## Queensland Cancer Register (QCR) Pathology Investigations – Approved Form (Version 0.8, 3 April 2025)

Notification about cancer related pathological investigations to the QCR will be required under the Public Health Act 2005 Queensland Cancer Register (QCR) Legislation Amendments. This legislation will commence in **May 2025.**

The approved form aligns with:

- The national pathology accreditation standards, published by the Australian Commission for Safety and Quality in Health Care[2], and
- The pathology terminology and information standardisation guidelines and reference sets[3], published by the Royal College of Pathologists of Australasia (RCPA), and
- The structured pathology reporting of cancer protocols[4], published by RCPA.

Pathology laboratories are required to provide additional follow up cancer-related examination results (even if there is no cancer identified in the specimen) performed by the pathology laboratory for a person who has, or has had cancer in the following approved form:

- Pathology results must be presented in a message file that conforms to the current HL7 Australia Diagnostic Messaging standard[5], as specified in Table 1 below.
- PDF documents and PDF files embedded in HL7 messages are not an approved form.
- Pathology results must have titles that consistently and accurately describe the contents of the report, i.e., the panel names (Universal service identifier name) must reflect the test results found in the report.
- Where available, the standardised requesting and reporting content, terminology, codes, and units must be applied, as specified in the RCPA Standardised Pathology Informatics in Australia (SPIA) guidelines, associated reference sets and information models, published on the RCPA website.
- For cancer resections, reports must conform the to the RCPA structured pathology reporting of cancer protocols, specified on the RCPA website (or linked to the International Collaboration on Cancer Reporting data sets), including precise adherence to the reporting proforma and data sets, with all ancillary test results and use of standardised terminology where specified.
- For genetic testing of neoplasms, standardised terminology must be applied, including Human Genome Variation Society (HGVS) nomenclature for variations to DNA sequences and amino acids, as specified in the SPIA reference material and the accreditation requirements for medical testing for human genetic variation[6].
- For tests referred to other laboratories, the referring laboratory must ensure the report is notified to the cancer register in the approved form.

Version 0.08

Date 3 April 2025

| Value name | Description | Expected HL7 segment/field | Examples of expected values | Max character length for the value | Priority |
|---|---|---|---|---|---|
| **Message information** | **Describes the file that contains the complete diagnostics report, within a compliant HL7 message structure of type ORU^R01.** | **MSH** | | | |
| Field separator | Defines the character to be used as a field separator for the entire message content. | MSH-1 | \| | n/a | Mandatory |
| Encoding characters | This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. | MSH-2 | ^~\& | n/a | Mandatory |
| Escape sequences | A set of characters used to replace and denote reserved characters and delimiters that have a pre-defined purpose in the message, as per the HL7 standard and encoding characters in use. | As required | Example: \T\ replaces sub-component delimiter '&' | n/a | Mandatory |
| Sending application | Identifies the information system that is the source of the message that contains the diagnostic report. | MSH-3 | *Producer system name* | 180 | Mandatory |
| Sending facility | Identifies the facility (diagnostic provider organisation) that is responsible for the sending application. Together, the sending facility and application uniquely identify the source of the message in the QCR environment. | MSH-4 | *Diagnostic provider name* | 180 | Mandatory |

| Value name | Description | Expected HL7 segment/field | Examples of expected values | Max character length for the value | Priority |
|---|---|---|---|---|---|
| Receiving application | Identifies the information system in the context of the receiving facility, that is intended to receive the message. | MSH-5 | Queensland Cancer Register | 180 | Optional |
| Receiving facility | Identifies the facility that is responsible for the receiving application. | MSH-6 | Cancer Alliance Queensland MSHHS | 180 | Optional |
| Date/time of message | This field contains the date/time that the sending system created the message. | MSH-7 | Time stamp | n/a | Mandatory |
| Message type | This field contains the message type, trigger event, and the message structure ID for the message. | MSH-9 | ORU^R01 | n/a | Mandatory |
| Message control ID | Uniquely identifies the message (in the sender's context). | MSH-10 | *Refer to HL7 Standard for recommended format.* | 30 | Mandatory |
| **Patient information** | **The patient is the subject of the diagnostic investigations** | **PID** | | | |
| Primary patient identifier with assigning authority | Uniquely identifies the patient in the sender's facility. | PID-3 (first repeat) | Examples: **07654321**^^^PAS^MR^00011; **624055839**^^^NATA&LAB&N | 250 | Mandatory |
| Other patient identifiers | e.g., National health identifier - individual health identifier (IHI) | PID-3 | Example: **8003608833357361**^^^AUSHIC^NI **1035468466**^^^QH^PT^EUID; | 250 | Conditional - mandatory if available |

| Value name | Description | Expected HL7 segment/field | Examples of expected values | Max character length for the value | Priority |
|---|---|---|---|---|---|
| Medicare number | May be referenced for patient matching if other identifiers are inadequate to match. | PID-3 | Example: **41556495371**^^^AUSHIC ^MC^^^ 202509 | 250 | Conditional - mandatory if available |
| Name | This field contains the names of the patient, the primary or legal name of the patient is reported first. The given name and second and further names must be appropriately delimited from one another. All names should be correctly classified using the Name Type value. For example, a preferred name that is not the legal name of the patient may have Alias (A) name type. | PID-5 | Example: **CITIZEN ^John^Paul** ^^MR^^**L** | 200 | Mandatory |
| DOB | This field contains the patient's date of birth, or the date and time of birth. | PID-7 | Time stamp (YYYYMMDD) | n/a | Mandatory |
| Sex | Refers to 'Administrative sex' and reflects the patient's genetic, hormonal and physical characteristics (sex characteristics). This field should not be used to reflect the patient's Gender Identity.<br><br>Note: The referenced standard does not specify the presentation of definitive Sex- and Gender-related data elements, such as Gender Identity and Sex for Clinical Use. If other data elements are available, please advise QCR so that the values can be accurately recorded. | PID-8 | **Code - Description**<br>1 or M - Male<br>2 or F - Female<br>3 or A - X, intersex or indeterminate<br>9 or U - Not stated/inadequately described | 1 | Mandatory |

| Value name | Description | Expected HL7 segment/field | Examples of expected values | Max character length for the value | Priority |
|---|---|---|---|---|---|
| Indigenous status | Refers to patient's indigenous status, represented by codes defined by METEOR, Queensland Health, or the relevant HL7 standard. This value is required for the national cancer data collection. | PID-10 | **Code - Description**<br>1 - Aboriginal but not Torres Strait Islander origin<br>2 - Torres Strait Islander but not Aboriginal origin<br>3 - Both Aboriginal and Torres Strait Islander origin<br>4 - Neither Aboriginal nor Torres Strait Islander origin<br>9 - Not stated/unknown | 1 | Conditional - mandatory if available |
| Address | Refers to the home address or mailing address of the patient, and includes street address, state, post code and country code. | PID-11 | Example: **100 James Street^^Fair Hills^QLD^4995**^AUS^H | 250 | Mandatory |
| Phone number | Refers to the contact phone number for the patient | PID-13 | 0400200123 | 250 | Optional |
| **Order control information (optional)** | **Information that is common to all orders in a diagnostic service request** | **ORC** | | | |
| Order control ID | Refers to the status of an order group from a diagnostic service request. | ORC-1 | RE | 2 | Optional |
| Placer order number | The string of characters assigned by the placer system when it creates the diagnostic service request. It uniquely identifies the order within the placer system. | ORC-2 | 123456 | 250 | Optional |

| Value name | Description | Expected HL7 segment/field | Examples of expected values | Max character length for the value | Priority |
|---|---|---|---|---|---|
| Filler order number | The string of characters assigned by the filler system that uniquely identifies the order within the filler system of the diagnostic providers environment. | ORC-3 | 6543216500 | 250 | Optional |
| Placer group number | The string of characters that is assigned by the placer system, to identify the group of (one or more) orders belonging to one service request, submitted to the diagnostic service provider. | ORC-4 | ABC123456 | 250 | Optional |
| Order status | Specifies the status of an order to enable communication of status change. | ORC-5 | CM | 2 | Optional |
| Ordering provider | Refers to the individual healthcare provider who created the request. | ORC-12 | 7654321A^Brown^Julie^^^Dr^^^AUSHICPR | 250 | Optional |
| **Order information** | **Describes the order and the set of (one or more) observations that are provided in the message.** | **OBR** | **Reference: RCPA Standardised Pathology Informatics in Australia (SPIA) Guidelines and associated information models** | RCPA - SPIA Terminology Reference Sets & Information Models | |
| Order Set ID | This field identifies the OBR segment within the message and is required if more than one OBR is sent in one message. | OBR-1 | 1 | 4 | Mandatory |
| Placer order number | The string of characters assigned by the placer system when it creates the diagnostic service request. It uniquely identifies the order within the placer system. | OBR-2 (OBR-2 must = ORC-2 if both are supplied) | 123456 | 250 | Optional |

| Value name | Description | Expected HL7 segment/field | Examples of expected values | Max character length for the value | Priority |
|---|---|---|---|---|---|
| Filler order number | The string of characters assigned by the filler system that uniquely identifies the order within the filler system of the diagnostic provider's environment. The filler system refers to the laboratory, or radiology, information system. | OBR-3 (OBR-3 must = ORC-3 if both are supplied) | 6543216500 | 250 | Mandatory |
| Universal service identifier code and name | The code and name that universally identifies the group of observations (panel/battery/test) that has been requested. For pathology messages, this field should use the RCPA approved SNOMED CT-AU code and preferred term. | OBR-4 | 252416005^Histology^SCT;<br>26604007^Full blood count^SCT | 100 | Conditional - mandatory if available (SPIA) |
| Local service identifier code and name | The code and name that identifies the group of observations (panel/battery/test) that has been requested, within the filler system. This field uses the order code and panel/test name that is known within the diagnostic provider's environment. | OBR-4 | HISTO^Histopathology^NATA7777;<br>FBE^Full Blood Examination^NATA7777 | 100 | Mandatory |
| Requested date and time | The date and time at which the imaging exam was requested. | OBR-6 | Time stamp | 26 | Conditional - mandatory if available |
| Observation date and time | The date and time at which the observation was obtained from the patient, i.e., when the specimen was collected, or imaging study performed. This is also known as the 'collection date and time'. | OBR-7 | Time stamp | n/a | Mandatory |

| Value name | Description | Expected HL7 segment/field | Examples of expected values | Max character length for the value | Priority |
|---|---|---|---|---|---|
| Relevant clinical information | Clinical information about the patient, specimen or imaging study that can assist the diagnostic provider with interpretation of observation results. | OBR-13 | Example: Right hemicolectomy for adenoca resection, distal margin inked; Staging study for known NSCLC. | 300 | Conditional - mandatory if available |
| Specimen received date/time | For pathology observations, refers to the date and time the specimen was receipted into the laboratory system. | OBR-14 | Time stamp | n/a | Mandatory |
| Specimen source | Specifies the specimen type collected. | OBR-15 | Tissue | 100 | Mandatory |
| Specimen primary site | Specifies the body site of the observations. It is important that this field is populated with information about the body site of the tumour tissue, for anatomical pathology on tumour samples, biopsies and resections, and biomarker studies performed on tissue. | OBR-15 | Lung | 100 | Conditional - mandatory if applicable |
| Specimen secondary site | Specifies the detailed body site of the observations. It is important that this field is populated with information about the body site of the tumour tissue, for anatomical pathology on tumour samples, biopsies and resections, and biomarker studies performed on tissue. | OBR-15 | Left lower lobe | | Conditional - mandatory if applicable |
| Ordering provider | Refers to the individual healthcare provider who created the request. Same value as ORC-12 (if present). | OBR-16 | 7654321A^Brown^Julie^^^Dr^^^AUSHICPR | 250 | Mandatory |
| Filler field 1 | This field should contain the laboratory accession number, i.e., the string of characters that identifies the diagnostic service request (episode) in the filler system. | OBR-20 | 456123789 | 60 | Mandatory |

| Value name | Description | Expected HL7 segment/field | Examples of expected values | Max character length for the value | Priority |
|---|---|---|---|---|---|
| Result status change date and time | Specifies the date and time that the results were reported, or the status of the results changed, and subsequently triggered a new message to send. | OBR-22 | Time stamp | n/a | Mandatory |
| Diagnostic service section ID | Specifies the diagnostic service department or discipline where the observations were processed and resulted. | OBR-24 | SP (Anatomical Pathology) | 10 | Mandatory |
| Result status | Specifies the collective status of all observations in the order. Together with the unique filler order number (OBR-3), and result status change date and time (OBR-22), this value enables version control of reports received and subsequently amended. | OBR-25 | F (Final results); C (Correction or amendment to one or more observations in the set) | 1 | Mandatory |
| **Observation information** | **Describes each of the individual observation results in the group** | **OBX** | Reference: RCPA STRUCTURED PATHOLOGY REPORTING OF CANCER – PROTOCOLS (if applicable) | RCPA - Structured Pathology Reporting of Cancer - Protocols | |
| Sequence number (Set ID) | Specifies the order in which the observations are listed, as intended by the sender. | OBX-1 | 3 | 4 | Mandatory |
| Result value data type | Specifies the format of the observation result value in OBX-5. | OBX-2 | NM; FT | 3 | Mandatory |
| Universal observation identifier and preferred term | The code and name that universally identifies the observations (individual test). For pathology messages, this field should use the RCPA approved LOINC code and preferred term. | OBX-3 | Example: 718-7^Haemaglobin^LN | 120 | Conditional - mandatory if available (SPIA) |

| Value name | Description | Expected HL7 segment/field | Examples of expected values | Max character length for the value | Priority |
|---|---|---|---|---|---|
| Local observation identifier and name | The code and name that identifies the observation (individual test) within the filler system. This field uses the test code and test name that is known within the diagnostic provider's environment. | OBX-3 | Example: HGB^Haemaglobin^NATA 7777 | 120 | Mandatory |
| Observation value | The result value that was observed for the test specified in OBX-3, presented according to the data type specified in OBX-2. Each observation result in the set should be provided as a discrete value in its individual OBX segment, **and** within the context of its complete report, i.e., in both the atomic and the display formats. The complete report should be provided as a display segment comprised of formatted text. PDF does not comprise an approved form. | OBX-5 | Where applicable, refer to the RCPA SPIA guidelines. For cancer resections, refer to RCPA cancer protocols. For genetic testing, refer to the Requirements for medical testing for human genetic variation. | Depends on data type, up to 16 MB. | Mandatory |
| Observation units | The units of measure that apply to the observation result value. This field should use the RCPA approved preferred units. | OBX-6 | g/L | 250 | Conditional - mandatory if applicable |
| Reference ranges | The lower and/or upper limits where the result value is considered to be 'normal'. Reference ranges may vary according to factors such as the age and sex of the patient at the time of the observation. | OBX-7 | 135 - 175 | 60 | Conditional - mandatory if applicable |
| Abnormal flags | Characters to indicate whether the result value falls within the normal range of values and may indicate the degree to which the result is considered to be abnormal. | OBX-8 | H; HH; +; +++ | 5 | Conditional - mandatory if applicable |

| Value name | Description | Expected HL7 segment/field | Examples of expected values | Max character length for the value | Priority |
|---|---|---|---|---|---|
| Observation result status | This value specifies the stage in the diagnostic provider's processing, where the individual observation resulting is up to. | OBX-11 | F (Final result) | 1 | Mandatory |
| Analysis date and time | Specifies the date and time that the raw observation result was generated by the analytical instrument. | OBX-14 | Time stamp | n/a | Mandatory |
| Producers ID | The unique identifier of the responsible producing service; i.e., the pathology provider organisation who authored the report (e.g. for send away tests). When this field is null, CAQ assumes that the report was produced by the sending organisation. | OBX-15 | *Name of pathology service* | 250 | Conditional - mandatory if applicable |

References:


1. Health and Other Legislation Amendment Act 2023 - Queensland Legislation - Queensland Government
2. Requirements for information communication and reporting (Fifth Edition) | Australian Commission on Safety and Quality in Health Care
3. Pathology accreditation standards | Australian Commission on Safety and Quality in Health Care
4. RCPA - SPIA Terminology Reference Sets & Information Models
5. RCPA - Structured Pathology Reporting of Cancer - Protocols
6. HL7AUSD-STD-OO-ADRM-2021.1 - Australian Diagnostic and Referral Messaging - Localisation of HL7 Version 2.4
7. Requirements for medical testing for human genetic variation (Third Edition) | Australian Commission on Safety and Quality in Health Care