醫健通

eHealth

香港特別行政區政府 HKSARGOVT

Developers' Quick Guide
eHealth Laboratory Result (Anatomical Pathology Result) Records (FHIR)

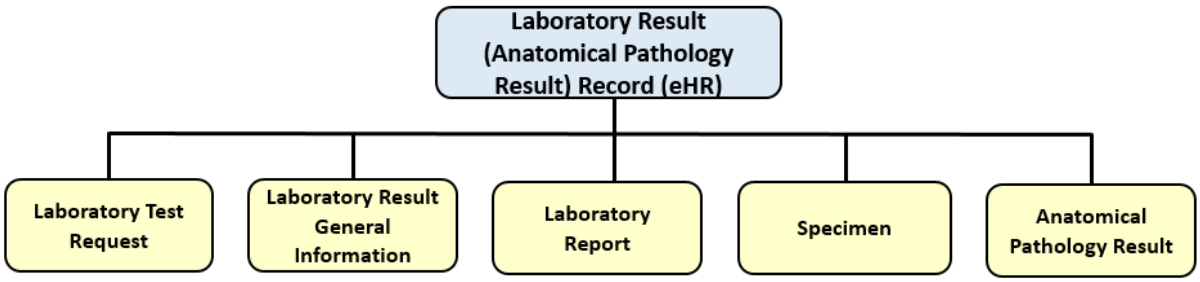
1 Contents

1. Purpose

This document is intended for Information Technology personnel involved in the development of programmes to upload data from their Electronic Medical Record (EMR) system to the electronic Health Record Sharing System (eHRSS) .

The technical interface requirements for implementing Health Level Seven (HL7) Fast Healthcare Interoperability Resources (FHIR) Release 4 (R4) for uploading the Laboratory results – Anatomical Pathology Result Records (LABAP) to eHRSS are provided below. Readers who prefer more in-depth study of the HL7 FHIR (R4) standards and content standards may refer to the HL7 FHIR website https://www.hl7.org/fhir/ and the **eHR Content Standards Guidebook** on the eHealth official website https://www.ehealth.gov.hk/ for more detail.

2. Data Components



Laboratory Test Request

Basic information of requesting a laboratory test, including unique order number, institution, doctor, clinical information and panel.

Laboratory Result General Information

General information of laboratory result, including performing laboratory name, request number, laboratory category, laboratory report status, reference datetime, authorized person, authorized datetime and report comment.

Laboratory Report

Report of the laboratory record with report date in Portable Document Format (PDF) or in text format.

Specimen

Specimen details, including local terminology information of specimen type, specimen collection and arrival datetime.

Anatomical Pathology Result

Descriptions of test result, including laboratory test name, result of diagnosis and report details.

3. Upload Standards

Supported Data Standards Level

The Laboratory Result (Anatomical Pathology Result) data domain (LABAP) supports Level 1 (including text / PDF report), Level 2 and Level 3 data standards.

Examples of Anatomical Pathology Result Scenarios
Below is an example depicting the different details in Level 1, Level 2 and Level 3 LABAP records:

Data Field	Level 1 Data	Level 2 Data	Level 3 Data
Laboratory test request healthcare institution identifier	8877350433	8877350433	8877350433
Laboratory test request healthcare institution long name	Kowloon Hospital	Kowloon Hospital	Kowloon Hospital
Laboratory test request healthcare institution local name	Kowloon Hospital	Kowloon Hospital	Kowloon Hospital
Laboratory test request performing laboratory name	Kowloon Bay Clinical Laboratory	Kowloon Bay Clinical Laboratory	Kowloon Bay Clinical Laboratory
Laboratory test request number	11-CC123456	11-CC123456	11-CC123456
Laboratory category code	PATH	PATH	PATH
Laboratory category description	Anatomical Pathology	Anatomical Pathology	Anatomical Pathology
Laboratory category local description	Anatomical Pathology Laboratory	Anatomical Pathology Laboratory	Anatomical Pathology Laboratory
Report status code	F	F	F
Report status description	Final Report	Final Report	Final Report
Report status local description	Final	Final	Final
Laboratory report reference datetime	2023-10-20 14:30:00.000+08:00	2023-10-20 14:30:00.000+08:00	2023-10-20 14:30:00.000+08:00
Laboratory report authorised datetime	2023-10-20 14:30:00.000+08:00	2023-10-20 14:30:00.000+08:00	2023-10-20 14:30:00.000+08:00
Anatomical pathology test name	Biopsy all embedded	Biopsy all embedded	Biopsy all embedded
Anatomical pathology diagnosis title	NA	Frozen Section Diagnosis	Frozen Section Diagnosis
Anatomical pathology diagnosis text result	NA	Adenocarcinoma of right lung	Adenocarcinoma of right lung
Diagnosis topography - recognised terminology name	NA	NA	HKCTT
Diagnosis topography identifier -recognised terminology	NA	NA	8003046
Diagnosis topography description - recognised terminology	NA	NA	Right lung structure
Topography local code	NA	T-28100,01,001	T-28100,01,001
Topography local description	NA	Lung, right	Lung, right
Diagnosis finding - recognised terminology name	NA	NA	HKCTT
Diagnosis finding identifier - recognised terminology	NA	NA	8002624
Diagnosis finding description - recognised terminology	NA	NA	Adenocarcinoma in situ
Anatomical pathology finding local code	NA	M-81402,01,001	M-81402,01,001

Data Field	Level 1 Data	Level 2 Data	Level 3 Data
Anatomical pathology finding local description	NA	Adenocarcinoma in-situ	Adenocarcinoma in-situ
Anatomical pathology report details - title code	NA	OTH	OTH
Anatomical pathology report details - title description	NA	Other	Other
Anatomical pathology report details - title local description	NA	Molecular Pathology	Molecular Pathology

Terminology

- The clinical terminology and code sets used are provided in the **self-service kit**. For the latest codes used, please refer the eHR code sets published on the eHealth official website.

Message Standards

- FHIR R4 message standards in JSON format are adopted for Laboratory Result (Anatomical Pathology Result) upload to eHealth.
- Resource and Element names are case-sensitive

Encoding

- UTF-8 encoding is used for eHR Clinical data exchange.

Notes:

The following conventions are used for the specifications described in this document:

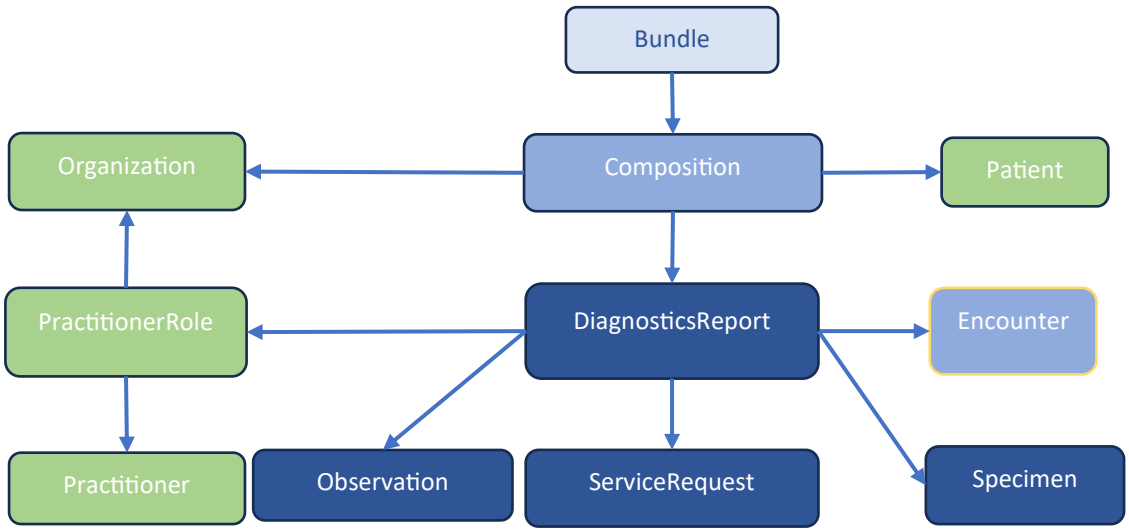
Constants:	***Bolded** values are constants or fixed values.*
E.g.:	*Example values for illustration.*
[…]:	*Data variables*
"…":	*Data values.*
"M/O"	*Indicates if the data field is Mandatory (M) or Optional (O). M* or O* denotes conditional Mandatory or Optional, please refer to Remarks for rules*
NA:	*Data Field in concern is not used.*
[S]:	*Must Support*

4. Specification of Data uploaded

The section describes the format and data required for the data contributed to eHealth. Unused FHIR message items and those not processed by eHRSS are not listed below. Readers may refer to the HL7 (HK) website for the full HL7 FHIR R4 message specifications if required.

4.1 Composition of HL7 FHIR Message

The Laboratory Result (Anatomical Pathology Result) are structured with the HL7 FHIR components (Resources) and hierarchy as specified below.



Bundle Resource (Single occurrence in each FHIR message bundle)

- Identify the container type for the collection of data included in the bundle. The resource composition and data contents are determined by the Bundle Type. For LABAP Records data upload, the following resources are included in the bundle.

Composition Resource (Single occurrence for each bundle)

- Indicate a composition of data or document are collected in the message bundle. For "document" type of bundle, the "Composition Resource" must be the first resource to be included.

Patient Resource (Single occurrence for each **Bundle**)

- Contains the demographics data of the healthcare recipient (HCR) who has the Laboratory result

DiagnosticReport Resource (Multiple occurrences for each **bundle**)

- Contains the Laboratory result report of the healthcare recipient (HCR)

Specimen(Single occurrence for each **DiagnosticReport**)

- Contains the details of sample to be used for analysis related to the DiagnosticReport

Observation (Multiple occurrences for each **DiagnosticReport**)

- Provide the atomic results for a particular investigation to support

Organization Resource

- Institution(s) (HCP) authored the upload LABAP Records. (Single occurrence for each **Bundle**)
- Institution(s)(HCP/HCI) requested the LABAP records (Single occurrence is for each **DiagnosticReport**)
- Institution(s)(HCP/HCI) issued the LABAP records (Single occurrence is for **DiagnosticReport**)

PractitionerRole Resource (Single occurrence each **DiagnosticReport**)

- The role which requested the upload LABAP Records.
- The role which issued the upload LABAP Records.

Practitioner Resource (Single occurrence each **DiagnosticReport**)

- Healthcare staff requested the upload LABAP Records.
- Healthcare staff issued the upload LABAP Records.

Encounter Resource (Single occurrence for each **DiagnosticReport**)

- Contains the encounter information for the LABAP.

4.2 Data Elements in the FHIR Resource

Details of data elements for eHRSS in each FHIR Resources are provided in below sections. Non-eHR elements which are required to complete the structure of the FHIR messages are included, and hence eHR would not process those values. Readers may refer to the Hong Kong HL7 FHIR website for further details if interested.

4.3 Data Elements in the Bundle Resource

The below table listed data elements in the Bundle Resource which identifies the beginning of the container and the collection of data resources are all included under [resource.entry] in the bundle.

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	L1 – L3 M/O	Delete scenario
resourceType	Resource Name	string(6)	Fixed value: "**Bundle**"	M	
id	Resource id which is a logic id to identify the artifact A UUID represented as a URI (RFC 4122) Please see reference website in appendix	uuid	*E.g.* "id": "ba8606d5-33c3-45c3-89fe-29e229a41bf2"	M	
identifier	Identifier of the Bundle				

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	L1 – L3 M/O	Delete scenario

system	System urn	string(255)	Fixed value:
			"identifier":{
			"system" : "**urn:ietf:rfc:4122**"
			"value" : "urn:uuid:0c3151bd-1cbf-4d64-b04d-cd9187a4c6e0"
			}
				M	

value	System assigned unique id of the Bundle For the use of globally unique value, the value of system is always “urn:ietf:rfc:4122” and the value of value is a Universally Unique Identifier (UUID).	string (45)			
type	Bundle Type	string(8)	Fixed value: "**document**"	M	
timestamp	Datetime when the bundle was assembled. [current datetime]	dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g.*"2024-03-01T15:04:48.865+08:00"	M	

entry.resource	Resources included in this bundle are collected under ‘entry’	Backbone Element	E.g.
			
			"entry": [
			{
			"fullUrl": "Composition/fed3d9a",
			"resourceType": "Composition"
			},
			{
			"fullUrl": "Patient/2e839c7",
			"resourceType": "Patient"
			}
			]
			
			HL7 FHIR Resources that collected in the LABAP record upload Bundle include:
			• Composition
			• Organization
			• Patient
			• PractitionerRole
			• Practitioner
			• DiagnosticReport
			• ServiceRequest
			• Specimen
			• Observation
			• Encounter
				M	

resource	A document must have a Composition as the first resource. Please refer to Composition resource requirements	BackboneElement.Resource	The 1st resource must be “Composition” resource.	M	M

4.3.1 Data Elements in the Composition Resource

The Composition Resource identifies whether the upload package includes a list of LABAP records in this bundle. HCP is required to provide the record keys associated with each LABAP records submitted. The record key is used to insert/update/delete a record in eHRSS

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	L1-L3 M/O	Delete scenarios
resourceType	Resource name	string (11)	Fixed value: "**Composition**"	M	
id	[resource id] which is a logic id to identify the composition A UUID represented as a URI (RFC 4122) Please see reference website in appendix	uuid		M	
extension 99999999-SendingLocation	[Sending Location Code] A code agreed between eHRSS and the HCP which indicates the location where the data is sending from	extension url string(20)	Use [HCP ID] if sending location cannot be provided. E.g. { "url": "**[eHR FHIR URL]**/99999999-SendingLocation", "valueString": "**[Sending Location Code]**"}	O	
extension 99999999-ComplianceLevel	[Compliance Level]	extension url string(1)	Permissible Values: 1,2,3 *E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-ComplianceLevel", "valueString": "**[Compliance Level]**" }]	M	
extension 99999999-DomainVersion	[Domain version] The version of this interface	extension url string(11)	Fixed value: "**eHRSS-2.0.3**" E.g.{ "url": "**[eHR FHIR URL]**/99999999-DomainVersion", "valueString": "**eHRSS-2.0.3**"}	M	
extension 99999999-UploadMode	[Upload Mode]	extension url string(3)	Permissible values: NBL: Non Bulk load E.g. { "url": "**[eHR FHIR URL]**/99999999-UploadMode", "valueString": "**NBL**"}	M	
status	The status is always “final”. Other codes are not accepted by eHRSS.	string(5)	Fixed value: "**final**"	M	

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	L1-L3 M/O	Delete scenarios

type.coding.system
type.coding.display
	Composition type
	
	A coding object is required.
		CodeableConcept
		
		coding.system
		
		coding.display
			Fixed value:
			"type": {
			"coding": [
			{
			"system": "**[eHR FHIR URL]**",
			"display": "**Hong Kong eHR Healthcare Document**"
			}]}
				M	

subject.reference	[resource.id] of Patient Resource included in the same bundle	reference(100)	In format:
			Patient/<resource id>
			
			E.g.
			"subject": {
			"reference": "Patient/6e480262-978c-49f0-a793-468293932fc2"
			}
			• This resource id is the same value of the Patient resource id
			• Reference to the Patient Resource which contains demographic data of the HCR.
				M	

date	Composition creation time [Message generation time] *eHRSS will use this value and [record key] for overriding records uploaded in eHRSS*	dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g.*"2024-03-01T15:00:00.000+08:00"	M	
author.reference	[resource.id] of Organization Resource who is the author of this composition *eHRSS will not interpret this value*	reference(100)	In format: Organization/<resource id> *E.g.* "author": [{ "reference" : "Organization/3b3703a9-7a26-427c-9352-4e41f046d85e"}]	M	
title	Title of this composition *eHR will not interpret this value*	string(33)	Fixed value: title:"**Hong Kong eHR Healthcare Document**"	M	
section	List the DiagnosticReport resource(s) in this bundle with related record key		The entry is repeatable for multiple LABAP records		
title	A human readable label for this section *eHR will not interpret this value*	string(255)	Fixed value: "**Laboratory Result (Anatomical Pathology Result) Records**"	O	
code	The code to identify the section content				
coding.system	Link to data domain coding system	string(255)	In Format: "system": "**[eHR FHIR URL]**/datadomain",	M	
coding.code	[Record type]	string(4)		M	

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	L1-L3 M/O	Delete scenarios

coding.display	The long name of the record type	string(255)	Fixed value:
			"code": {
			"coding": [
			{
			"system": "**[eHR FHIR URL]**/datadomain",
			"code": "LABAP",
			"display": "Laboratory Result (Anatomical Pathology Result) Records"
			}
			]
			}
				M	

section.entry	[resource.id] of list the DiagnosticReport resource(s) in this bundle with related record key **Each entry represents each record	Reference(100)	In format: DiagnosticReport/<resource id> • This resource id is the same value of DiagnosticReport resource id	M	
extension 99999999-TransactionType	[Transaction Type] Insert/Update/Delete of a LABAP Record identified by the [Record Key].	extension url string(1)	Permissible Values: **I**: Insert **U**: Update **D**: Delete ***Notes:*** • Insert ("I"): Upload a record which has never been uploaded to eHRSS before. • Update ("U"): Update a record which has been uploaded to eHRSS before and its data content was changed since the last upload of this record. • Delete ("D"): Delete a record which has been uploaded to eHRSS before and has since be cancelled or deleted. • DM mode only permits 'I' (Insert) • The Insert / Update / Delete is in relation to whether the record has been uploaded to eHRSS before and does not necessarily represent the actual transactions in the HCP's EMR system. *E.g:* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-TransactionType", "valueDateTime": "**[Transaction Type]**" }]	M	

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	L1-L3 M/O	Delete scenarios
extension 99999999-LastUpdateDateTime	[Last Update Date Time] The last update datetime of the HCP's EMR system	extension url dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g:* "2023-08-31T08:30:00.000+08:00" *E.g:* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-LastUpdateDateTime", "valueDateTime": "**[Last Update Date Time]**" }]	M	
extension 99999999-TransactionDateTime	[Transaction Date Time] Datetime when this transaction was created in the local EMR. It indicates the transaction sequence if multiple transactions of the same record are uploaded.	extension url dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g.* "2023-10-22T00:00:00.000+08:00" *E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-TransactionDateTime", "valueDateTime": "**[Transaction Date Time]**" }]	M	
extension 99999999-RecordCreateDatetime	[Record Create Datetime] Datetime when the record was created in the source system of the HCP.	extension url dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g.* "2023-10-22T00:00:00.000+08:00" *E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-RecordCreateDatetime", "valueDateTime": "**[Record Create Datetime]**" }]	O	NA
extension 99999999-RecordCreateInstIdentifier	[Record Create Institution Identifier] eHRSS assigned [Healthcare Institution Identifier] (HCI ID) of the healthcare institution where the record was created	extension url string(10)	Fixed length:10 *E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-RecordCreateInstIdentifier", "valueString": **"[Record Create Institution Identifier]"** }]	O	NA
extension 99999999-RecordCreateInstName	[Record Create Institution Name] Name of healthcare institution where the record was created.	extension url string(255)	*E.g.*: "extension": [{ "url": "**[eHR FHIR URL]**/99999999-RecordCreateInstName", "valueString": "**[Record Create Institution Name]**" }]	O	NA

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	L1-L3 M/O	Delete scenarios
extension 99999999-RecordLastUpdateDatetime	[Record Last Update Datetime] The last update datetime of the HCP's EMR system	extension url dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g.* "2023-10-22T00:00:00.000+08:00" *E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-RecordLastUpdateDatetime", "valueDateTime": "**[Record Last Update Datetime]**" }]	O	NA
extension 99999999-RecordUpdateInstIdentifier	[Record Update Institution Identifier] eHRSS assigned [Healthcare Institution Identifier] (HCI ID) of the healthcare institution where the record was last updated.	extension url string(10)	Fixed length:10 *E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-RecordUpdateInstIdentifier", "valueString": "**[Record Update Institution Identifier]**" }]	O	NA
extension 99999999-RecordUpdateInstName	[Record Update Institution Name] Name of healthcare institution where the record was updated.	extension url string(255)	*E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-RecordUpdateInstName", "valueString": "**[Record Update Institution Name]**" }]	O	NA
reference. DiagnosticReport	[resource.id] List of DiagnosticReport Resource included in the same bundle **Each entry represents each record	reference (100)	In Format: DiagnosticReport/<resource id> *E.g* **"reference"**: "DiagnosticReport/63634800-5ffa-4700-a05c-8bf4a24f5ede" This resource id is the same value of DiagnosticReport resource id	M	M

identifier.system	Link to record key coding system	string(255)	In format: "**[HCP FHIR URL]**/Recordkey"
			
			E.g.
			"identifier": {
			"system": "**[HCP FHIR URL]**/Recordkey",
			"value": "**[Record Key]**"
			}
				M	

Identifier.value	[Record key] of the LABAP Record	string(50)			

4.3.2 Data Elements in the Patient Resource

The Patient Resource provides the patient identifier referenced in the other Resources to identify the patient whom these LABAP data belongs to. This resource also contains the basic demographic data (major keys) used for the validation of the HCR's identity.

JSON Name	Data Field	sFHIR Data Type (Max Length)	Remarks	L1-L3 M/O	delete
resourceType	Resource name	string(7)	Fixed value: "**Patient**"	M	
id	[resource id] reference by Composition resource A UUID represented as a URI (RFC 4122) Please see reference website in appendix	string(45)	This id identifies the patient / HCR whose LABAP records are included in the current bundle. It is used in [subject.reference] in the Composition Resources to identify the concerned patient.	M	
identifier	eHR number for this patient	identifier	There are always 2 entries for Patient Resource [identifier.] One for eHR number and one for document number/ID.		
type.coding.system	Link to document type coding system	string(255)	Fixed value:"**[eHR FHIR URL]/typeofID-ext**"	M	
type.coding.code	identifier type code	string(5)	Fixed value: **"EHRNO"**	M	
value	[eHR number] A unique HCR identifier assigned by eHRSS.	string(12)	Fixed length: **12** e.g. 773024585457	M	
identifier	Document type and HKIC for this patient	identifier			
type.coding.system	Link to document type coding system	string(255)	Fixed value:"**[eHR FHIR URL]/typeofID-ext**"	M	
type.coding.code	[Type of identity document] eHRSS document type code which is used for registration	string(5)	Refer to the document type code set provided in the **self-service kit** or the eHRSS official website for the most updated code set.	M	
value	Identity Document number of the type of document as specified above If document type ="**ID**" or "**CD**" or "**BC**" or "**ECID**", the Identity Document Number will comply with the HKID format, else it will be of free text format.	string(12)	In Format: If [document type] is **ID, BC, CD, ECID,** format of the document number is: AANNNNNNC or ANNNNNNC where: • C is the check digit • All Uppercase	M	
name	Patient's name	At least [name.family] or [name.given] will be provided			
family	[English surname] Patient's surname in English For single name cases, the single name can be specified in either [English surname] or [English given Name]	string(40)	Mandatory if [name.text] and [name.give] are blank; else Optional • All Uppercase letters	M*	
given	[English given name] Patient's given name in English	string(40)	Mandatory if [name.text] and [name.family] are blank; else Optional • All Uppercase letters	M*	

JSON Name	Data Field	sFHIR Data Type (Max Length)	Remarks	L1-L3 M/O	delete
text	[English full name] Patient's full name in English	string(100)	Mandatory if [name.family] and [name.given] are blank;else Optional In format: [name.family] + [,] + 1 white space + [name.given] • All Uppercase letters • If HCR has either English surname or given name stored in local EMR system, full name should be filled.	M*	
gender	[sex] Gender of the patient eHR will convert the FHIR gender to eHR [Sex] according to the Section 6 conversion table	code(7)	Permissible Values: - male - female - unknown *E.g.*: "gender": "**[Sex]**"	M	
birthdate	[Date of birth] Date of birth of the patient as indicated on the patient's identity document	date(10)	In format: YYYY-MM-DD *E.g.*: "birthDate": "**[Date of birth]**" If date is exact to 'Year' (e.g. 2010), the unknown month and day should be filled with '01-01'. Example: "2010-01-01". If date is exact to 'Month' (e.g. 2011-12), the unknown day should be filled with '01'. Example: "2011-12-01".	M	

4.3.3 Data Elements in the Organization resource

This Organization Resource entry identifies HCP as the source of data uploading and contains only constant values.

JSON Name	Data Value	FHIR Data Type	Remarks	M/O	Delete Scenario
resourceType	Resource name	string (12)	Fixed value: **"Organization"**	M	
id	[resource id] reference by Composition resource A UUID represented as a URI (RFC 4122) Please see reference website in appendix	string (45)	The resource id identifies the Healthcare Institution relevant to the Composition resource.	M	

JSON Name	Data Value	FHIR Data Type	Remarks	M/O	Delete Scenario
name	[Healthcare institution long name]	string (255)		M	

This Organization Resource entry identifies HCP which issued the LABAP record and it is referenced by DiagnosticReport Resource.

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
resourceType	Resource name	string (12)	Fixed value: **"Organization"**	M			NA
id	[resource id] reference by Composition resource A UUID represented as a URI (RFC 4122) Please see reference website in appendix	string (45)	The resource id identifies the Healthcare Institution relevant to the Composition resource.	M			NA
Requester Role							
identifier	[Laboratory test request healthcare institution identifier] The healthcare institution requested the laboratory test. It is the [HCI identifier] in the eHR Healthcare Provider Index *This field is referenced by the Requester Role of PractitionerRole resource*	string(10)	Fixed length: 10 E.g. "identifier": [{ "system": "**[EHR FHIR URL]**/pvdr", "value": "**[Laboratory test request healthcare institution identifier]**" }]	O			NA
name	[Laboratory test request healthcare institution long name] The healthcare institution who requested the laboratory test. It is the [HCI displayed English long name] or the [HCI displayed Chinese long name] in the eHR Healthcare Provider Index *This field is referenced by the Requester Role of PractitionerRole resource*	string (255)		O			NA

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
alias	[Laboratory test request healthcare institution local name] Local description of the healthcare institution who requested the laboratory test. *This field is referenced by the Requester Role of PractitionerRole resource*	string (255)		M			NA
Performer Role							
alias	[Laboratory test request performing laboratory name] Name of the laboratory who produced or coordinated the creation of the laboratory report. *This field is referenced by the Performer Role of PractitionerRole resource*	string (100)		M			NA

4.3.4 Data Elements in DiagnosticReport

The DiagnosticReport Resources is referenced by the Composition Resource to identify each LABAP Report

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
resourceType	Resource name	string (12)	Fixed value: **"DiagnosticReport"** Mandatory if [Laboratory test order number] is given	M			M*
id	[resource id] reference by Composition resource A UUID represented as a URI (RFC 4122)	string (45)	The resource id identifies the LABAP relevant to the Composition resource. Mandatory if [Laboratory test order number] is given	M			M*

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario

extension 1003520-LabReportStatusDesc	[Laboratory report status description]
	eHR description of the "Laboratory Report Status" code table which indicates the status of the laboratory report.
	
	- **Provisional/Preliminary report** (A provisional report is issued when provisional or partial results become available and report is submitted to eHR. A final report will always follow after the provisional report.)
	- **Final report** (A completed report for the laboratory request.)
	- **Amended report** (An Amended report is issued when the final report of diagnosis or test result(s) have been changed or amended. Amended report includes information with the latest submitted provisional report/final report/supplementary report.)
	- **Supplementary report** (A supplementary report is issued when additional information is available when final/amended report has been submitted to eHR. Supplementary report includes information with the latest submitted provisional report/final report/amended report.)
	- **Unspecified report status** (Laboratory report status cannot be provided.)
		string(255)	Permissible values:
			• Provisional/Preliminary report
			• Final report
			• Amended report
			• Supplementary report
			• Unspecified report status
			
			Refer to the code set of "Laboratory report status" in **Self-Service Kit**. The latest code set in eHealth website shall prevail
			
			E.g.:
			{
			"url": "**[EHR FHIR URL]**/1003520-LabReportStatusDesc",
			"valueString": "**[Laboratory report status description]**"
			}
				M*			NA

extension 1003521-LabReportStatusLocalDesc	[Laboratory report status local description]
	A local description issued by the performing laboratory for indicating the status of the laboratory report
		string(255)	E.g.:
			{
			"url": "**[EHR FHIR URL]**/[1003521-LabReportStatusLocalDesc",
			"valueString": "**[Laboratory report status local description]**"
			}
			
			Refer to the code set of "Laboratory report status" in **Self-Service Kit**. The latest code set in eHealth website shall prevail
				M			NA

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario

extension 1003526-LabReportComment	[Laboratory report comment]
	The additional information about the laboratory report as a whole.
		string(2000)	E.g.:
			{
			"url": "**[EHR FHIR URL]**/1003526-LabReportComment",
			"valueString": "**[Laboratory report comment]**"
			}
					O		NA

extension 1003529-LabReportText	[Laboratory report (text)]
	The Laboratory Report in text format
		string(32767)	E.g.:
			{
			"url": "**[EHR FHIR URL]**/1003529-LabReportText",
			"valueString": "**[Laboratory report (text)]**"
			}
					O		NA

identifier	[Laboratory test request number]
	A unique identifier assigned by the Laboratory Information System (LIS) of the performing laboratory to identify the laboratory test request.
		string(40)	E.g.:
			"identifier": [
			{
			"system": "**[HCP FHIR URL]**/RequestNum",
			"value": "**[Laboratory test request number]**"
			}
			]
					M		NA

basedOn.Reference	[resource.id] of ServiceRequest Resource which contains the details for what was requested	reference(10)	In format: ServiceRequest/<resource id> Mandatory if [Laboratory test order number] is given		M		M*
status	[Laboratory report status code] eHR value of the "Laboratory Report Status" code table which indicates the status of the laboratory report.	string(1)	Permissible values: • **preliminary** : Provisional/Preliminary report • **final** : Final report • **corrected** : Amended report • **appended** : Supplementary report • **unknown** : Unspecified report status Refer to the code set of "Laboratory report status" in **Self-Service Kit**. The latest code set in eHealth website shall prevail. Mandatory if [Laboratory test order number] is given		M		M*
category	Category of the Laboratory						
coding.system	Link to Laboratory Category coding system	string(255)	In format: "**[eHR FHIR URL]**/LabCatCode"		M		NA

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario

coding.code	[Laboratory category code]
	eHR value of the "Laboratory Category" code table which indicates the category of the laboratory from which the report was produced.
		string(10)	In format:
			"category": [
			{
			"coding": [
			{
			"system": "**[EHR FHIR URL]/LabCatCode**",
			"code": "**[Laboratory category code]**",
			"display": "**[Laboratory category description]**"
			}
			],
			"text": "**[Laboratory category local description]**"
			}
			]
			
			Refer to the code set of "Laboratory category" in **Self-Service Kit**. The latest code set in eHealth website shall prevail.
					M		NA

coding.display	[Laboratory category description] eHR description of the "Laboratory Category" code table which indicates the category of the laboratory from which the report was produced. It should be the corresponding description of the selected [Laboratory category code].	string(255)			M		NA
text	[Laboratory category local description] Description created by the performing laboratory for the category of the laboratory from which the report was produced	string(255)			M		NA
code	code of the Diagnostic Report						

coding.system	Link to Laboratory Panel coding system	string(255)	In format:
			"**[eHR FHIR URL]/PanelCode**"
			
			E.g:
			"code": {
			"coding": [
			{
			"system": "**[EHR FHIR URL]**/PanelCode",
			"code": "**[Panel local code]**",
			"display": "**[Panel local description]**"
			}
			]
			}
			
			Mandatory if [Laboratory test order number] is given
					O		M*

coding.code	[Panel local code] The requesting test/profile abbreviations for the laboratory request which was issued by the performing laboratory.	string(10)			O		M*
coding.display	[Panel local description] The requesting test or profile description which was issued by the performing laboratory. This field describes the requested observation/test/profile	string(255)			O		M*
text	[Anatomical pathology test name] Local description for the anatomical pathology request made by clinicians.	string(1000)	e.g. Gynae Cytology, Surgical Biopsy, Fine Needle Aspiration, Frozen Section		M		O

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario

subject.reference	[resource.id] of Patient Resource included in the same bundle	reference(100)	In format:
			Patient/<resource id>
			
			E.g.
			"subject": {
			"reference": "Patient/6e480262-978c-49f0-a793-468293932fc2"
			}
			• This resource id is the same value of the Patient resource id
			• Reference to the Patient Resource which contains demographic data of the HCR.
				M			M

encounter.reference	[resource.id] of Encounter Resource in which the request was created	reference(100)	In format: Encounter/<resource id>	O			NA
effectiveDateTime.value	[Laboratory report reference datetime] The reference date or datetime which is used to determine the display sequence of a specific laboratory report in the eHR. The laboratory reports are displayed in the eHR according to the following rule : i. Specimen collection datetime, if none ii. Specimen arrival datetime, if none iii. Laboratory request registration datetime.	dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz E.g."2023-10-20T00:00:00.000+08:00"	M			NA
issued	[Laboratory report authorised datetime] The date or datetime when a specific version of the laboratory report was authorised and ready to be issued	dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz E.g."2023-10-22T00:00:00.000+08:00"	M			NA
performer.reference	[resource id] of performing PractitionerRole who produced or coordinated the creation of the laboratory report.	reference(100)	In format: PractitionerRole/<resource id> Related fields: • [[Laboratory test request performing laboratory name]	NA	O	O	NA

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
resultsInterpreter.reference	[resource id] of authorizing PractitionerRole who authorized the laboratory report.	reference(100)	In format: PractitionerRole/<resource id> Related fields: [Laboratory report authorised healthcare staff Chinese name] [Laboratory report authorised healthcare staff English name]	NA	O	O	NA
specimen.reference	[resource id] of Specimen resource related to laboratory result	reference(100)	In format: Specimen/<resource id> [Specimen type local code] [Specimen type local description] [Specimen Details] [Specimen arrival datetime] [Specimen collection datetime]	O			NA
Anatomical Pathology Investigation Result (Multiple)							
result.reference	[resource id] of Observation resource related to Diagnosis title and result	reference(100)	In format: Observation/<resource id> Observation.category.coding.code= "Diagnosis" [Anatomical Pathology Diagnosis Title] [Anatomical pathology diagnosis text result]	NA	M	M	NA
result.reference	[resource id] of Observation resource related to Diagnosis Topography Data . The value of Observation.code.text is same as [Anatomical Pathology Diagnosis Title] if the result belong to same investigation result	reference(100)	In format: Observation/<resource id> Observation.category.coding.code= "Topography" [Diagnosis topography - recognised terminology name] [Diagnosis topography identifier - recognised terminology] [Diagnosis topography description - recognised terminology] [Topography Local Code] [Topography Local Description]	NA	NA	O	NA

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
result.reference	[resource id] of Observation resource related to Anatomical pathology diagnosis finding. The value of Observation.code.text is same as [Anatomical Pathology Diagnosis Title] if the result belong to same investigation result	Reference(100)	In format: Observation/<resource id> Observation.category.coding.code= "DiagFinding" [Diagnosis finding - recognised terminology name] [Diagnosis finding identifier - recognised terminology] [Diagnosis finding description - recognised terminology] [Anatomical pathology finding local code] [Anatomical pathology finding local description]	NA	NA	M	NA
result.reference	[resource id] of Observation resource related to Anatomical Pathology Report Details	Reference(100)	In format: Observation/<resource id> Observation.category.coding.code= "APReportDetail" [Anatomical Pathology Report Details - Title Code] [Anatomical Pathology Report Details - Title Description] [Anatomical Pathology Report Details - Title Local Description] [Anatomical pathology report details – content]	NA	O	O	NA
presentedForm	Report Details	Attachment					

presentedForm.data	Laboratory report (PDF)	base64Binary	Example:
			"presentedForm": [
			{
			"data": ,
			"url": "file://**[PDF File name]**",
			"creation": "**[Laboratory report date]**"
			}
			]
			
			Mandatory if Laboratory Report (PDF) is provided
				M	O	O	NA

presentedForm.url	File name of Laboratory Report (PDF)			M	M*	M*	NA
presentedForm.creation	[Laboratory report date] The documentation date of the laboratory report	dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz E.g."2023-10-20T00:00:00.000+08:00"	O	O	O	NA

4.3.5 Data Elements in ServiceRequest

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
resourceType	Resource name	string (12)	Fixed value: **"ServiceRequest"** Mandatory if [Laboratory test order number] is given	M*	M	M	M*
id	[resource id] of ServiceRequest reference by DiagnosticReport A UUID represented as a URI (RFC 4122) Please see reference website in appendix	string (45)	The resource id identifies the LABAP relevant to the ServiceRequest resource. Mandatory if [Laboratory test order number] is given	M*	M	M	M*

identifier	[Laboratory test order number]
	A unique identifier issued by the healthcare institution who made the laboratory test order
	
	For e-Referral consent, provide value with the format: <Referring HCP ID>:<Referral document reference number>
	e.g 8088450656:12345678900000000306
		string(40)	E.g:
			"identifier": [
			{
			"system": "**[EHR FHIR URL]**/OrderNum",
			"value": "**[Laboratory test order number]**"
			}
			]
				O	O	O	O

status	Request status	string(9)	Fixed value : **"completed"** Mandatory if [Laboratory test order number] is given	M	M	M	M*
intent	Request intent	string(5)	Fixed value : **"order"** Mandatory if [Laboratory test order number] is given	M	M	M	M*

requester.reference	[resource id] of requesting PractitionerRole resource who request the laboratory test	reference(100)	E.g.:
			"requester": {
			"reference": "PractitionerRole/4037da57-d98b-400b-93fe-3d918f6aa7c8"
			}
			
			[Laboratory test requesting doctor]
				NA	O	O	NA

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario

supportingInfo	[Laboratory test request clinical information]
	Clinical information about the patient, e.g. clinical findings, or specimen. The information will assist the laboratory to interpret the diagnostic studies.
		string(2000)	E.g:
			"supportingInfo": [
			{
			"display": "**[Laboratory test request clinical information]**"
			}
			]
				NA	O	O	NA

4.3.6 Data Elements in Specimen

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
resourceType	Resource name	string (12)	Fixed value: **"Specimen"**	O	M	M	NA
id	[resource id] of Specimen reference by DiagnosticReport A UUID represented as a URI (RFC 4122) Please see reference website in appendix	string (45)	The resource id identifies the Specimen resource which is used relevant to DiagnosticReport.	O	M	M	NA

1003530-SpecimenDetail	[Specimen details]
	Specimen site details or additional information about [Specimen type].
		string(255)	For example, an anatomical site 'Left lower lobe' for biopsy, "Cervix scraping" for routine cytology or any specimen qualifier in free text, such as, "Red cap of the Hickman line"
			E.g.
			{
			"url": "**[EHR FHIR URL]**/1003530-SpecimenDetail",
			"valueString": "**[1003530-SpecimenDetail]**"
			}
				O	O	O	NA

type	Specimen Type						

coding.code	[Specimen type local code]
	Local code for the [Specimen type] issued by the performing laboratory
		string(30)	E.g.
			"coding": [
			{
			"system": "**[HCP FHIR URL]**/SpecimenType",
			"code": "**[Specimen type local code]**",
			"display": "**[Specimen type local description]**"
			}
			]
				O	O	O	NA

coding.display	[Specimen type local description] Local description for the [Specimen type] issued by the performing laboratory	string(255)		O	O	O	NA

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
receivedTime	[Specimen arrival datetime] The date/time when the specimen was received at the laboratory. The actual time that is recorded is based on how specimen receipt is managed and may correspond to the time the sample is logged in. This is different from [Specimen Collection Datetime].	dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g.*" 2012-01-4T14:00:30.000+08:00"	NA	O	O	NA
collection collectedDateTime	[Specimen collection datetime] The date and time when the specimen was collected.	dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g.*" 2012-01-4T14:00:30.000+08:00"	NA	O	O	NA

4.3.7 Data Elements in PractitionerRole resource

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
resourceType	Resource name	string (12)	Fixed value: **"PractitionerRole"**	NA	M	M	NA
id	[resource id] of PractitionerRole reference by DiagnosticReport A UUID represented as a URI (RFC 4122) Please see reference website in appendix	string (45)	The resource id identifies the PractitionerRole who produces or creates the LABAP result relevant to DiagnosticReport.	NA	M	M	NA

practitioner.reference	[resource id] of Practitioner resource
	
	Performer Role
	• [Laboratory report authorised healthcare staff Chinese name]
	• [Laboratory report authorised healthcare staff English name]
	
	Requester Role
	• [Laboratory test requesting doctor]
		reference(100)	In format:
			Practitioner/<resource id>
			
			E.g:
			"practitioner": {
			"reference": "Practitoner/8d46812c-4345-45ca-b9ff-ec325816c416"
			}
				NA	O	O	NA

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
organization.reference	[resource id] of Organization resource Performer Role • [Laboratory test request performing laboratory name] Requester Role • [Laboratory test request healthcare institution identifier] • [Laboratory test request healthcare institution long name] • [Laboratory test request healthcare institution local name]	reference(100)	In format: Organization/<resource id>	NA	O	O	NA

4.3.8 Data Elements in Practitioner resource

The Practitioner Resources is referenced by the PractitionerRole Resource to identify the Healthcare Staff to issue the LABAP result.

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
resourceType	Resource name	string (12)	Fixed value: **"Practitioner"**	M			NA
id	[resource id] reference by PractitionerRole A UUID represented as a URI (RFC 4122) Please see reference website in appendix	string (45)	The resource id identifies the Healthcare staff who authorised the Laboratory Report relevant to DiagnosticReport.	M			NA
Requester Role : Laboratory requesting doctor							

name.text	[Laboratory test requesting doctor]
	Full name (with title) of the clinician who requested the laboratory investigations.
		string(100)	E.g.
			"name": [
			{
			"text": "**[Laboratory test requesting doctor]**"
			}
			]
				NA	O	O	NA

Performer Role : Laboratory report authorised healthcare staff							

JSON Name	Data Value	FHIR Data Type	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
extension 1003524-LabReportAuthHCSChineseName	[Laboratory report authorised healthcare staff Chinese name] Full Chinese name (with title, if applicable) of the healthcare staff who authorised the laboratory report. For auto-authorised reports, the Laboratory Report Authorised Person can be a local description of an auto-analyzer.	extension url string(10)	Fixed length: 10 "url": "**[eHR FHIR URL]**/1003524-LabReportAuthHCSChineseName", "valueString": "**[Laboratory report authorised healthcare staff Chinese name]**"	NA	O	O	NA

name.text	[Laboratory report authorised healthcare staff English name]
	Full name in English of the healthcare staff who authorised the laboratory report.
	
	For auto-authorised reports, the Laboratory Report Authorised Person can be a local description of an auto-analyzer.
		string(100)	E.g.
			"name": [
			{
			"text": "**[Laboratory report authorised healthcare staff English name]**"
			}
			]
				NA	O	O	NA

4.3.9 Data Elements for the Observation resource

The information about an observation which related to LABAP issued.

JSON Name	Data Value Data Definition	FHIR Data Type (Max Length)	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
resourceType	Resource name	string(9)	Fixed Value: "**Observation**"	NA	M	M	NA
id	[resource id] reference by DiagnosticReport resource A UUID represented as a URI (RFC 4122) Please see reference website in appendix	string(45)	This id identifies the Observation information related to LABAP records which are included in the current bundle.	NA	M	M	NA
status	Observation status	string(5)	Fixed Value : "**final**"	M			NA
Anatomical pathology diagnosis title and result							

JSON Name	Data Value Data Definition	FHIR Data Type (Max Length)	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
category coding.system	Category of LABAP observation Link to AP Category coding system & and fixed code value	string(15)	Fixed code value: "system": "**[EHR FHIR URL]**/APcategory ", "code": "**Diagnosis**"	NA	M	M	NA
code	Code of the observation						

coding.system	Link to AP Diagnosis title coding system	string(255)	E.g.
			"code": {
			"coding": [
			{
			"system": "**[HCP FHIR URL]**/APDiagTitle"
			}
			],
			"text": "**[Anatomical Pathology Diagnosis Title]**"
			}
				NA	M	M	NA

code.text	[Anatomical Pathology Diagnosis Title] The local title or caption of the diagnosis section in anatomical pathology report.	string(255)					
valuestring	[Anatomical pathology diagnosis text result] Narrative comment or text description of pathological diagnosis by the performing laboratory.	string(2000)	E.g. "valueString": "**[Anatomical pathology diagnosis text result]**"	NA	M	M	NA
Diagnosis Topography							

category.coding	Category of LABAP observation
	Link to AP Category coding system & and fixed code value
		string(15)	Fixed code value:
			{
			"system": "**[EHR FHIR URL]**/APcategory ",
			"code": "**Topography**"
			}
				NA	M	M	NA

code	Code of the observation						

code.system	Link to AP Diagnosis title coding system	string(255)	{
			"system": "**[HCP FHIR URL]**/APDiagTitle"
			}
				NA	M	M	NA

code.text	[Anatomical Pathology Diagnosis Title] The local title or caption of the diagnosis section in anatomical pathology report.	string(255)	E.g. "valueString": "**[Anatomical Pathology Diagnosis Title]**"	NA	M	M	NA
valueCodeableConcept							
• Recognized Terminology							
coding.system	Link to Diagnosis topography coding system in whcin contains the [Diagnosis topography - recognised terminology name] Name of the recognised terminology set for anatomical pathology diagnosis topography term.	string(15)	Fixed value: **HKCTT** e.g. "coding": [{ "system": "**[EHR FHIR URL]**/**HKCTT**", "code": "**[Diagnosis topography identifier -**	NA	NA	M*	NA

JSON Name	Data Value Data Definition	FHIR Data Type (Max Length)	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
coding.code	[Diagnosis topography identifier - recognised terminology] Unique identifier of anatomical pathology diagnosis topography term in the recognised terminology.	string(30)	**recognised terminology]**", "display": "**[Diagnosis topography description - recognised terminology-]**" } Mandatory for Level 3 if [Diagnosis topography identifier - recognised terminology] is given	NA	NA	O	NA
coding.display	[Diagnosis topography description - recognised terminology] Description of anatomical pathology diagnosis topography term in the recognised terminology. It should be the corresponding description of the [Diagnosis Topography Identifier - Recognised Terminology].	string(255)		NA	NA	M*	NA
• Local Terminology							

coding.system	Link to Topography Local coding system	string(255)	e.g.
			"coding": [
			{
			"system": "**[HCP FHIR URL]/DiagTopography**",
			"code": "**[Diagnosis topography identifier - recognised terminology]**",
			"display": "**[Diagnosis topography description - recognised terminology-]**"
			}
			
			Mandatory if [Diagnosis Topography Identifier - Recognised Terminology] is given
				NA	O	O	NA

coding.code	[Topography Local Code] Local code for the diagnosis result on anatomical site issued by the performing laboratory. e.g. T-code in SNOMED 3	string(30)		NA	O	O	NA
coding.display	[Topography Local Description] Local description for the diagnosis result on anatomical site issued by the performing laboratory	string(255)		NA	O	M*	NA
Anatomical pathology finding							

category.coding	Category of LABAP observation
	Link to AP Category coding system & and fixed code value
		string(15)	Fixed code value
			{
			"system": "**[EHR FHIR URL]**/APcategory ",
			"code": "DiagFinding"
			}
				NA	NA	M*	NA

code	Code of the observation						

code.system	Link to AP Diagnosis title coding system	string(255)	{
			"system": "**[HCP FHIR URL]**/APDiagTitle"
			}
				NA	NA	M	NA

code.text	[Anatomical Pathology Diagnosis Title] The local title or caption of the diagnosis section in anatomical pathology report.	string(255)	E.g. "valueString": "**[Anatomical Pathology Diagnosis Title]**"	NA	NA	M	NA

JSON Name	Data Value Data Definition	FHIR Data Type (Max Length)	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
valueCodeableConcept							
• Recognized Terminology							

coding.system	[Diagnosis finding - recognised terminology name]
	Name of the recognised terminology set for anatomical pathology diagnosis finding term
		string(15)	"coding": [
			{
			"system": "**[EHR FHIR URL]**/HKCTT",
			"code": "**[Diagnosis finding identifier - recognised terminology]**",
			"display": "**[Diagnosis finding description - recognised terminology]**"
			}
			]
				NA	NA	M	NA

coding.code	[Diagnosis finding identifier - recognised terminology] Unique identifier of anatomical pathology diagnosis finding term in the recognised terminology.	string(30)		NA	NA	M	NA
coding.display	[Diagnosis finding description - recognised terminology] Description of anatomical pathology diagnosis finding term in the recognised terminology. It should be the corresponding description of the [Diagnosis Finding Identifier - Recognised Terminology].	string(255)		NA	NA	M	NA
• Local Terminology							

coding.system	Link to AP Diagnosis title coding system	string(255)	e.g.
			{
			"system": "**[HCP FHIR URL]**/DiagFing",
			"code": "**[Anatomical pathology finding local code]**",
			"display": "**[Anatomical pathology finding local description]**"
			}				

coding.code	[Anatomical pathology finding local code] Local code issued by the performing laboratory for the diagnosis result on pathological finding e.g. SNOMED M/D/F codes, M40000,01,001.	string(30)		NA	O	O	NA
coding.display	[Anatomical pathology finding local description] Local description issued by the performing laboratory for the diagnosis result on pathological finding.	string(255)		NA	O	M	NA
Anatomical pathology report details							

category.coding	Category of LABAP observation
	Link to AP Category coding system & and fixed code value
			E.g.
			{
			"system": "**[EHR FHIR URL]**/APcategory ",
			"code": "**APReportDetail**"
			}
				NA	O	O	NA

code	Code of the observation						
codeing.syste	Link to AP Diagnosis title coding system		E.g. "coding": [	NA	M*	M*	NA

JSON Name	Data Value Data Definition	FHIR Data Type (Max Length)	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario

coding.code	[Anatomical Pathology Report Details - Title Code]
	eHR value of the "Anatomical pathology report structure table" code table which is used to identify various sections of the Anatomical Pathology Report. Details refer to [Anatomical pathology result details - title local description]
		string(10)	{
			"system": "**[EHR FHIR URL]**/APReportDetail",
			"code": "**[Anatomical Pathology Report Details - Title Code]**",
			"display": "Other",
			"text": "**[Anatomical Pathology Report Details - Title Local Description]**"
			}
			]
			
			Refer to the code set of "Anatomical pathology report structure table" in **Self-Service Kit**. The latest code set in eHealth website shall prevail.
			
			*Mandatory for Levels 2 and 3 if [Anatomical Pathology Report Details – Content] is not blank.
			
			**Mandatory if [Anatomical pathology report details - title code] is not blank
				NA	M*	M*	NA

coding.display	[Anatomical Pathology Report Details - Title Description] eHR description of the "Anatomical pathology report structure table" code table which is used to identify various sections of the Anatomical Pathology Report. The [Anatomical pathology result details - title description] should be the corresponding description of the selected [Anatomical pathology result details - title code].	string(255)		NA	M**	M**	NA
text	[Anatomical Pathology Report Details - Title Local Description] The local title or caption of the section in anatomical pathology report apart from -Diagnosis such as -Clinical information -Specimen -Gross Examination -Microscopic Examination -Comment Example: Molecular Pathology	string(255)		NA	M**	M**	NA
valuestring	[Anatomical pathology report details – content] Narrative comment or description of anatomical pathology report e.g. Gynaecytology or general cytology investigation/Special investigation.	string(2000)		NA	O	O	NA

4.3.10 Data Elements for the Encounter resource

An interaction during which services are provided to the patient.

JSON Name	Data Value Data Definition	FHIR Data Type (Max Length)	Remarks	L1 M/O	L2 M/O	L3 M/O	Delete Scenario
resourceType	Resource name	string(9)	Fixed Value: "**Encounter**"	M			NA
id	[resource id] reference by DocumentReference resource A UUID represented as a URI (RFC 4122) Please see reference website in appendix	string(45)	This id identifies the Encounter information related to LABAP records which are included in the current bundle.	O			NA
99999999-AttendanceInstIdentifier	[Attendance institution identifier] eHRSS assigned [Healthcare Institution Identifier] (HCI ID) of the healthcare institution where the HCR receives the service.	string(10)	Fixed length:10 *E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-AttendanceInstIdentifier", "valueString": "**[Attendance institution identifier]**" }]	O			NA

identifier	[Episode number]
	A unique reference number assigned by the healthcare institution to an episode of care. The episode of care can be of inpatient or outpatient nature
		string(20)	*E.g.*
			{
			"system": "**[HCP FHIR URL]**/EpisodeNum",
			"value": "**[Episode number]**"
			}
				O			NA

status	Encounter Status *eHRSS will not interpret the value.*	code	Fixed Value : "**finished**"	M			NA
Class	Classification of patient encounter *eHRSS will not interpret the value.*	Coding	Fixed Value: "class": { "system": "**[eHR FHIR URL]**/class", "code": "UNKNOWN", "display": "Unknown status"}	M			NA

5. Image File (PDF)

The details of PDF naming convention

File Name	<HCP ID>.<Sending Location Code>.<Record Type>.<Record Key>.<Original File Name>.<File Extension>.<eHR Number>.<Generation Date> where the <Record Type> is "**LABAP**"

E.g.

8088450656.BRANCHA.LABAP.LABAP-001.123.pdf.201000000001.20231030150000

1. The file name must be in capital letters except pdf extension.
2. Dot "." is used as file name delimiters and hence the value of each file name component must not contain dot "."

The table below listed the file name components and their respective definitions:

Seq	File name Component	Definition	Length	Remarks	M/O
1	HCP ID	A unique identifier assigned to an eHealth Healthcare Provider by eHRSS	string(10)	Fixed Length: 10 e.g. 8088450656	M
2	Sending Location Code	A code agreed between eHRSS and the HCP which indicates the location where the data is sending from.	string(20)	Use [HCP ID] if sending location cannot be provided. Format: Any combination of the following alphanumeric characters: [A-Z][0-9][-_]	M
3	Record Type	A standardised code to identify the data domain	string(5)	Refer to defined Dataset Code e.g. LABAP	M
4	Record Key	A unique identifier for a record within the HCP's EMR system	string(50)	e.g. LABAP-001	M
5	Original File Name	The fila name used in source institution	string(100)	e.g. 123	M
6	File Extension	pdf (Portable Document Format File)	string(3)	Fixed value: **pdf**	M
7	eHR Number	A unique HCR identifier assigned by eHRSS	string(12)	Fixed length: 12 e.g. 201000000001	M

Seq	File name Component	Definition	Length	Remarks	M/O
8	Generation Date	File generation date. It should be the same value of the [composition.date]	string(14)	In format: YYYYMMDDhhmmss e.g. 20231030150000	M

6. Examples

In the following samples, data variables that have to be generated with each specific upload are quoted in square brackets and highlighted in *[Red]*. The definitions and expected values of these variables are listed in the previous section. All other parts including data values should not be altered without confirmation with the eHRSS project teams.

A sample in JSON format is included in the eHealth Data Upload Self Service Kit. Developers may use it as a template for incorporation with their data uploads after modification.

Level 3 Template:

```
{
    "resourceType": "Bundle",
    "identifier": {
        "system": "urn:ietf:rfc:4122",
        "value": "d2f9f649-5555-4826-868b-84e015c1f1be"
    },
    "type": "document",
    "timestamp": "2023-10-21T00:00:00.000+08:00",
    "entry": [
        {
            "fullUrl": "Composition/2fb40fdc-db52-4a80-991c-b352384c965a",
            "resource": {
                "resourceType": "Composition",
                "id": "2fb40fdc-db52-4a80-991c-b352384c965a",
                "extension": [
                    {
                        "url": "https://ehealth.gov.hk/FHIR/99999999-SendingLocation",
                        "valueString": "BRANCHA"
                    },
                    {
                        "url": "https://ehealth.gov.hk/FHIR/99999999-ComplianceLevel",
```

```
Bundle Resource
-[Resource id for
Bundle]



[current time]

-[fullUrl for
Composition]
Composition Resource

[resource id for
Composition]

- [Sending location]
```

"valueString": "3"
},
{
"url": "https://ehealth.gov.hk/FHIR/99999999-DomainVersion",
"valueString": "eHRSS-2.0.1"
},
{
"url": "https://ehealth.gov.hk/FHIR/99999999-UploadMode",
"valueString": "NBL"
}
],
"status": "final",
"type": {
"coding": [
{
"system": "https://ehealth.gov.hk/FHIR",
"display": "Hong Kong eHR Healthcare Document"
}
]
},
"subject": {
"reference": "Patient/d58dd75b-cf09-4a1c-b913-c9e867f27616"
},
"date": "2023-10-20T15:00:00.000+08:00",
"author": [
{
"reference": "Organization/3b3703a9-7a26-427c-9352-4e41f046d85e"
}
],
"title": "Hong Kong eHR Healthcare Document",
"section": [
{
"title": "Laboratory Result (Anatomical Pathology Result) Records",
"code": {
"coding": [
{
"system": "https://ehealth.gov.hk/FHIR/datadomain",
"code": "LABAP",
"display": "Laboratory Result (Anatomical Pathology Result) Records"
}
]
},
"entry": [
	- [Compliance level]
	
	Fixed value
	
	- [Upload mode]
	
	Link to Patient Resource
	- [Message generation time]
	
	Link to Organization Resource

<pre>{
"extension": [
{
"url": "https://ehealth.gov.hk/FHIR/99999999-TransactonType",
"valueString": "U"
},
{
"url": "https://ehealth.gov.hk/FHIR/99999999-LastUpdateDateTime",
"valueDateTime": "2023-10-20T14:30:00.000+08:00"
},
{
"url": "https://ehealth.gov.hk/FHIR/99999999-TransactionDateTime",
"valueDateTime": "2023-10-20T14:30:00.000+08:00"
},
{
"url": "https://ehealth.gov.hk/FHIR/99999999-RecordCreateDatetime",
"valueDateTime": "2023-10-20T14:30:00.000+08:00"
},
{
"url": "https://ehealth.gov.hk/FHIR/99999999-RecordCreateInstIdentifier",
"valueString": "8877350433"
},
{
"url": "https://ehealth.gov.hk/FHIR/99999999-RecordCreateInstName",
"valueString": "Kowloon Bay Clinical Laboratory"
},
{
"url": "https://ehealth.gov.hk/FHIR/99999999-RecordLastUpdateDatetime",
"valueDateTime": "2023-10-20T14:30:00.000+08:00"
},
{
"url": "https://ehealth.gov.hk/FHIR/99999999-RecordUpdateInstIdentifier",
"valueString": "8877350433"
},
{</pre>
	- [Transaction type]
	- [Last Update datetime]
	- [Transaction datetime]
	- [Record creation datetime]
	- [Record creation institution identifier]
	- [Record creation institution name]
	-[Record last update datetime]
	- [Record update institution identifier]

<table>
<tr>
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<pre>
                                    "url": "https://ehealth.gov.hk/FHIR/99999999-
RecordUpdateInstName",
                                    "valueString": "Kowloon Bay Clinical Laboratory"
                                }
                            ],
                            "reference": "DiagnosticReport/534922e6-1e05-4b08-b0b3-
068773c12658",
                            "identifier": {
                                "system":
"https://ehealth.gov.hk/FHIR/HCP/local/Recordkey",
                                "value": "DHPLLAB20221122"
                            }
                        }
                    ]
                }
            ]
        }
    },
    {
        "fullUrl": "Organization/3b3703a9-7a26-427c-9352-4e41f046d85e",
        "resource": {
            "resourceType": "Organization",
            "id": "3b3703a9-7a26-427c-9352-4e41f046d85e",
            "name": "Hospital A"
        }
    },
    {
        "fullUrl": "Patient/d58dd75b-cf09-4a1c-b913-c9e867f27616",
        "resource": {
            "resourceType": "Patient",
            "id": "d58dd75b-cf09-4a1c-b913-c9e867f27616",
            "identifier": [
                {
                    "type": {
                        "coding": [
                            {
                                "system": "https://ehealth.gov.hk/FHIR/typeofID-ext",
                                "code": "EHRNO"
                            }
                        ]
                    },
                    "value": "234567808800"
                },
                {
</pre>

</td>
<td>

- [Record update institution name]

Link to DiagnosticReport resource

[Record Key]

-[fullUrl for Organization]
Organization Resource
- [Resource id for Organization resource]
- [Healthcare institution long name]
-[fullUrl for Patient]
Patient (HCR) Resource
- Resource id for Patient resource]

Fixed value

- [eHR Number]

</td>
</tr>
</table>

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<pre>
                        "type": {
                            "coding": [
                                {
                                    "system": "https://ehealth.gov.hk/FHIR/typeofID-ext",
                                    "code": "ID"
                                }
                            ]
                        },
                        "value": "Q1730351"
                    }
                ],
                "active": true,
                "name": [
                    {
                        "use": "official",
                        "text": "CHAN, MAN MAN",
                        "family": "CHAN",
                        "given": [
                            "MAN MAN"
                        ]
                    }
                ],
                "gender": "female",
                "birthDate": "1974-12-25"
            }
        },
        {
            "fullUrl": "DiagnosticReport/534922e6-1e05-4b08-b0b3-068773c12658",
            "resource": {
                "resourceType": "DiagnosticReport",
                "id": "534922e6-1e05-4b08-b0b3-068773c12658",
                "extension": [
                    {
                        "url": "https://ehealth.gov.hk/FHIR/1003520-LabReportStatusDesc",
                        "valueString": "Final Report"
                    },
                    {
                        "url": "https://ehealth.gov.hk/FHIR/1003521-LabReportStatusLocalDesc",
                        "valueString": "Final"
                    },
                    {
                        "url": "https://ehealth.gov.hk/FHIR/1003526-LabReportComment",
                        "valueString": "Clinical Guideline Note: The goal of diabetes therapy
should be an HbA1c level of 7 percent."
</pre>

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<td>

- [Type of identity document]

- [Document number]

- [English full name]
- [English surname]
- [English given name]

- [Sex]
- [Date of Birth]
-[fullUrl for DiagnosticReport]
DiagnosticReport Resource
[Resource id for DiagnosticReport resource]

[Laboratory report status description]

[Laboratory report status local description]

[Laboratory report comment]

</td>
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</table>

`},`
`{`
`"url": "https://ehealth.gov.hk/FHIR/1003529-LabReportText"`
`}`
`],`
`"identifier": [`
`{`
`"system": "https://ehealth.gov.hk/FHIR/HCP/local/RequestNum",`
`"value": "11-CC123456"`
`}`
`],`
`"basedOn": [`
`{`
`"reference": "ServiceRequest/8030e4f9-573d-4ceb-a429-aaf2cdfbabd3"`
`}`
`],`
`"status": "final",`
`"category": [`
`{`
`"coding": [`
`{`
`"system": "https://ehealth.gov.hk/FHIR/LabCatCode",`
`"code": "PATH",`
`"display": "Anatomical Pathology"`
`}`
`],`
`"text": "Anatomical Pathology Laboratory"`
`}`
`],`
`"code": {`
`"coding": [`
`{`
`"system": "https://ehealth.gov.hk/FHIR/HCP/local/PanelCode",`
`"code": "CYTO",`
`"display": "Routine Cytology"`
`}`
`],`
`"text": "Biopsy all embedded"`
`},`
`"subject": {`
`"reference": "Patient/d58dd75b-cf09-4a1c-b913-c9e867f27616"`
`},`
`"effectiveDateTime": "2023-10-20T14:30:00.000+08:00",`
`"issued": "2023-10-20T14:30:00.000+08:00",`
	[Laboratory report (text)]
	
	[Laboratory test request number]
	
	Link to ServiecRequest resource
	
	[Laboratory category code]
	[Laboratory category description]
	
	[Laboratory category local description]
	
	[Panel local code]
	[Panel local description]
	
	[Anatomical Pathology Test Name]
	
	Link to Patient resource
	[Laboratory report reference datetime]
	[Laboratory report

<table>
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```
                "performer": [
                    {
                        "reference": "PractitionerRole/21c6828c-b175-4a3b-b6de-6eaf69335021"
                    }
                ],
                "specimen": [
                    {
                        "reference": "Specimen/afeae3fd-7b0b-4d51-a683-d4668cf9d9fa"
                    }
                ],
                "result": [
                    {
                        "reference": "Observation/94c026f3-10a2-4db3-9b57-ba874e42e52b"
                    },
                    {
                        "reference": "Observation/8f588cd6-6c17-4ad6-9255-106ccba45b53"
                    },
                    {
                        "reference": "Observation/f588c115-7fe9-406b-9d7f-07655dcf2db8"
                    },
                    {
                        "reference": "Observation/4d14f866-cb05-4185-b857-24a7a51b45ea"
                    }
                ],
                "presentedForm": [
                    {
                        "contentType": "application/pdf",
                        "data": "JVBERi0xLjcNCiW1tbW1DQoxIDAgb2JqDQo8PC9UeX==Cover many lines",
                        "url":
"file://99087819043.BRANCHA.LABAP.DHPLLAB20221122.123.pdf.234567808800.2023102000000",
                        "creation": "2023-10-20T14:30:00.000+08:00"
                    }
                ]
            }
        },
        {
            "fullUrl": "Observation/94c026f3-10a2-4db3-9b57-ba874e42e52b",
            "resource": {
                "resourceType": "Observation",
                "id": "94c026f3-10a2-4db3-9b57-ba874e42e52b",
                "status": "final",
                "category": [
                    {
                        "coding": [
```

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authorized datetime]
Link to PractitionerRole Resource

Link to Specimen Resource

Link to Observation Resources

- [PDF in Base64]
- [PDF file name]

-[fullUrl for Observation]
Observation Resource [Resource id for Observation resource]

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```
                        {
                            "system": "https://ehealth.gov.hk/FHIR/APcategory",
                            "code": "Diagnosis"
                        }
                    ]
                }
            ],
            "code": {
                "coding": [
                    {
                        "system": "https://ehealth.gov.hk/FHIR/HCP/local/APDiagTitle"
                    }
                ],
                "text": "Frozen Section Diagnosis"
            },
            "valueString": "Adenocarcinoma of right lung"
        }
    },
    {
        "fullUrl": "Observation/8f588cd6-6c17-4ad6-9255-106ccba45b53",
        "resource": {
            "resourceType": "Observation",
            "id": "8f588cd6-6c17-4ad6-9255-106ccba45b53",
            "status": "final",
            "category": [
                {
                    "coding": [
                        {
                            "system": "https://ehealth.gov.hk/FHIR/APcategory",
                            "code": "Topography"
                        }
                    ]
                }
            ],
            "code": {
                "coding": [
                    {
                        "system": "https://ehealth.gov.hk/FHIR/HCP/local/APDiagTitle"
                    }
                ],
                "text": "Frozen Section Diagnosis"
            },
            "valueCodeableConcept": {
                "coding": [
```


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[Anatomical Pathology Diagsnosis Title]

[Anatomical pathology diagnosis text result]

-[fullUrl for Observation]
Observation Resource [Resource id for Observation resource]

[Anatomical Pathology Diagsnosis Title]

url contains [Diagnosis topography - recognised

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```
                    {
                        "system": "https://ehealth.gov.hk/FHIR/HKCTT",
                        "code": "8003046",
                        "display": "Right lung structure"
                    },
                    {
                        "system": "https://ehealth.gov.hk/FHIR/HCP/local/DiagTopography",
                        "code": "T-28100,01,001",
                        "display": "Lung, right"
                    }
                ]
            }
        }
    },
    {
        "fullUrl": "Observation/f588c115-7fe9-406b-9d7f-07655dcf2db8",
        "resource": {
            "resourceType": "Observation",
            "id": "f588c115-7fe9-406b-9d7f-07655dcf2db8",
            "status": "final",
            "category": [
                {
                    "coding": [
                        {
                            "system": "https://ehealth.gov.hk/FHIR/APcategory",
                            "code": "DiagFinding"
                        }
                    ]
                }
            ],
            "code": {
                "coding": [
                    {
                        "system": "https://ehealth.gov.hk/FHIR/HCP/local/APDiagTitle"
                    }
                ],
                "text": "Frozen Section Diagnosis"
            },
                        "valueCodeableConcept": {
                "coding": [
                    {
                        "system": "https://ehealth.gov.hk/FHIR/HKCTT",
                        "code": "8002624",
                        "display": "Adenocarcinoma in situ"
```

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terminology name]
[Diagnosis topography identifier - recognised terminology]
[Diagnosis topography description - recognised terminology]
[Topography Local Code]
[Topography Local Description]

-[fullUrl for Observation]
Observation Resource [Resource id for Observation resource]

[Anatomical Pathology Diagnosis Title]

[Diagnosis finding - recognised terminology name]
[Diagnosis finding

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```
                    },
                    {
                        "system": "https://ehealth.gov.hk/FHIR/HCP/local/DiagTopography",
                        "code": "M-40000, 01, 001",
                        "display": "Adenocarcinoma in-situ""
                    }
                ]
            }
        }
    },
    {
        "fullUrl": "Observation/4d14f866-cb05-4185-b857-24a7a51b45ea",
        "resource": {
            "resourceType": "Observation",
            "id": "4d14f866-cb05-4185-b857-24a7a51b45ea",
            "status": "final",
            "category": [
                {
                    "coding": [
                        {
                            "system": "https://ehealth.gov.hk/FHIR/APcategory",
                            "code": "APReportDetail"
                        }
                    ]
                }
            ],
            "code": {
                "coding": [
                    {
                        "system": "https://ehealth.gov.hk/FHIR/APReportDetail",
                        "code": "OTH",
                        "display": "Other"
                    }
                ],
                "text": "Molecular Pathology"
            },
            "valueString": "HC-2 Test for high risk HPV group(positive)."
        }
    },
    {
        "fullUrl": "Observation/8030e4f9-573d-4ceb-a429-aaf2cdfbabd3",
        "resource": {
            "resourceType": "ServiceRequest",
            "id": "8030e4f9-573d-4ceb-a429-aaf2cdfbabd3",
```

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identifier - recognised terminology]
[Diagnosis finding description - recognised terminology]
[Anatomical pathology finding local code]
[Anatomical pathology finding local description]

-[fullUrl for Observation]
Observation Resource
[Resource id for Observation resource]

[Anatomical Pathology Report Details - Title Code]
[Anatomical Pathology Report Details - Title Description]
[Anatomical Pathology Report Details - Title Local Description]
[Anatomical pathology report details - content]

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```
            "identifier": [
                {
                    "system": "https://ehealth.gov.hk/FHIR/HCP/local/OrderNum",
                    "value": "OR1101606192"
                }
            ],
            "status": "completed",
            "intent": "order"
            "encounter": {
                "reference": "Encounter/169281c8-fb76-4e9c-b30f-3dfb3a7f53f2"
            },
            "requester": {
                "reference": "PractitionerRole/4037da57-d98b-400b-93fe-3d918f6aa7c8"
            },
            "supportingInfo": [
                {
                    "display": "? Ca Lung Fasting blood sample"
                }
            ]
        }
    },
    {
        "fullUrl": "PractitionerRole/4037da57-d98b-400b-93fe-3d918f6aa7c8",
        "resource": {
            "resourceType": "PractitionerRole",
            "id": "4037da57-d98b-400b-93fe-3d918f6aa7c8",
            "practitioner": {
                "reference": "Practitioner/8d46812c-4345-45ca-b9ff-ec325816c416"
            },
            "organization": {
                "reference": "Organization/c3cdb0dd-9b20-4a14-82bc-3facb3da18f7"
            }
        }
    },
    {
        "fullUrl": "Organization/c3cdb0dd-9b20-4a14-82bc-3facb3da18f7",
        "resource": {
            "resourceType": "Organization",
            "id": "c3cdb0dd-9b20-4a14-82bc-3facb3da18f7",
            "identifier": [
                {
                    "system": "https://ehealth.gov.hk/FHIR/pvdr",
                    "value": "99087819043"
                }
```

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<td>

[Laboratory test order number]
Link to Encounter resource
Link to PractitionerRole Resource
[Laboratory test request clinical information]
-[fullUrl for Observation]
Observation Resource
[Resource id for Observation resource]

Link to Practitioner resource
Link to Organization resource

-[fullUrl for Organization]
Organization Resource
[Resource id for Organization resource]
[Laboratory test request healthcare institution identifier]
[Laboratory test request healthcare institution long name]
[Laboratory test request healthcare institution local name]
-[fullUrl for PractitionerRole]
PractitionerRole

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```
            ],
            "name": "Kowloon Hospital",
            "alias": [
                "Kowloon Hospital"
            ]
        }
    },
    {
        "fullUrl": "PractitionerRole/21c6828c-b175-4a3b-b6de-6eaf69335021",
        "resource": {
            "resourceType": "PractitionerRole",
            "id": "21c6828c-b175-4a3b-b6de-6eaf69335021",
            "practitioner": {
                "reference": "Practitioner/0de7ebaa-de1d-40af-ba4a-b82328180faa"
            },
            "organization": {
                "reference": "Organization/1832473e-2fe0-452d-abe9-3cdb9879522f"
            }
        }
    },
    {
        "fullUrl": "PractitionerRole/fc347242-e2ba-46a7-8333-4dadb6ed4d71",
        "resource": {
            "resourceType": "PractitionerRole",
            "id": "fc347242-e2ba-46a7-8333-4dadb6ed4d71",
            "practitioner": {
                "reference": "Practitioner/0de7ebaa-de1d-40af-ba4a-b82328180faa"
            }
        }
    },
    {
        "fullUrl": "Organization/1832473e-2fe0-452d-abe9-3cdb9879522f",
        "resource": {
            "resourceType": "Organization",
            "id": "1832473e-2fe0-452d-abe9-3cdb9879522f",
            "identifier": [
                {
                    "system": "https://ehealth.gov.hk/FHIR/pvdr",
                    "value": "8840188537"
                }
            ],
            "alias": [
                "Kowloon Bay Clinical Laboratory"
            ]
```

</td>
<td>

Resource
[Resource id for PractitionerRole resource]
Link to Practitioner resource
Link to Organization resource

-[fullUrl for PractitionerRole]
PractitionerRole Resource
[Resource id for PractitionerRole resource]
Link to Practitioner resource

-[fullUrl for Organization]
Organization Resource
[Resource id for Organization resource]
[Laboratory test request performing laboratory name]

-[fullUrl for Encounter]
Encounter Resource
[Resource id for Encounter resource]

</td>
</tr>
</table>

<pre>}
},
{
"fullUrl": "Encounter/169281c8-fb76-4e9c-b30f-3dfb3a7f53f2",
"resource": {
"resourceType": "Encounter",
"id": "169281c8-fb76-4e9c-b30f-3dfb3a7f53f2",
"extension": [
{
"url": "https://ehealth.gov.hk/FHIR/99999999-AttendanceInstIdentifier",
"valueString": "8840188537"
}
],
"identifier": [
{
"system": "https://ehealth.gov.hk/FHIR/HCP/local/EpisodeNum",
"value": "OP123456"
}
],
"status": "finished",
"class": {
"system": "https://ehealth.gov.hk/FHIR/class",
"code": "UNKNOWN",
"display": "Unknown status"
}
}
},
{
"fullUrl": "Specimen/afeae3fd-7b0b-4d51-a683-d4668cf9d9fa",
"resource": {
"resourceType": "Specimen",
"id": "afeae3fd-7b0b-4d51-a683-d4668cf9d9fa",
"extension": [
{
"url": "https://ehealth.gov.hk/FHIR/1003530-SpecimenDetail",
"valueString": "Cervix"
}
],
"type": {
"coding": [
{
"system": "https://ehealth.gov.hk/FHIR/HCP/local/SpecimenType",
"code": "S423",
"display": "Biopsy"</pre>
	<pre>[Attendance institution identifier]
	
	[Episode number]
	
	-[fullUrl for Specimen] Specimen Resource [Resource id for Specimen resource]
	[Specimen details]
	
	URL contains [Specimen type - recognised terminology name]
	[Specimen type identifier - recognised terminology]
	[Specimen type description - recognised terminology]
	[Specimen type local code]
	[Specimen type local description]</pre>

<table>
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<pre>
                        }
                    ]
                },
                "receivedTime": "2023-10-20T14:30:00.000+08:00",
                "collection": {
                    "collectedDateTime": "2023-10-20T14:30:00.000+08:00"
                }
            }
        },
        {
            "fullUrl": "Practitioner/0de7ebaa-de1d-40af-ba4a-b82328180faa",
            "resource": {
                "resourceType": "Practitioner",
                "id": "0de7ebaa-de1d-40af-ba4a-b82328180faa",
                "extension": [
                    {
                        "url": "https://ehealth.gov.hk/FHIR/1003524-
LabReportAuthHCSChineseName",
                        "valueString": "陳大文"
                    }
                ],
                "name": [
                    {
                        "text": "Chan"
                    }
                ]
            }
        },
        {
            "fullUrl": "Practitioner/8d46812c-4345-45ca-b9ff-ec325816c416",
            "resource": {
                "resourceType": "Practitioner",
                "id": "8d46812c-4345-45ca-b9ff-ec325816c416",
                "name": [
                    {
                        "text": "Dr. TM Chan"
                    }
                ]
            }
        }
    ]
}
</pre>

</td>
<td>

[Specimen arrival datetime]
[Specimen collection datetime]

-[fullUrl for Practitioner]
Practitioner Resource [Resource id for Practitioner resource]

[Laboratory report authorized healthcare staff Chinese name]

[Laboratory report authorized healthcare staff English name]

-[fullUrl for Practitioner]
Practitioner Resource [Resource id for Practitioner resource]

[Laboratory test requesting doctor]

</td>
</tr>
</table>

7. Mapping Tables

7.1 FHIR Administrative Gender

FHIR Administrative Gender	eHR Value of [Sex]
male	M
female	F
unknown	U

7.2 Laboratory report status code

FHIR DiagnosticReport.status	eHR Value of [Laboratory Report Status]	eHR definition
preliminary	P	A provisional report is issued when provisional or partial results become available and report is submitted to eHR. A final report will always follow after the provisional report.
final	F	A completed report for the laboratory request.
corrected	A	An Amended report is issued when the final report of diagnosis or test result(s) have been changed or amended. Amended report includes information with the latest submitted provisional report/final report/supplementary report.
appended	S	A supplementary report is issued when additional information is available when final/amended report has been submitted to eHR.
unknown	U	Laboratory report status cannot be provided.

8. Code Tables

Type of identity document

eHR Value	eHR Description	Chinese Description	Full Description
AR	Adoption Certificate	領養證明書	Adopted Children Register (include those issued by HKSAR and non-HKSAR government authorities)
BC	Birth Certificate - HK	香港出生證明書	Hong Kong Birth Certificate
CD	Consular Corps ID Card	領事團身份證	Consular Corps Identity Card
DI	Document of Identity for Visa Purposes	香港特別行政區簽證身份書	HKSAR Document of Identity for Visa Purposes
EC	Exemption Certificate	豁免證明書(或稱豁免登記證明書)	Certificate of Exemption
ED	eHR document	電子健康紀錄文件	Document issued by eHRC for newborn registration
ID	HKID Card	香港身份證	Hong Kong Identity Card
MD	Macao ID Card	澳門身份證	Macao Identity Card
OC	Travel documents - PRC	中華人民共和國發出之其他旅遊証件	Other travel documents issued by the People Republic of China government / authorising agent, exclude One-way Permit and Two-way Permit
OP	Travel document - overseas	其他國家/地區發出之旅遊証件	Travel documents issued by other countries / regions
OW	One-way Permit	單程証	One-way Permit
RE	Recognizance Form	擔保書(行街紙)	Recognizance Form

RP	Re-entry Permit	香港特別行政區回港證	HKSAR Re-entry Permit
TW	Two-way Permit	雙程証	Two-way Permit

9. Data variable

Variable	Variable Value	Remark
eHR FHIR URL	https://ehealth.gov.hk/FHIR	
HCP FHIR URL	https://ehealth.gov.hk/FHIR/HCP/local	

10. Appendix

Reference to generate the UUD URI

Online UUID generator : https://www.uuidgenerator.net/
Python uuid module documentation: https://docs.python.org/3/library/uuid.html
Java UUID Class Documentation:
https://docs.oracle.com/en/java/javase/14/docs/api/java.base/java/util/UUID.html

FHIR Reference

Bundle Resource: https://hl7.org/fhir/R4/bundle.html

Composition Resource: https://hl7.org/fhir/R4/composition.html

Patient Resource: https://hl7.org/fhir/R4/patient.html

Organization Resource : https://hl7.org/fhir/r4/organization.html

PractitionerRole Resource: https://hl7.org/fhir/R4/practitionerrole.html

Practitioner Resource : https://hl7.org/fhir/r4/practitioner.html

DiagnosticReport Resource : https://hl7.org/fhir/R4/diagnosticreport.html

Specimen Resource : https://hl7.org/fhir/R4/specimen.html

ServiceRequest Resource : https://hl7.org/fhir/R4/servicerequest.html

Observation Resource : https://hl7.org/fhir/R4/observation.html

Encounter Resource : https://hl7.org/fhir/R4/encounter.html