assignedCustodian>
                <representedCustodianOrganization>
                  <id/>
                  <representedCustodianOrganization>
                    <assignedCustodian>
                      <custodian>
                        <assignedCustodian>
                          <representedCustodianOrganization>
                            <id/>
                            <representedCustodianOrganization>
                          </assignedCustodian>
                        </custodian>
                      <!--
                      ****
                      Clinical Information
                      ****
                      -->
                      <component>
                        <nonXMLBody>
                          <clinicalDoc>
                            <participant>
                              <ehr_no>201000000001</ehr_no>
                              <hkid>A1234563</hkid>
                              <doc_type>ID</doc_type>
                              <doc_no>A1234563</doc_no>
                              <person_eng_surname>CHAN </person_eng_surname>
                              <person_eng_given_name>TAI MAN</person_eng_given_name>
                              <person_eng_full_name>CHAN, TAI MAN</person_eng_full_name>
                              <sex>M</sex>
                              <birth_date>1999-01-01 00:00:00.000</birth_date>
                            </participant>
                            <detail>
                              <lab_req_data>
                                <record_key>PYN_LAB_HMS_000123</record_key>
                                <transaction_dtm>2012-05-01 00:00:00.000</transaction_dtm>
                                <transaction_type>D</transaction_type>
                                <last_update_dtm>2012-05-01 00:00:00.000</last_update_dtm>
                                <episode_no>EP-12345</episode_no>
                                <attendance_inst_id>8088450656</attendance_inst_id>
                              </lab_req_data>
                            </detail>
                          </clinicalDoc>
                        <text/>
                      </nonXMLBody>
                    </component>
                  </ClinicalDocument>
                <!--
                ****
                -->
              <!--
              ****
              -->
            <!--
            ****
            -->
          <!--
          ****
          -->
        <!--
        ****
        -->
      <!--
      ****
      -->
    <!--
    ****
    -->
  <!--
  ****
  -->
</ClinicalDocument>
```

14.3.6 HL7 Message Example for scenario Delete (S3) in Data Compliance Level 3

8088450656.BRANCHA.LABAP.HL7.20110702084530

```
<?xml version="1.0" encoding="utf-8"?>
<ORU_R01 xmlns="urn:hl7-org:v2xml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:hl7-org:v2xml \\\\hoehrsv01\\eHR\\CE4\\MESSAG~1\\EHR\\HL7SAM~1\\V25SCH~1\\xsd\\ORU_R01.xsd">
  <MSH>
    <MSH.1></MSH.1>
    <MSH.2>^~\&lt;></MSH.2>
    <MSH.3>
      <HD.1>CMS 3.0</HD.1>
    </MSH.3>
    <MSH.4>
      <HD.1>8088450656</HD.1>
    </MSH.4>
    <MSH.5>
      <HD.1>EIF</HD.1>
    </MSH.5>
    <MSH.6>
      <HD.1>eHR</HD.1>
    </MSH.6>
    <MSH.7>
      <TS.1>20110427181041</TS.1>
    </MSH.7>
    <MSH.8>3</MSH.8>
    <MSH.9>
      <MSG.1>ORU</MSG.1>
      <MSG.2>R01</MSG.2>
      <MSG.3>ORU_R01</MSG.3>
    </MSH.9>
    <MSH.10>20110702084530</MSH.10>
    <MSH.11>
      <PT.1>P</PT.1>
    </MSH.11>
    <MSH.12>
      <VID.1>2.5</VID.1>
    </MSH.12>
    <MSH.15>NE</MSH.15>
  </MSH.21>
  <EI.1>eRSS-2.0.0</EI.1>
</MSH.21>
</MSH>
<ORU_R01.PATIENT_RESULT>
<ORU_R01.ORDER_OBSERVATION>
  <OBR>
    <OBR.4>
      <CE.1> LABAP </CE.1>
    </OBR.4>
  </OBR>
<ORU_R01.OBSERVATION>
  <OBX>
    <OBX.2>ED</OBX.2>
    <OBX.3>
      <CE.1> LABAP </CE.1>
    </OBX.3>
    <OBX.4>NBL</OBX.4>
  </OBX.5>
<ED.2>multipart</ ED.2>
< ED.4>A</ ED.4>
< ED.5>
  MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=00163630f5f354355b046be66f6d
--00163630f5f354355b046be66f6d
Content-Type: text/xml; charset=UTF-8; name="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Disposition: attachment; filename="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdehi70
PD94bWwgdmVyc2lvbj0iMS4wIiBlbmNvZGluZz0iVVRLTgiPz4NCjwhLS0gQ0RBIFNhBXBs
ZSBmb3IgSEtISFIgSW50ZXJvcGVyYWJpbGl0eSAAtLT4NCg0KPCEtLSBDb3B5cmlnaHQ6IFRo
ZSBvd25lcNoaXAgb2YgdGhpccyBkb2NlWVudCBzaG91bGQgYmUgUHJlcGFyYXRvcnkgR3Jv
dXAzb24gZUhSIENvbRlnQgJiBTdGFuZGFyZHMgdW5kZXIgZUhSIENvbRlnQgYW5kIElu
```

Technical Interface Specification for LABAP Record

```
Zm9ybWF0aW9uIFN0YW5kYXJkcyBXb3JraW5nIEdyb3VwIGFuZCBmdXR1cmUgZUhSIG9mZmlj
ZS4gQWxsIFJpZ2h0cyBSZXNlcnZlZC4gLS0+DQo8IS0tIERpc2NsYWltZXI6IFRoZSBJbmZv
IGZvcIBFcGlzb2RIFN1bW1hcncgd2hpY2ggYXR0YWNoZWQgdGhlIFBERiAgLS0+DQoNCjxDF0
.....
.....
aW9uPSJ1cm46aGw3LW9yZzp2MyBDREEueHNkIiBjbGFzc0NvZGU9IkRPQ0NMSU4iIG1vb2RD
b2RIPSJFVk4iPg0KDQo8IS0tIA0KKioqKioqKioqKioqKioqKioqKioqKioqKioq
KioqKg0KSGVhZGVyIEluZm9ybWF0aW9uDQoqKioqKioqKioqKioqKioqKioqKioq
KioqKioqDQoLT4JDQoNCgk8dHlwZUIkIHJvb3Q9IjluMTYuODQwLjEuMTEzODgZLjEu
MyIgZXh0ZW5zaW9uPSJQT0NEX0hEMDAwMDQwI8+DQoJPCeLSB0ZW1wbGF0ZUlkIHJvb3Q9
IjluMTYuODQwLjEuMTEzODgZLjEwLjIwLjEiLyAtLT4NCgkNCgk8IS0tIERvY3VtZW50IEIE
OyB1bmxldWUsIGFzc2lnbmVkJG15IFByb3ZpZGVyL0N1c3RvZGlibiwcm9vdCBjb2RIIG9m
ICBQcm92aWRlc9DdXN0b2RpYW4gdG8gYmUgZGVmaW5lZC0tPg0KCTxpZCByb290PSIyLjE2
Ljg0MC4xLjExMzg4My42LjEiIGV4dGVuc2lvbj0tMTIzNDU2NzgiLz4NCgkNCgk8Y29kZSBj
b2RIPSIZNDEzMy05IiBjb2RIU3lzdGVtPSIyLjE2Ljg0MC4xLjExMzg4My42LjEiIGRp3Bs
dW1bnQ+DQo=-
--00163630f5f354355b046be66f6d--
< ED.5>
  </OBX.5>
  <OBX.11>F</OBX.11>
</OBX>
</ORU_R01.OBSERVATION>
</ORU_R01.ORDER_OBSERVATION>
</ORU_R01.PATIENT_RESULT>
</ORU_R01>
```

14.3 RE-MATERIALISATION MESSAGE

Example Data

Data Field	Sample Value
eHR number	201000000001
HKIC number	A1234563
Type of document	ID (Refer the "Document Type" published in eHealth Record Office website)
Identity document number	A1234563
English surname	CHAN
English given name	TAI MAN
English full name	CHAN, TAI MAN
Sex	M
Date of birth	2009-01-01 00:00:00.000

CDA Example

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
xmlns="urn:hl7-org:v3" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
<!--
*****
CDA General Information
*****
-->
<typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
<id/>
<code code="LABAP"/>
<title>Laboratory Anatomical Pathology Result</title>
<effectiveTime/>
<confidentialityCode/>
<recordTarget>
```

```
<patientRole>
  <id/>
</patientRole>
</recordTarget>
<author>
  <time/>
  <assignedAuthor>
    <id/>
  </assignedAuthor>
</author>
<custodian>
  <assignedCustodian>
    <representedCustodianOrganization>
      <id/>
    </representedCustodianOrganization>
  </assignedCustodian>
</custodian>
<!--
*****
Clinical Information
*****
-->
<component>
  <nonXMLBody>
    <clinicalDoc>
      <participant>
        <ehr_no>201000000001</ehr_no>
        <hkid>A1234563</hkid>
        <doc_type>ID</doc_type>
        <doc_no>A1234563</doc_no>
        <person_eng_surname>CHAN</person_eng_surname>
        <person_eng_given_name>TAI MAN</person_eng_given_name>
        <person_eng_full_name>CHAN, TAI MAN</person_eng_full_name>
        <sex>M</sex>
        <birth_date>2009-01-01 00:00:00.000</birth_date>
      </participant>
    </clinicalDoc>
    <text/>
  </nonXMLBody>
</component>
</ClinicalDocument>
```

Message Example (with CDA)

```
<?xml version="1.0" encoding="utf-8"?>
<ORU_R01 xmlns="urn:hl7-org:v2xml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:hl7-org:v2xml \\\\hoehrsv01\\eHR\\CE4\\MESSAG~1\\EHR\\HL7SAM~1\\V25SCH~1\\xsd\\ORU_R01.xsd">
  <MSH>
    <MSH.1></MSH.1>
    <MSH.2>~&lt;/MSH.2>
    <MSH.3>
      <HD.1>CMS 3.0</HD.1>
    </MSH.3>
    <MSH.4>
      <HD.1>8088450656</HD.1>
    </MSH.4>
    <MSH.5>
      <HD.1>EIF</HD.1>
    </MSH.5>
    <MSH.6>
      <HD.1>eHR</HD.1>
    </MSH.6>
    <MSH.7>
      <TS.1>20110427181041</TS.1>
```

Technical Interface Specification for LABAP Record

```
</MSH.7>
<MSH.8>2</MSH.8>
<MSH.9>
<MSG.1>ORU</MSG.1>
<MSG.2>R01</MSG.2>
<MSG.3>ORU_R01</MSG.3>
</MSH.9>
<MSH.10>20110702084530</MSH.10>
<MSH.11>
<PT.1>P</PT.1>
</MSH.11>
<MSH.12>
<VID.1>2.5</VID.1>
</MSH.12>
<MSH.15>NE</MSH.15>
<MSH.21>
<EI.1>eHRSS-2.0.0</EI.1>
</MSH.21>
</MSH>
<ORU_R01.PATIENT_RESULT>
<ORU_R01.ORDER_OBSERVATION>
<OBR>
<OBR.4>
<CE.1>LABAP </CE.1>
</OBR.4>
</OBR>
<ORU_R01.OBSERVATION>
<OBX>
<OBX.2>ED</OBX.2>
<OBX.3>
<CE.1>LABAP </CE.1>
</OBX.3>
<OBX.4>NBL-R</OBX.4>
<OBX.5>
<ED.2>multipart</ED.2>
<ED.4>A</ED.4>
<ED.5>
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=00163630f5f354355b046be66f6d

--00163630f5f354355b046be66f6d
Content-Type: text/xml; charset=UTF-8; name="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Disposition: attachment; filename="8088450656.BRANCHA.LABAP.CDA.20110702084530"
Content-Transfer-Encoding: base64
X-Attachment-Id: f_fvqdehi70

PD94bWwgdmVyc2lvbj0iMS4wLiBlbmNvZGluZz0iVVRLTgiPz4NCjwhLS0gQ0RBIFNhXBs
ZSBmb3IgSEtSFIgSW50ZXJvcGVyYWJpbGl0eSATLT4NCg0KPCEtLSBDb3B5cmlnaHQ6fR0
ZSBvd25lcNoAXAgb2YgdGhpvcBkb2N1bWVudCbzaG91bGQgYmUgUHJlcGFyYXRvcnkgR3Jv
dXAgb24gZUhnSIENvbnnRlbnQgJiTdGFuZHMgdW5kZXlgZUhnSIENvbnnRlbnQgYW5kIElu
Zm9ybW9uIFN0YW5kYXjkcyXBx3JraW5nIEdyb3VwIGFuZCBmdXR1cmUgZUhnSIG9mZmlj
ZS4gQWxsIFJpZ2h0cyBSZXNlcnZlC4gLS0+DQo8IS0tIERPc2NsYWltZXl6fRoZSBJbmZv
IGZvciBFcGlzb2RIIFN1bW1hcngd2hpY2ggYXR0YWNoZWQgdGhlIFBERiAgLS0+DQoNCjxDf0
.....
.....
.....
aW9uPSJ1cm46aGw3LW9yZzp2MyBDREEEueHNkIiBjbGFzc0NvZGU9IKRPQQNMSU4IG1vb2RD
b2RIPSJFVk4iPg0KDQo8IS0tIA0KKioqKioqKioqKioqKioqKioqKioq
KioqKg0KSGVhZGVyIEluZm9ybWF0aW9uDQoqKioqKioqKioqKioqKioqKioq
KioqKioqDQotLT4JDQoNCgk8dHlwZUIkIHJvb3Q9JluMTYuODQwLjEuMTEzODgzLjEu
MyIgZXh0ZW5zaW9uPSJQT0NEX0hEMDAwMDQwI8+DQoJPCEtLSB0ZW1wbGF0ZUIkIHJvb3Q9
IjlMTYuODQwLjEuMTEzODg2LjEwLjIwLjEiLyAtLT4NCgkNCgk8IS0tIERvY3VtZW50IEIE
OyB1bmlxdWUsIGFzc2lnbmVkJIG5IFByb3ZpZGVyL0N1c3RvZGhbwiwgem9vdCBjb2RIIG9m
ICBQcm92aWRlcI9DdXN0b2RpYW4gdG8gYmUgZGVmaW5lZC0tPg0KCTxpZCByb290PSIyLjE2
Ljg0MC4xLjExMzg4My42LjEiIGV4dGVuc2lvbj0IMTlZNDU2Nzg1Lz4NCgkNCgk8Y29kZSBj
b2RIPSIzNDEzMy05IiBjb2RIU3lzdGVtPSIyLjE2Ljg0MC4xLjExMzg4My42LjEiIGRp3Bs
dW1lbnQ+DQo=


--00163630f5f354355b046be66f6d--
</ED.5>
</OBX.5>
<OBX.11>F</OBX.11>
</OBX>
</ORU_R01.OBSERVATION>
</ORU_R01.ORDER_OBSERVATION>
```

Technical Interface Specification for LABAP Record

```
</ORU_R01.PATIENT_RESULT>  
</ORU_R01>
```