

1	Status	Final Text
2	Date of Last Update	2017/04/18
3	Person Assigned	David Clunie
4		mailto:dclunie@dclunie.com
5	Submitter Name	David Clunie
6		mailto:dclunie@dclunie.com
7	Submission Date	2016/08/24

8	Correction Number CP-1649	
9	Log Summary: Clarify use of Other Patient IDs Sequence with Issuer and related Attributes as Query keys	
10	Name of Standard	
11	PS3.3, PS3.4, PS3.6	
12	Rationale for Correction:	
13	When patients have multiple identifiers, particular in the context of cross-enterprise use cases it is desirable to consistently communicate these in persistent objects as well as in query models.	
14		
15	The original standard failed to specify a means of identifying the issue of either the Patient ID or the Other Patient IDs values, and over time Issuer of Patient ID and Other Patient IDs Sequence were added, as well as Issuer of Patient ID Qualifiers Sequence to the persistent objects and the work flow query models.	
16		
17		
18	These became available for use in the Query models as a consequence of the existing optional inclusion of "All other Attributes at Patient Level" in the models, but it seems that some implementers and users remain unclear about the availability of this capability.	
19		
20	The IHE Multiple Image Manager/Archive (MIMA) profile emphasizes the importance of the use of these attributes that explicitly specify the issuer, and forbid the use of those that don't (Other Patient IDs).	
21		
22	Accordingly, it is proposed that the PS3.4 Annex C query models be updated to explicitly list the relevant attributes as optional query keys rather than relying on the "all other" mechanism, and that attributes now no longer appropriate be removed from the query model and retired. Further, the retrieve behavior is clarified to emphasize that the Patient ID is cannot be qualified by the Issuer of Patient ID, and so a STUDY rather than PATIENT level retrieval should be used in such cases.	
23		
24		
25		
26	The same approach is then propagated across all other potential uses of patient identification in other PS3.4 services.	
27	Attributes that should no longer be used are retired, including Other Patient IDs and Medical Record Locator.	
28	This CP does not change the standard behavior or implementation; it is only a clarification of the documentation of existing requirements.	
29	Correction Wording:	

Amend DICOM PS3.3 as follows (changes to existing text are bold and underlined for additions and ~~struckthrough~~ for removals):

## 10.14 HL7v2 Hierarchic Designator Macro

Table 10-17 describes the attributes for identifying an entity (system, organization, agency, or department) that has responsibility for managing or assigning a defined set of instance identifiers (such as placer or filler number, patient identifiers, provider identifiers, etc.). This entity could be a particular health care application such as a registration system that assigns patient identifiers, a governmental entity such as a licensing authority that assigns professional identifiers or drivers' license numbers, or a facility where such identifiers are assigned.

### Note

This definition is identical to HL7 v2.5, Section 2.A.33, with only minor changes for editorial style.

These attributes are equivalent to the components of the HL7 v2 Hierarchic Designator (HD) and Entity Identifier (EI) data types (see HL7 v2 Chapter 2.A).

If both Local Namespace Entity ID (0040,0031) and Universal Entity ID (0040,0032) are present, they shall refer to the same entity.

**Table 10-17. HL7v2 Hierarchic Designator Macro Attributes**

Attribute Name	Tag	Type	Attribute Description
Local Namespace Entity ID	(0040,0031)	1C	Identifies an entity within the local namespace or domain. Required if Universal Entity ID (0040,0032) is not present; may be present otherwise.
Universal Entity ID	(0040,0032)	1C	Universal or unique identifier for an entity. Required if Local Namespace Entity ID (0040,0031) is not present; may be present otherwise.
Universal Entity ID Type	(0040,0033)	1C	Standard defining the format of the Universal Entity ID. Required if Universal Entity ID (0040,0032) is present.  <b>Enumerated Values:</b>  <b>DNS</b> An Internet dotted name. Either in ASCII or as integers <b>EUI64</b> An IEEE Extended Unique Identifier <b>ISO</b> An International Standards Organization Object Identifier <b>URI</b> Uniform Resource Identifier <b>UUID</b> The DCE Universal Unique Identifier <b>X400</b> An X.400 MHS identifier <b>X500</b> An X.500 directory name

## 10.15 Issuer of Patient ID Macro

Table 10-18 describes the attributes for identifying the source of Patient ID (0010,0020).

These attributes are equivalent to components of the HL7 v2 Extended Composite ID with Check Digit (CX) data type (see HL7 v2 Chapter 2.A.14), as used in the HL7 v2 PID-3 Patient Identifier List field.

**Table 10-18. Issuer of Patient ID Macro Attributes**

Attribute Name	Tag	Type	Attribute Description
Issuer of Patient ID	(0010,0021)	3	Identifier of the Assigning Authority (system, organization, agency, or department) that issued the Patient ID.  <b>Note</b>  Equivalent to HL7 v2 CX component 4 subcomponent 1.

Attribute Name	Tag	Type	Attribute Description
Issuer of Patient ID Qualifiers Sequence	(0010,0024)	3	Attributes specifying or qualifying the identity of the issuer of the Patient ID, or scoping the Patient ID.  Only a single Item is permitted in this Sequence.
>Universal Entity ID	(0040,0032)	3	Universal or unique identifier for the Patient ID Assigning Authority. The authority identified by this attribute shall be the same as that of Issuer of Patient ID (0010,0021), if present.  <b>Note</b>  Equivalent to HL7 v2 CX component 4 subcomponent 2 (Universal ID).
>Universal Entity ID Type	(0040,0033)	1C	Standard defining the format of the Universal Entity ID (0040,0032). Required if Universal Entity ID (0040,0032) is present.  <b>Note</b>  Equivalent to HL7 v2 CX component 4 subcomponent 3 (Universal ID Type).  See Section 10.14 for Defined Terms.
>Identifier Type Code	(0040,0035)	3	Type of Patient ID. Refer to HL7 v2 Table 0203 for Defined Terms.  <b>Note</b>  Equivalent to HL7 v2 CX component 5 (Identifier Type Code).
>Assigning Facility Sequence	(0040,0036)	3	The place or location identifier where the identifier was first assigned to the patient. This component is not an inherent part of the identifier but rather part of the history of the identifier.  Only a single Item is permitted in this Sequence.  <b>Note</b>  Equivalent to HL7 v2 CX component 6 (Assigning Facility).
>>Include Table 10-17 "HL7v2 Hierarchic Designator Macro Attributes"			
>Assigning Jurisdiction Code Sequence	(0040,0039)	3	The geo-political body that assigned the patient identifier. Typically a code for a country or a state/province. Only a single Item is permitted in this Sequence.  <b>Note</b>  Equivalent to HL7 v2 CX component 9 (Assigning Jurisdiction).
>>Include Table 8.8-1 "Code Sequence Macro Attributes"			Baseline CID 5001 for country codes.
>Assigning Agency or Department Code Sequence	(0040,003A)	3	The agency or department that assigned the patient identifier. Only a single Item is permitted in this Sequence.  <b>Note</b>  Equivalent to HL7 v2 CX component 10 (Assigning Agency or Department).
>>Include Table 8.8-1 "Code Sequence Macro Attributes"			No Baseline CID is defined.

## C.2.2 Patient Identification Module

Table C.2-2 defines the Attributes relevant to identifying a patient.

**Table C.2-2. Patient Identification Module Attributes**

Attribute Name	Tag	Attribute Description
Patient's Name	(0010,0010)	Patient's full name
Patient ID	(0010,0020)	Primary identifier for the patient.  <b>Note</b>  In the case of imaging a group of small animals simultaneously, the single value of this identifier corresponds to the identification of the entire group. See also Section C.7.1.4.1.1 "Groups of Subjects".
<i>Include Table 10-18 "Issuer of Patient ID Macro Attributes"</i>		
<b>Other Patient IDs</b>	<b>(0010,1000)</b>	<b>Other identification numbers or codes used to identify the patient.</b>
Other Patient IDs Sequence	(0010,1002)	A sequence of identification numbers or codes used to identify the patient, which may or may not be human readable, and may or may not have been obtained from an implanted or attached device such as an RFID or barcode.  <b>One or more Items are permitted in this Sequence.</b>  <b>Note</b>  <b><u>This Attribute replaces the use of Other Patient IDs (0010,1000), which did not specify an issuer for each other identifier, and which has been retired.</u></b>
>Patient ID	(0010,0020)	An identifier for the patient.
<i>&gt;Include Table 10-18 "Issuer of Patient ID Macro Attributes"</i>		
>Type of Patient ID	(0010,0022)	The type of identifier in this item.  <b>Enumerated Values:</b>  TEXT RFID BARCODE  <b>Note</b>  The identifier is coded as a string regardless of the type, not as a binary value.
Other Patient Names	(0010,1001)	Other names used to identify the patient.
Patient's Birth Name	(0010,1005)	Patient's birth name.
Patient's Mother's Birth Name	(0010,1060)	Birth name of patient's mother.
<b>Medical Record Locator</b>	<b>(0010,1090)</b>	<b>An identifier used to find the patient's existing medical record (e.g., film jacket).</b>
...	...	...

### Note

**Previously, Other Patient IDs (0010,1000) and Medical Record Locator (0010,1090) were included in this table. These Attributes have been retired. See PS3.3 2017a.**

## C.7.1.1 Patient Module

**Table C.7-1. Patient Module Attributes**

Attribute Name	Tag	Type	Attribute Description
Patient's Name	(0010,0010)	2	Patient's full name.
Patient ID	(0010,0020)	2	Primary identifier for the patient.  <b>Note</b>  In the case of imaging a group of small animals simultaneously, the single value of this identifier corresponds to the identification of the entire group. See also Section C.7.1.4.1.1 "Groups of Subjects".
<i>Include Table 10-18 "Issuer of Patient ID Macro Attributes"</i>			
...	...	...	...
Patient's Birth Time	(0010,0032)	3	Birth time of the Patient.
<b>Other Patient IDs</b>	<del>(0010,1000)</del>	<del>3</del>	<b>Other identification numbers or codes used to identify the patient:</b>
Other Patient IDs Sequence	(0010,1002)	3	A sequence of identification numbers or codes used to identify the patient, which may or may not be human readable, and may or may not have been obtained from an implanted or attached device such as an RFID or barcode.  One or more Items are permitted in this Sequence.  <b>Note</b>  <b><u>This Attribute replaces the use of Other Patient IDs (0010,1000), which did not specify an issuer for each other identifier, and which has been retired.</u></b>
>Patient ID	(0010,0020)	1	An identifier for the patient.  <b>Note</b>  In the case of imaging a group of small animals simultaneously, the single value of this identifier corresponds to the identification of the entire group. See also Section C.7.1.4.1.1 "Groups of Subjects".
<i>&gt;Include Table 10-18 "Issuer of Patient ID Macro Attributes"</i>			
>Type of Patient ID	(0010,0022)	1	The type of identifier in this item.  <b>Defined Terms:</b>  TEXT RFID BARCODE  <b>Note</b>  The identifier is coded as a string regardless of the type, not as a binary value.
Other Patient Names	(0010,1001)	3	Other names used to identify the patient.
...	...	...	...

**Note**

Previously, Other Patient IDs (0010,1000) was included in this table. This Attribute have been retired. See PS3.3 2017a.

**C.30.4 Unified Procedure Step Relationship Module****Table C.30.4-1. Unified Procedure Step Relationship Module Attributes**

Attribute Name	Tag	Attribute Description
Patient's Name	(0010,0010)	Patient's full legal name.
Patient ID	(0010,0020)	Primary identifier for the patient.  <b>Note</b>  In the case of imaging a group of small animals simultaneously, the single value of this identifier corresponds to the identification of the entire group. See also Section C.7.1.4.1.1 "Groups of Subjects".  See Section C.30.4.1
<i>Include Table 10-18 "Issuer of Patient ID Macro Attributes"</i>		
Other Patient IDs Sequence	(0010,1002)	Identification numbers or codes used to identify the patient, which may or may not be human readable, and may or may not have been obtained from an implanted or attached device such as an RFID or barcode.  Zero or more Items shall be included in this Sequence.
>Patient ID	(0010,0020)	An identifier for the patient.
...	...	...
Admission ID	(0038,0010)	Identification number of the visit as assigned by the healthcare provider
Issuer of Admission ID Sequence	(0038,0014)	Identifier of the Assigning Authority that issued the Admission ID.  Only a single Item shall be included in this Sequence.
<i>&gt;Include Table 10-17 "HL7v2 Hierarchic Designator Macro Attributes"</i>		
...	...	...
>Accession Number	(0008,0050)	An identifier of the order for the Study.
>Issuer of Accession Number Sequence	(0008,0051)	Identifier of the Assigning Authority that issued the Accession Number.  Only a single Item shall be included in this Sequence.

**C.30.4.1 Patient Identification**

For workitems that have a patient as the subject or context, the Patient ID, Issuer of Patient ID, Patient's Name, Patient's Sex and Patient's Birth Date shall have appropriate values.

For workitems that have an identifiable subject that is not a patient, for example a phantom to be scanned or a display to be calibrated, the Patient ID shall be filled with an acceptable pseudo-patient value.

**Note**

For an object with a hospital asset control number or a manufacturer's serial number, that number might be used as the Patient ID. The Issuer of Patient ID would identify the hospital asset control system or the device manufacturer. Alternatively, it is conceivable that a Patient ID could be generated by the ADT or the local John Doe procedure (to avoid conflicting with an ID assigned to a real patient).

The Patient Name might be set to CT^Phantom or ReadingRoom1Display.

*Amend DICOM PS3.4 as follows (changes to existing text are bold and underlined for additions and ~~struckthrough~~ for removals):*

**B.4.1 Conformance as an SCP**

At any level of conformance, the SCP of the Storage Service Class may modify the values of certain Attributes in order to coerce the SOP Instance into the Query Model of the SCP. The Attributes that may be modified are shown in Table B.4-1.

**Table B.4-1. Attributes Subject to Coercion**

Attribute Name	Tag
Patient ID	(0010,0020)
<b><u>Issuer of Patient ID</u></b>	<b><u>(0010,0021)</u></b>
<b><u>Other Patient IDs Sequence</u></b>	<b><u>(0010,1002)</u></b>
Study Instance UID	(0020,000D)
Series Instance UID	(0020,000E)

The SCP of the Storage Service Class may modify the values of Code Sequence Attributes to convert from one coding scheme into another. This includes changing from deprecated values of Coding Scheme Designator (0008,0102) or Code Value (0008,0100) to currently valid values.

If an SCP performs such a modification, it shall return a C-STORE response with a status of Warning.

**Note**

- Modification of these Attributes may be necessary if the SCP is also an SCP of a Query/Retrieve SOP Classes. These SOP Classes are described in this Standard. For example, an MR scanner may be implemented to generate Study Instance UIDs for images generated on the MR. When these images are sent to an archive that is HIS/RIS aware, it may choose to change the UID of the study assigned to the study by the PACS. The mechanism by which it performs this coercion is implementation dependent.
- An SCP may, for instance, convert Coding Scheme Designator values "SNM3" to "SRT", in accordance with the DICOM conventions for SNOMED (see PS3.16).
- Modification of Attributes that may be used to reference a SOP Instance by another SOP Instance (such as Study Instance UID and Series Instance UID Attributes) will make that reference invalid. Modification of these Attributes is strongly discouraged.
- Other Attributes may be modified/corrected by an SCP of a Storage SOP Class.
- Modification of Attributes may affect digital signatures referencing the content of the SOP Instance.

**C.4.2.1.4.1 Request Identifier Structure**

An Identifier in a C-MOVE request shall contain:

- Query/Retrieve Level (0008,0052), which defines the level of the retrieval

- Unique Key Attributes, which may include Patient ID (0010,0020), Study Instance UIDs (0020,000D), Series Instance UIDs (0020,000E), and the SOP Instance UIDs (0008,0018)
- Conditionally, the Attribute Query/Retrieve View (0008,0053). This Attribute may be included if Enhanced Multi-Frame Image Conversion has been accepted during Association Extended Negotiation. It shall not be included otherwise.

Specific Character Set (0008,0005) shall be present if Patient ID (0010,0020) is using a character set other than the default character repertoire.

The Unique Keys at each level of the hierarchy and the values allowable for the level of the retrieval shall be defined in the SOP Class definition for the Query/Retrieve Information Model.

#### Note

1. In the non-Relational behavior, more than one entity may be retrieved if the Query/Retrieve Level is IMAGE, SERIES or STUDY, using List of UID matching, but only Single Value Matching value may be specified for Patient ID (0010,0020).
2. **The issuer of the Patient ID (0010,0020) is implicit; there is no provision to send the Issuer of Patient ID (0010,0021). When there is a possibility of ambiguity of the Patient ID (0010,0020) value, a STUDY level retrieval should be used instead of a PATIENT level retrieval.**

### C.4.3.1.3.1 Request Identifier Structure

An Identifier in a C-GET request shall contain:

- Query/Retrieve Level (0008,0052), which defines the level of the retrieval
- Unique Key Attributes, which may include Patient ID (0010,0020), Study Instance UIDs (0020,000D) Series Instance UIDs (0020,000E), and SOP Instance UIDs (0008,0018)
- Conditionally, the Attribute Query/Retrieve View (0008,0053). This Attribute may be included if Enhanced Multi-Frame Image Conversion has been accepted during Association Extended Negotiation. It shall not be included otherwise.

Specific Character Set (0008,0005) shall be present if Patient ID (0010,0020) is using a character set other than the default character repertoire.

The Unique Keys at each level of the hierarchy and the values allowable for the level of the retrieval shall be defined in the SOP Class definition for the Query/Retrieve Information Model.

#### Note

1. In the non-Relational behavior, more than one entity may be retrieved if the Query/Retrieve Level is IMAGE, SERIES or STUDY, using List of UID matching, but only Single Value Matching value may be specified for Patient ID (0010,0020).
2. **The issuer of the Patient ID (0010,0020) is implicit; there is no provision to send the Issuer of Patient ID (0010,0021). When there is a possibility of ambiguity of the Patient ID (0010,0020) value, a STUDY level retrieval should be used instead of a PATIENT level retrieval.**

### C.6.1.1.2 Patient Level

Table C.6-1 defines the Attributes at the Patient Query/Retrieve level of the Patient Root Query/Retrieve Information Model.

#### Note

1. A description of the Attributes of this Information Model is contained in Section C.3 Standard Query/Retrieve Information Models of this part.
2. Although the Patient ID may not be globally unique, the Study Instance UID is globally unique ensuring that no two studies may be misidentified. **The scope of uniqueness of the Patient ID may be specified using the Issuer of Patient ID (0010,0021).**



3. **Previously, Other Patient IDs (0010.1000) was included in this table. This Attribute have been retired. See PS3.4 2017a.**

**Table C.6-1. Patient Level Attributes for the Patient Root Query/Retrieve Information Model**

Attribute Name	Tag	Type
Patient's Name	(0010,0010)	R
Patient ID	(0010,0020)	U
Issuer of Patient ID	(0010,0021)	O
Referenced Patient Sequence	(0008,1120)	O
>Referenced SOP Class UID	(0008,1150)	O
>Referenced SOP Instance UID	(0008,1155)	O
Patient's Birth Date	(0010,0030)	O
Patient's Birth Time	(0010,0032)	O
Patient's Sex	(0010,0040)	O
<b><del>Other Patient IDs</del></b>	<b><del>(0010,1000)</del></b>	<b><del>O</del></b>
<b><u>Other Patient IDs Sequence</u></b>	<b><u>(0010,1002)</u></b>	<b><u>O</u></b>
Other Patient Names	(0010,1001)	O
Ethnic Group	(0010,2160)	O
Patient Comments	(0010,4000)	O
Number of Patient Related Studies	(0020,1200)	O
Number of Patient Related Series	(0020,1202)	O
Number of Patient Related Instances	(0020,1204)	O
<i>All other Attributes at Patient Level</i>		O

### C.6.1.1.3 Study Level

Table C.6-2 defines the keys at the Study Information level of the Patient Root Query/Retrieve Information Model.

#### Note

- A description of the Attributes of this Information Model is contained in Section C.3 Standard Query/Retrieve Information Models of this Part.
- Although the Patient ID may not be globally unique, the Study Instance UID is globally unique ensuring that no two studies may be misidentified. **The scope of uniqueness of the Patient ID may be specified using the Issuer of Patient ID (0010,0021).**

**Table C.6-2. Study Level Keys for the Patient Root Query/Retrieve Information Model**

Attribute Name	Tag	Type
Study Date	(0008,0020)	R
Study Time	(0008,0030)	R
Accession Number	(0008,0050)	R
Study ID	(0020,0010)	R
Study Instance UID	(0020,000D)	U
Modalities in Study	(0008,0061)	O
SOP Classes in Study	(0008,0062)	O
Referring Physician's Name	(0008,0090)	O

Attribute Name	Tag	Type
Study Description	(0008,1030)	O
Procedure Code Sequence	(0008,1032)	O
>Code Value	(0008,0100)	O
>Coding Scheme Designator	(0008,0102)	O
>Coding Scheme Version	(0008,0103)	O
>Code Meaning	(0008,0104)	O
Name of Physician(s) Reading Study	(0008,1060)	O
Admitting Diagnoses Description	(0008,1080)	O
Referenced Study Sequence	(0008,1110)	O
>Referenced SOP Class UID	(0008,1150)	O
>Referenced SOP Instance UID	(0008,1155)	O
Patient's Age	(0010,1010)	O
Patient's Size	(0010,1020)	O
Patient's Weight	(0010,1030)	O
Occupation	(0010,2180)	O
Additional Patient History	(0010,21B0)	O
Other Study Numbers	(0020,1070)	O
Number of Study Related Series	(0020,1206)	O
Number of Study Related Instances	(0020,1208)	O
<i>All other Attributes at Study Level</i>		O

### C.6.2.1.2 Study Level

Table C.6-5 defines the keys at the Study Information level of the Study Root Query/Retrieve Information Model.

#### Note

1. A description of the Attributes of this Information Model is contained in Section C.3 Standard Query/Retrieve Information Models.
2. Although the Patient ID may not be globally unique, the Study Instance UID is globally unique ensuring that no two studies may be misidentified. **The scope of uniqueness of the Patient ID may be specified using the Issuer of Patient ID (0010.0021).**
3. **Previously, Other Patient IDs (0010.1000) was included in this table. This Attribute have been retired. See PS3.4 2017a.**

**Table C.6-5. Study Level Keys for the Study Root Query/Retrieve Information Model**

Attribute Name	Tag	Type
Study Date	(0008,0020)	R
Study Time	(0008,0030)	R
Accession Number	(0008,0050)	R
Patient's Name	(0010,0010)	R
Patient ID	(0010,0020)	R
Study ID	(0020,0010)	R
Study Instance UID	(0020,000D)	U

Attribute Name	Tag	Type
Modalities in Study	(0008,0061)	O
SOP Classes in Study	(0008,0062)	O
Referring Physician's Name	(0008,0090)	O
Study Description	(0008,1030)	O
Procedure Code Sequence	(0008,1032)	O
>Code Value	(0008,0100)	O
>Coding Scheme Designator	(0008,0102)	O
>Coding Scheme Version	(0008,0103)	O
>Code Meaning	(0008,0104)	O
Name of Physician(s) Reading Study	(0008,1060)	O
Admitting Diagnoses Description	(0008,1080)	O
Referenced Study Sequence	(0008,1110)	O
>Referenced SOP Class UID	(0008,1150)	O
>Referenced SOP Instance UID	(0008,1155)	O
Referenced Patient Sequence	(0008,1120)	O
>Referenced SOP Class UID	(0008,1150)	O
>Referenced SOP Instance UID	(0008,1155)	O
Issuer of Patient ID	(0010,0021)	O
Patient's Birth Date	(0010,0030)	O
Patient's Birth Time	(0010,0032)	O
Patient's Sex	(0010,0040)	O
<b>Other Patient IDs</b>	<b><del>(0010,1000)</del></b>	<b><del>O</del></b>
<b>Other Patient IDs Sequence</b>	<b><u>(0010,1002)</u></b>	<b><u>O</u></b>
Other Patient Names	(0010,1001)	O
Patient's Age	(0010,1010)	O
Patient's Size	(0010,1020)	O
Patient's Weight	(0010,1030)	O
Ethnic Group	(0010,2160)	O
Occupation	(0010,2180)	O
Additional Patient History	(0010,21B0)	O
Patient Comments	(0010,4000)	O
Other Study Numbers	(0020,1070)	O
Number of Study Related Series	(0020,1206)	O
Number of Study Related Instances	(0020,1208)	O
<i>All other Attributes at Study Level</i>		O

### Note

The use of the word "Images" rather than "Composite Object Instances" is historical, and should not be taken to mean that Composite Object Instances of other than image type are not included in the number.

## F.7.2.1.1 Modality Performed Procedure Step Subset Specification

...

**Table F.7.2-1. Modality Performed Procedure Step SOP Class N-CREATE, N-SET and Final State Attributes**

Attribute Name	Tag	Req. Type N-CREATE (SCU/SCP)	Req. Type N-SET (SCU/SCP)	Requirement Type Final State (see Note 1)
...	...	...	...	
<b>Performed Procedure Step Relationship</b>				
Scheduled Step Attribute Sequence	(0040,0270)	1/1	Not allowed	
...	...	...	...	
>Accession Number	(0008,0050)	2/2	Not allowed	
>Issuer of Accession Number Sequence	(0008,0051)	3/3	Not allowed	
>>Local Namespace Entity ID	(0040,0031)	1C/1C  Required if Universal Entity ID (0040,0032) is not present; may be present otherwise	Not allowed	
>>Universal Entity ID	(0040,0032)	1C/1C  Required if Local Namespace Entity ID (0040,0031) is not present; may be present otherwise.	Not allowed	
>>Universal Entity ID Type	(0040,0033)	1C/1C  Required if Universal Entity ID (0040,0032) is present.	Not allowed	
...	...	...	...	
Patient's Name	(0010,0010)	2/2	Not allowed	
Patient ID	(0010,0020)	2/2	Not allowed	
Issuer of Patient ID	(0010,0021)	3/3	Not allowed	
Issuer of Patient ID Qualifiers Sequence	(0010,0024)	3/3	Not allowed	
>Universal Entity ID	(0040,0032)	3/3	Not allowed	
>Universal Entity ID Type	(0040,0033)	1C/1C  Required if Universal Entity ID (0040,0032) is present.	Not allowed	
>All other Attributes of the Issuer of Patient ID Qualifiers Sequence		3/3	Not allowed	
<b><u>Other Patient IDs Sequence</u></b>	<b><u>(0010,1002)</u></b>	<b><u>3/3</u></b>	<b><u>Not allowed</u></b>	
<b><u>&gt;Patient ID</u></b>	<b><u>(0010,0020)</u></b>	<b><u>3/3</u></b>	<b><u>Not allowed</u></b>	
<b><u>&gt;Issuer of Patient ID</u></b>	<b><u>(0010,0021)</u></b>	<b><u>3/3</u></b>	<b><u>Not allowed</u></b>	
<b><u>&gt;Issuer of Patient ID Qualifiers Sequence</u></b>	<b><u>(0010,0024)</u></b>	<b><u>3/3</u></b>	<b><u>Not allowed</u></b>	
<b><u>&gt;&gt;All other Attributes of the Issuer of Patient ID Qualifiers Sequence</u></b>		<b><u>3/3</u></b>	<b><u>Not allowed</u></b>	
Patient's Birth Date	(0010,0030)	2/2	Not allowed	

Attribute Name	Tag	Req. Type N-CREATE (SCU/SCP)	Req. Type N-SET (SCU/SCP)	Requirement Type Final State (see Note 1)
...	...	...	...	
Admission ID	(0038,0010)	3/3	Not Allowed	
Issuer of Admission ID Sequence	(0038,0014)	3/3	Not allowed	
>Local Namespace Entity ID	(0040,0031)	1C/1C Required if Universal Entity ID (0040,0032) is not present; may be present otherwise	Not allowed	
>Universal Entity ID	(0040,0032)	1C/1C Required if Local Namespace Entity ID (0040,0031) is not present; may be present otherwise..	Not allowed	
>Universal Entity ID Type	(0040,0033)	1C/1C Required if Universal Entity ID (0040,0032) is present.	Not allowed	
...	...	...	...	

### F.8.2.1.1 Modality Performed Procedure Step Retrieve IOD Subset Specifications

...

**Table F.8.2-1. Modality Performed Procedure Step Retrieve SOP Class N-GET Attributes**

Attribute Name	Tag	Requirement Type (SCU/SCP)
...	...	...
<b>Performed Procedure Step Relationship</b>		
Scheduled Step Attributes Sequence	(0040,0270)	3/1
...	...	...
>Accession Number	(0008,0050)	-/2
>Issuer of Accession Number Sequence	(0008,0051)	-/3
>>Local Namespace Entity ID	(0040,0031)	-/3
>>Universal Entity ID	(0040,0032)	-/3
>>Universal Entity ID Type	(0040,0033)	-/3
...	...	...
Patient's Name	(0010,0010)	3/2
Patient ID	(0010,0020)	3/2
Issuer of Patient ID	(0010,0021)	3/3
Issuer of Patient ID Qualifiers Sequence	(0010,0024)	3/3
>Universal Entity ID	(0040,0032)	3/3
>Universal Entity ID Type	(0040,0033)	1C/1C Required if Universal Entity ID (0040,0032) is present.

Attribute Name	Tag	Requirement Type (SCU/SCP)
>All other Attributes of the Issuer of Patient ID Qualifiers Sequence		3/3
<b>Other Patient IDs Sequence</b>	<b>(0010,1002)</b>	<b>3/3</b>
>Patient ID	<b>(0010,0020)</b>	<b>3/3</b>
>Issuer of Patient ID	<b>(0010,0021)</b>	<b>3/3</b>
>Issuer of Patient ID Qualifiers Sequence	<b>(0010,0024)</b>	<b>3/3</b>
>>All other Attributes of the Issuer of Patient ID Qualifiers Sequence		<b>3/3</b>
Patient's Birth Date	(0010,0032)	3/2
...	...	...
Admission ID	(0038,0010)	3/3
Issuer of Admission ID Sequence	(0038,0014)	3/3
>Local Namespace Entity ID	(0040,0031)	-/3
>Universal Entity ID	(0040,0032)	-/3
>Universal Entity ID Type	(0040,0033)	-/3
...	...	...

## K.6.1.2.2 Modality Worklist Attributes

...

**Table K.6-1. Attributes for the Modality Worklist Information Model**

Description / Module	Tag	Matching Key Type	Return Key Type	Remark / Matching Type
...				
<b>Imaging Service Request</b>				
Accession Number	(0008,0050)	O	2	
<b>Issuer of Accession Number Sequence</b>	<b>(0008,0051)</b>	<b>O</b>	<b>3</b>	
...	...	...	...	
All other Attributes of the PS3.3 Section C.4.12 "Imaging Service Request Module"		O	3	
<b>Visit Identification</b>				
Admission ID	(0038,0010)	O	2	
<b>Issuer of Admission ID Sequence</b>	<b>(0038,0014)</b>	<b>O</b>	<b>3</b>	
All other Attributes of the PS3.3 Section C.3.2 "Visit Identification Module"		O	3	
<b>Patient Identification</b>				
Patient's Name	(0010,0010)	R	1	Patient Name shall be retrieved with Single Value Matching or Wild Card Matching.
Patient ID	(0010,0020)	R	1	Patient ID shall be retrieved with Single Value Matching.
<b>Issuer of Patient ID</b>	<b>(0010,0021)</b>	<b>O</b>	<b>3</b>	

Description / Module	Tag	Matching Key Type	Return Key Type	Remark / Matching Type
<b>Issuer of Patient ID Qualifiers Sequence</b>	<b>(0010.0024)</b>	<b>Q</b>	<b>3</b>	
<b>Other Patient IDs Sequence</b>	<b>(0010.1002)</b>	<b>Q</b>	<b>3</b>	
<i>All other Attributes of the PS3.3 Section C.2.2 "Patient Identification Module"</i>		O	3	
...				

## P.2.2.1 Action Information

**Table P.2-2. Procedural Event Logging Action Information**

Action Type Name	Action Type ID	Attribute Name	Tag	Requirement Type SCU/SCP
Record Procedural Event	1	Specific Character Set	(0008,0005)	1C/1C  (Required if an extended or replacement character set is used)
		Patient ID	(0010,0020)	2/2
		Study Instance UID	(0020,000D)	2/2
		...	...	...

### P.2.2.1.1 Study Matching Attributes

The SCU may provide Patient ID (0010,0020), Study Instance UID (0020,000D), Study ID (0020,0010), and/or Performed Location (0040,0243) Attributes to allow the SCP to match the N-ACTION with a Study for which a procedure log is being created.

## P.2.2.5 Action Reply

With any response status indicating Success or Warning, the identifiers of the study into which the event has been logged shall be returned in the N-ACTION-RSP Action Reply as specified in Table P.2-4.

**Table P.2-4. Procedural Event Logging Action Reply**

Action Type Name	Action Type ID	Attribute Name	Tag	Requirement Type SCU/SCP
Record Procedural Event	1	Study Instance UID	(0020,000D)	3/1
		Patient ID	(0010,0020)	3/1

## P.3.2.1 Substance Administration Log Action Information

**Table P.3-2. Substance Administration Logging N-ACTION Information**

Action Type Name	Action Type ID	Attribute Name	Tag	Requirement Type SCU/SCP
Record Substance Administration Event	1	Specific Character Set	(0008,0005)	1C/1C  (Required if an extended or replacement character set is used)
		Patient ID	(0010,0020)	1C/1C  Either or both Patient ID and Admission ID shall be supplied by the SCU; the SCP shall support the Attribute if supplied
		Issuer of Patient ID	(0010,0021)	3/2
		Patient's Name	(0010,0010)	2/2
		Admission ID	(0038,0010)	1C/1C  Either or both Patient ID and Admission ID shall be supplied by the SCU; the SCP shall support the Attribute if supplied
		Issuer of Admission ID	(0038,0011)	3/2
		...	...	...

**Q.4.3.1.2 Relevant Patient Information Attributes**

...

**Table Q.4-1. Attributes for the Relevant Patient Information Model**

Description / Module	Tag	Matching Key Type	Return Key Type	Remark / Matching Type
<b>Patient</b>				
Patient's Name	(0010,0010)	-	1	
Patient ID	(0010,0020)	R	1	Shall be present in the Request Identifier.  Shall be retrieved with Single Value Matching.  <b>Note</b>  Since only one response is expected, this is a unique key.
Issuer of Patient ID	(0010,0021)	R	2	Shall be retrieved with Single Value Matching.  In situations where there are multiple issuers, this key constrains matching of Patient ID (0010,0020) to a domain in which the Patient ID (0010,0020) is unique.
Patient's Birth Date	(0010,0030)	-	2	
Patient's Sex	(0010,0040)	-	2	
All other Attributes of the Section C.2.2 "Patient Identification Module"		-	3	
...				



## V.6.2.2.2 Substance Approval Query Attributes

**Table V.6-2. Attributes for the Substance Approval Query Information Model**

Description / Module	Tag	Matching Key Type	Return Key Type	Remark/Matching Type
<b>Patient</b>				
Patient's Name	(0010,0010)	O	2	
Patient ID	(0010,0020)	R	1	Shall be retrieved with Single Value Matching only.  One or both of Patient ID (0010,0020) and Admission ID (0038,0010) shall be present as a Matching Key in the Query
Issuer of Patient ID	(0010,0021)	O	2	
Issuer of Patient ID Qualifiers Sequence	(0010,0024)	O	3	
>All Attributes of the Issuer of Patient ID Qualifiers Sequence		O	3	
Patient's Birth Date	(0010,0030)	-	2	
Patient's Sex	(0010,0040)	-	2	
<b>Visit</b>				
Admission ID	(0038,0010)	R	2	Shall be retrieved with Single Value Matching only.  One or both of Patient ID (0010,0020) and Admission ID (0038,0010) shall be present as a Matching Key in the Query
Issuer of Admission ID Sequence	(0038,0014)	O	3	
>Local Namespace Entity ID	(0040,0031)	O	1C	Required if Universal Entity ID (0040,0032) is not present; may be present otherwise
>Universal Entity ID	(0040,0032)	O	1C	Required if Local Namespace Entity ID (0040,0031) is not present; may be present otherwise.
>Universal Entity ID Type	(0040,0033)	O	1C	Required if Universal Entity ID (0040,0032) is present.
...				

One or both of Patient ID (0010,0020) and Admission ID (0038,0010) shall be present as a Matching Key in the Query.

## CC.2.5.1.2 UPS Macros

Table CC.2.5-2d. HL7V2 Hierarchic Designator Macro

Attribute Name	Tag	Req. Type N-CREATE (SCU/SCP)	Req. Type N-SET (SCU/SCP)	Final State	Req. Type N-GET (SCU/SCP)	Match Key Type	Return Key Type	Remark/Matching Type
Local Namespace Entity ID	(0040,0031)	1C/1	Not Allowed		-/1	*	1C	Creation required if Universal Entity ID (0040,0032) is not present; may be present otherwise.  Return Key required if set.
Universal Entity ID	(0040,0032)	1C/1	Not Allowed		-/1	*	1C	Creation required if Local Namespace Entity ID (0040,0031) is not present; may be present otherwise.  Return Key required if set.
Universal Entity ID Type	(0040,0033)	1C/1	Not Allowed		-/1	*	1C	Creation required if Universal Entity ID (0040,0032) is present.  Return Key required if set.
Local Namespace Entity ID	(0040,0031)	1C/1	Not Allowed		-/1	*	1C	Creation required if Universal Entity ID (0040,0032) is not present; may be present otherwise.  Return Key required if set.

Table CC.2.5-2e. Issuer of Patient ID Macro

Attribute Name	Tag	Req. Type N-CREATE (SCU/SCP)	Req. Type N-SET (SCU/SCP)	Final State	Req. Type N-GET (SCU/SCP)	Match Key Type	Return Key Type	Remark/Matching Type
Issuer of Patient ID	(0010,0021)	2/2	Not allowed	O	3/2	R	2	
Issuer of Patient ID Qualifiers Sequence	(0010,0024)	2/2	Not allowed	O	3/2	O	2	
>Universal Entity ID	(0040,0032)	2/2	Not allowed	O	3/2	O	2	
>Universal Entity ID Type	(0040,0033)	1C/1	Not allowed	O	3/2	O	1C	Required if Universal Entity ID (0040,0032) is present in this item with a value.
>Identifier Type Code	(0040,0035)	2/2	Not allowed	O	3/2	O	2	
>Assigning Facility Sequence	(0040,0036)	2/2	Not allowed	O	3/2	O	2	The Attributes of the Assigning Facility Sequence shall only be retrieved with Sequence Matching.
<i>&gt;&gt;Include Table CC.2.5-2d "HL7V2 Hierarchic Designator Macro"</i>								
>Assigning Jurisdiction Code Sequence	(0040,0039)	2/2	Not allowed	O	3/2	O	2	The Attributes of the Assigning Jurisdiction Code Sequence shall only be retrieved with Sequence Matching.
<i>&gt;&gt;Include Table CC.2.5-2a "UPS Code Sequence Macro"</i>								<i>Baseline CID 5001 for country codes.</i>

Attribute Name	Tag	Req. Type N-CREATE (SCU/SCP)	Req. Type N-SET (SCU/SCP)	Final State	Req. Type N-GET (SCU/SCP)	Match Key Type	Return Key Type	Remark/Matching Type
>Assigning Agency or Department Code Sequence	(0040,003A)	2/2	Not allowed	O	3/2	O	2	The Attributes of the Assigning Agency or Department Code Sequence shall only be retrieved with Sequence Matching.
>>Include Table CC.2.5-2a "UPS Code Sequence Macro"								No Baseline CID.

### CC.2.5.1.3 UPS Attribute Service Requirements

...

**Table CC.2.5-3. UPS SOP Class N-CREATE/N-SET/N-GET/C-FIND Attributes**

Attribute Name	Tag	Req. Type N-CREATE (SCU/SCP)	Req. Type N-SET (SCU/SCP)	Final State	Req. Type N-GET (SCU/SCP)	Match Key Type	Return Key Type	Remark/Matching Type
...	...	...	...	...	...	...	...	...
<b>Unified Procedure Step Relationship Module</b>								
Patient's Name	(0010,0010)	2/2	Not allowed	O	3/2	R	2	
Patient ID	(0010,0020)	1C/2	Not allowed	O	3/2	R	2	Required if the subject of the workitem requires identification or if the workitem is expected to result in the creation of objects that identify the subject.  See PS3.3 Section C.30.4.1
<i>Include Table CC.2.5-2e "Issuer of Patient ID Macro"</i>								
Other Patient IDs Sequence	(0010,1002)	2/2	3/3	O	3/2	O	2	
>Patient ID	(0010,0020)	1/1	1/1	O	-1	O	1	
<i>Include Table CC.2.5-2e "Issuer of Patient ID Macro"</i>								
Patient's Birth Date	(0010,0030)	2/2	Not allowed	O	3/2	R	2	
...	...	...	...	...	...	...	...	
Admission ID	(0038,0010)	2/2	Not allowed	O	3/2	R	2	
Issuer of Admission ID Sequence	(0038,0014)	2/2	Not allowed	O	3/2	R	2	
<i>&gt;Include Table CC.2.5-2d "HL7V2 Hierarchic Designator Macro"</i>								
...	...	...	...	...	...	...	...	
Referenced Request Sequence	(0040,A370)	2/2	Not allowed	O	3/2	R	2	Could be "changed" while SCHEDULED by canceling and re-creating with the "correct" values.

Attribute Name	Tag	Req. Type N-CREATE (SCU/SCP)	Req. Type N-SET (SCU/SCP)	Final State	Req. Type N-GET (SCU/SCP)	Match Key Type	Return Key Type	Remark/Matching Type
>Study Instance UID	(0020,000D)	1/1	Not allowed	O	-/1	O	1	
>Accession Number	(0008,0050)	2/2	Not allowed	O	-/2	R	2	
>Issuer of Accession Number Sequence	(0008,0051)	2/2	Not allowed	O	-/2	R	2	The Issuer of Accession Number Sequence shall only be retrieved with Sequence Matching.
<i>&gt;&gt;Include Table CC.2.5-2d "HL7V2 Hierarchic Designator Macro"</i>								
...	...	...	...	...	...	...	...	...

### DD.3.2.1.1 Attributes

The Attribute list of the N-CREATE and N-SET for the RT Conventional Machine Verification SOP Class is shown in Table DD.3.2.1-1. See Section 5.4 for usage notation.

**Table DD.3.2.1-1. N-CREATE and N-SET Attribute List - RT Conventional Machine Verification SOP Class**

Attribute Name	Tag	N-CREATE Usage SCU/SCP	N-SET Usage SCU/SCP
<b>RT General Machine Verification Module</b>			
...	...	...	...
Patient ID	(0010,0020)	1/1	Not allowed
<i>Include Table CC.2.5-2e "Issuer of Patient ID Macro"</i>			
...	...	...	...
<i>All other Attributes of the PS3.3 Section C.31.1 "RT General Machine Verification Module"</i>	-	-/-	3/3

...

**Table DD.3.2.1-2. N-CREATE and N-SET Attribute List - RT Ion Machine Verification SOP Class**

Attribute Name	Tag	N-CREATE Usage SCU/SCP	N-SET Usage SCU/SCP
<b>RT General Machine Verification Module</b>			
...	...	...	...
Patient ID	(0010,0020)	1/1	Not allowed
<i>Include Table CC.2.5-2e "Issuer of Patient ID Macro"</i>			
...	...	...	...
<i>All other Attributes of the PS3.3 Section C.31.1 "RT General Machine Verification Module"</i>	-	-/-	3/3

### DD.3.2.2.2 Attributes

...

**Table DD.3.2.2.2-1. N-GET Attribute List- RT Conventional Machine Verification SOP Class and RT Ion Machine Verification SOP Class**

Attribute Name	Tag	Usage SCU/SCP
...	...	...
Patient ID	(0010,0020)	-/1
<i>Include Table CC.2.5-2e "Issuer of Patient ID Macro"</i>		
...	...	...
All other Attributes	-	3/2

Amend DICOM PS3.6 as follows (changes to existing text are bold and underlined for additions and ~~struckthrough~~ for removals):

## 6 Registry of DICOM Data Elements

**Table 6-1. Registry of DICOM Data Elements**

Tag	Name	Keyword	VR	VM	
<i>(0010,1000)</i>	<i>Other Patient IDs</i>	<i>OtherPatientIDs</i>	<i>LO</i>	<i>1-n</i>	<b><u>RET</u></b>
<i>(0010,1090)</i>	<i>Medical Record Locator</i>	<i>MedicalRecordLocator</i>	<i>LO</i>	<i>1</i>	<b><u>RET</u></b>