

Digital Imaging and Communications in Medicine (DICOM)

Supplement 233

Patient Model Gender Enhancements

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Open Issues

5	<p>Can gender be required capability on Part 18 search? Should the resulting non-conforming past implementations be accepted? New actor created? Make it optional and deal with it by conformance claim? How would this search response payload?</p> <p>Note: It must remain optional for MWL and UPS to avoid unacceptable backwards compatibility issues. The conformance claim may be updated to inform users about the gender related capabilities.</p> <p>Proposal: Do not change Part 18 requirements. The new fields are all optional. Part 4 changes determine the Part 18 behavior, so Part 18 need not change.</p>
8	<p>How should the comments on sex and gender attributes relate to the existing DICOM comments?</p> <p>Comments on the Scheduled Procedure Step (0040,0400) is explicitly indicated as something to be displayed to the operator.</p> <p>Requested Procedure Comments (0040,1400) is not so indicated.</p> <p>Proposal: No changes are proposed beyond the inclusion of the comment attributes in the Patient Study Module.</p>
31	<p>Do any sex/gender based analytic results, e.g., BSA, need revision to the related TID?</p> <p>Proposal: TID 1007 Patient Context includes patient sex DCID 7455 and DCID 7455 has been updated. Are there any other changes needed? (Also, the attributes from Patient Study Module are part of the report IODs.)</p>
32	<p>Should DICOM try to capture reasons like “refused to answer” as distinct from missing with no reason provided? HL7 is using the various different kinds of missing and unknown as a coding for some of the sex and gender terms. Would this difference be important for an operator working from the Modality Worklist information? Would this information in the image SOP be relevant to a radiologist making a report?</p> <p>Proposal: The current text proposes these attributes as Type 3, so they may be missing, and missing does not convey any meaning regarding why they are missing.</p>
33	<p>Does the CDA template work in HL7 result in any changes that are appropriate to DICOM TIDs?</p> <p>Proposal: It appears that no changes will be needed. If subsequent analysis indicate that a change is needed, a separate CP will be used.</p>
37	<p>A mix of upgraded and non-upgraded systems may result in a scenario in which one system, does not recognize sex attributes of the other. Priors are likely generated by non-upgraded systems. Search reliability may be negatively impacted when there is discrepant information (patient situation change, attributes within records have changed).</p> <p>How is this handled? Is there a need for DICOM changes to address this issue?</p> <p>Proposal: The new attributes are Type 3, and the Type 3 rules are sufficient cover this.</p>
41	<p>Are there updates that should be considered for the DICOM Attribute Confidentiality constraint on patient data (0040,3001) to support local confidentiality approaches that may be applied to transgender and similar demographics changes?</p> <p>Proposal: No. The confidentiality behavior for Patient Sex (0010,0040) is being used for all</p>

	the new attributes.
42	<p>Should "name to use" be PN or LT VR? A patient may want to be referred to as "Anton Corbijn". DICOM PN does not specify which elements or subsets should be used for the name to use. Anton Corbijn's full name has the first name "Anton Johannes Gerrit" and the family name "Corbijn van Willenswaard". The desired name "Anton Corbijn" is not conveyed by the PN datatype. It is a subset of the first name plus a subset of the family name.</p> <p>In HL7 v2.8 the extended XPN had the 15th element "Called by" added as a text string element to convey this kind of name. FHIR uses a structure that is similar to XPN, so that both the text string form and the individual name components can be conveyed. HL7 v2.7 and earlier do not have the text string element. See HL7 v2.9 section 2A.3.90.15 Called By (ST) for more details.</p> <p>Proposal: LT is chosen because PN does not specify which elements should be included, nor does it specify the order, and HL7v2.x and FHIR have both chosen to use a text string.</p>
46	<p>Should the concept group CIDxxx1 Person Gender used in Gender Identity Code Sequence (0010,xxx4) be referenced as BCID or DCID?</p> <p>Proposal: Use DCID</p> <p>The baseline set of gender codes is very short and will be extended for local gender categories by local jurisdictions. There will not be a single international coding system that covers all the local details. There will be legal or administrative requirements on the terminology imposed by some jurisdictions.</p> <p>With a BCID there is no assurance that even a minimal set of codes will be internationally interoperable. Jurisdictions could choose some other coding system, i.e., not SNOMED, and require the use of that system.</p> <p>With a DCID most jurisdictions are likely to accept "Identifies as female gender" or "Identifies as male gender" as acceptable for local purposes. Some may accept "Identifies as nonbinary gender". Other local genders will be defined locally.</p> <p>For example, the USCDI has chosen to add two concepts specified in ONC's USCDI v2 Applicable Vocabulary Standards for Gender Identity:</p> <p style="padding-left: 40px;">Female-to-Male (FTM)/Transgender Male/Trans Man (SNOMED CT 407377005) Male-to-Female (MTF)/Transgender Female/Trans Woman (SNOMED CT 407376001)</p> <p>The USCDI also includes the three concepts that are part of CIDxxx1 Person Gender Identity. Canada and Australia have also identified additional gender identities for use in those countries.</p>
47	<p>The desired behavior for C-FIND is that if the SCP supports one of the new optional top level attributes for query, that the full contents of the items in that sequence be returned as part of the matching keys.</p> <p>"Required if present". How to state this clearly?</p>
48	<p>Should the Confidentiality for is Gender Identity clinically relevant or should it be removed in Retain Patient Characteristics.</p>

Closed Issues

1	<p>Should the conformance statement describe how sex/gender attributes are managed? Yes, in terms of any applicable configuration support, but not in terms of imposing any policy choices.</p>
2	<p>Duplicate of 26</p>
3	<p>Should we add a gender CID into TID 1007 Subject Context, Patient? It has subject sex; does it also need a subject gender? We need to fix a conflict between description and CID.</p> <p>The gender harmony model includes a partial list of gender identities proposed in various jurisdictions. It is unlikely that there will be a unified single list with internationally agreed definitions. It is likely that for some jurisdictions there will be recommended lists of gender identities.</p> <p>Note: a gender CID has been created for the Patient's Gender (0010,xxxx). The TID can reference that. The issue with many local extensions should be a note on the CID to warn implementers to expect local extensions.</p> <p>Add a gender to TID 1007</p>
4	<p>What should be done about CID 7457?</p> <p>NO changes.</p> <p>This is for small animals and groups of small animals where gender is not an issue. The current sex attributes are sufficient. See also comment 23.</p>
6	<p>Are there any SOP classes that deserve creating a new SOP class where the new attributes are type 2?</p> <p>NO. The new attributes are type 3 for all existing SOP classes.</p>
7	<p>How should HL7 FHIR codes be handled?</p> <p>The proposal is</p> <ol style="list-style-type: none"> 1. Use the minimum interoperable list from HL7 Implementation Guide as the basis for creating CIDs to the extent possible. 2. Where this is not possible, invent something specific for DICOM. <p>Some of attributes, such as Patient's Gender (0010,xxxx) will have significant local extensions based on national and local policies.</p> <p>See also issue 30 about how to encode HL7 codes</p> <p>Write a separate CP (done)</p> <p>WG-06 March 2023: Create DICOM Codes. There are problems with the HL7 Coding method, and these are well beyond the scope of the Sex and Gender supplement to resolve. For now, rather than force the HL7 coding system issues to be resolved before we resolve Sup 233, create DICOM codes.</p>
9	<p>Should Patient Comments (0010,4000) be moved from C.7.1.1.1 Patient Module to C.7.2.2 Patient Study Module?</p>

	<p>NO, never move existing attributes. But new attributes can be created in other modules. These may vary from study to study because they may reflect temporary, transient, or changed characteristics of the patient. That would make it more appropriate for comments on patient sex and gender that reflect changes.</p>
10	<p>What new attributes should be created to capture more specific sub-sets of genotypic and phenotypic parameters? Is this captured in an updated TID 1007? Should this be part of a later CP?</p> <p>No new attributes. Proper diagnosis is much more than just adding diagnostic codes. This is not a problem for DICOM to solve. The comments and references can provide specific extra information needed by the operator and staff. If links to other medical records are appropriate, they can be included there.</p>
11	<p>How should the present models in open literature, implementations, etc. be reflected into DICOM Standard?</p> <p>Copy bibliography in from HL7? Copy or reference various background information on HL7 Gender project site? (This stuff gets re-organized occasionally because it is a working group area, not a part of the standard that is subject to change control. Can we use DOI or something like it for more permanent references? Ask HL7 project team.)</p> <p>Response: Put bibliography into Part 17 Annex for reviewers, and then remove. Reviewers should consider the implication of this over time. This bibliography will gradually become out of date and need either regular updates or removal.</p>
12	<p>Do we provide instructions on what algorithm to pick for selecting sex or gender when the other is missing? What about other sex related instructions?</p> <p>NO. It's not DICOM's responsibility or core competence.</p>
13	<p>Based on HL7 Implementation Guide ballot resolutions the DICOM module will not include the Recorded Sex and Gender (RSG) attributes.</p> <p>The RSG attributes are useful for some patient related administrative activities, but not for ordering or other imaging related activities. They are useful for:</p> <ol style="list-style-type: none"> 1. Patient Identity confirmation 2. Billing activities 3. Patient reconciliation 4. Legal actions <p>If a need emerges for RSG attributes they can be added later by a CP.</p>
16	<p>All Supplements that are in progress need to be updated somehow. This is not a comment issue. It's a TODO if there are any.</p>
14	<p>Is this a supplement or a CP? <wg-06 question, November 2019 meeting> <revised August 2022></p> <p>Supplement 233</p>
18	<p>Should we update Part 16 TID 1007, CID 7455 (which is mostly diagnostic codes and non-extensible) and/or CID 7457 (which is M, F, and extensible) ?</p> <p>Proposal: The SPCU codes were added to CID 7455. CID 7457 is for animals and is not modified.</p>

19	<p>Include both sex and gender, in both image IODs and workflow IODs?</p> <p>YES. The Harmonized model is incorporated in Patient Modules and any IOD that incorporates these is affected.</p>
21	<p>The new attributes are proposed as type 3 so that they do not trigger creation of new SOP classes. They are a better fit to type 2 if the concept “attempted but failed to get a value” needs to be encoded. Is there a way to finesse this issue? Is it a problem if that concept cannot be encoded? Should a code value for this be added to the definition?</p> <p>Leave them type 3.</p>
22	<p>Should PS 3.2 Conformance be changed?</p> <p>For example, Australia privacy regulations require a statement with justification for maintaining sex information in records. Will this be part of a conformance statement from DICOM, or put somewhere else by the vendor?</p> <p>Should this be covered by having a section in the DCS for other regulations that are also complied with, e.g., GDPR, DIN, and UL? Should this be part of Supplement 209? These privacy regulation responses could go in such a section.</p> <p>Will Conformance provide justification etc.: NO, not required by DICOM (Tracking all the different laws and their changes is not practical or reasonable.)</p> <p>Will conformance describe capability? MAYBE, up to the vendor</p>
23.	<p>Gender and other sexes for animals is not prohibited and not specifically addressed. Should this be addressed? (e.g., should freemartin be added to CID 7457?)</p> <p>No. As coded values the veterinary users can extend locally, or add coded values to SNOMED, or as DICOM codes. This is a separate issue and can be dealt with by CP if necessary.</p>
24	<p>How should pronoun usage be addressed in this Supplement?</p> <p>Only English pronoun usage is addressed in this Supplement. Pronoun usage issues are reasonably well understood for English, but not for other languages that use sex identifying pronouns. Some languages, e.g., Mandarin and Cantonese, do not traditionally use such pronouns, so it is a non-issue for them. Other languages have complex conjugation, declination, and other grammatical rules that apply to pronouns.</p> <p>This could be addressed in a separate CP.</p> <p>One use case for providing pronouns is so that they can be used in patient instructions, comments, and related discussions. The acquired images and structured reports are much less likely to include pronouns, but they need the capability.</p>
25	<p>What should be done about Sex at Birth? See also issue 13.</p> <p>USE SPCU validity dates. HL7 is recommending use of SPCU with an Effective Start Time (0010,xxx6) at birth, and possibly a second SPCU with a later Effective Start Time (0010,xxx6).</p>
26	<p>What VR should be used for Patient’s Gender (0010,xxx1)?</p> <p>The Patient’s Gender Identity (0010,xxx1) is encoded as a coded value. There is only a minimal set of coded values defined by SNOMED and HL7.</p> <p>There are many locally defined terms that are appropriate for gender identities. These may be official designations, local designations, or personal designations. These will be handled the same way other code system extensions are handled.</p>
27	<p>Can we duplicate Patient Comments into Patient Study Module? NO</p> <p>There are other examples of the same attribute being present at the top level in multiple</p>

	modules. In those cases the disambiguation of intent is either not needed or obvious. Can with do that with these comments? Can or should we do that for other attributes?
28	<p>Are there problems with the same attribute in the Patient Module having different values in different studies? (Like Patient Weight, Patient Gender is subject to change.) This can be resolved by putting all the gender attributes in the Patient Study Module. Is that a problem?</p> <p>Ans: All the attributes that are allowed to change between studies have been put into the Patient Study Module. C-FIND queries will need to adapt to this.</p>
29	<p>What should we do about Patient Sex (0010,0008)?</p> <p>Answer: HL7 is leaving it very ambiguously defined and noting that the definition is basically up to the local policy of the system creating the value. New value sets and codes with better definitions are used in the new attributes. DICOM usually takes the value from a hospital administrative system, so the same ambiguities will remain.</p>
30	<p>How will DICOM refer to codes defined in FHIR? This is a question for both WG-06 and WG-20 to decide whether this is a suitable encoding and will function appropriately.</p> <p>See new CP, issue 7 (closed)</p>
34	<p>Technologist may be in a position to observe a discrepancy between the current medical record and "observed" information. Where and how is this communicated to other actors? Where and how is reconciliation performed?</p> <p>Considerations include:</p> <ul style="list-style-type: none"> - Authoritative sources of observations - Official systems of record - See also IHE (Integrating the Healthcare Enterprise) Scheduled Workflow 34.4.2.2 Use Case #2: Patient Update in which upstream systems (ADT / RIS) perform a patient update or merge. <p>Answer: This is outside the scope of DICOM. It belongs to IHE or some other organization.</p>
35	<p>What imaging activities are affected by a discrepant observation, and how should those be handled prior to reconciliation (e.g. protocol selection, post processing, report content)?</p> <p>Answer: No longer relevant with balloted HL7 implementation guide.</p>
36	<p>In the cross-community scenario:</p> <ol style="list-style-type: none"> 1. How to manage the case if one jurisdiction does not recognize the sex/gender attributes of another? 2. What impact will the patient name change have on the Master Patient Index weighting of search results? 3. Is this likely to require a manual merge of records? (see IHE ITI-30) <p>Answer: This is outside the scope of DICOM. It belongs to IHE or some other organization.</p>
38	<p>How does the workflow change in an encounter-based activity? Consider direct in-person clinical care vs tele health? Does this result in changes to DICOM or the DICOM-HL7 mappings?</p> <p>Proposal: This is not affected by Sex and Gender model, and thus need not be answered.</p>

39	<p>How to deal with the non-communicative patient? Does this affect DICOM? (This could introduce the HL7 notion of null flavors.)</p> <p>Answer: The new attributes are all Type 3, and the existing Type 3 rules apply.</p>
40	<p>Some machine-based algorithms are tuned based on patient age and sex at birth for the application of established reference values. How should sex at birth be handled?</p> <p>Answer: The HL7 recommendation for sex at birth is to employ valid period of SPCU, and that is the proposal for DICOM. (Note: this is for situations where sex at birth is clinically relevant. It is not for administrative uses.)</p>
43	<p>In this HL7 Implementation Guide Use Case, a single ADT message is created to communicate the patient name change. Is the order of the repeating elements in PID-5 significant? Should there be one ADT message or two (i.e. one message to communicate the new name, a second message to flag the old name as "NOUSE")?</p> <p>Answer: This issue is related to the DICOM example in the HL7 Implementation Guide, and does not affect the DICOM standard or this supplement.</p>
44	<p>To what degree should the DICOM Patient Study support all the attributes and elements of the logical model? I.e., multiple historical values with dates for the various concepts.</p> <p>Answer: The RSG attribute is not proposed. The other attributes are included in the Patient Study Module and all of their elements and sub-attributes defined. All are optional.</p>
45	<p>Should we require an SPCU code (0010,xxx9) be present? Should this be optional in the sequence item?</p> <p>The proposed structure deals with the issue of unknown SPCU (and all the related null flavors) by</p> <ol style="list-style-type: none"> 1. Defining only codes for known describable SPCUs, and 2. Requiring a comment or URI reference for patients with no SPCU code. (Comment and URI references are also permitted when an SPCU code is present.)

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4

Scope and Field

5 This supplement extends DICOM to add and harmonize with the HL7 Gender Harmony logical model and
6 be consistent with the HL7 normative changes. This facilitates communication between DICOM and the
7 various HL7 systems. This adds gender, sex, and related fields and resolves problems with the
8 oversimplified single M/F coding. The supplement:

- 9 ▪ Updates Patient Sex (0010,0040) description to match the HL-7 updated definition.
- 10 ▪ Adds optional attributes to the Patient Study Module and to various C-FIND services. These
11 optional attributes match those in the HL7 logical model.
- 12 ▪ These optional attributes are defined starting with the definitions from FHIR and the HL7
13 Implementation Guide. There are also informative references to FHIR and the
14 Implementation Guide.
- 15 ▪ Update codes in CID for Sex and adds CIDS for gender identity, pronouns, sex parameters for
16 clinical use. The external codes in these CIDs are the same codes used in HL7 v2, CDA, and

17 FHIR. New codes are defined by DICOM to avoid some issues with referencing FHIR value set
18 values directly.

19 The supplement also provides examples of use of the optional attributes, and examples of some of the
20 workflow and implementation considerations. These are accompanied by links to the related portions of
21 HL7 v2, CDA, and FHIR published standards for examples.

22 The HL7 Gender Harmony Project's logical model
23 (https://confluence.hl7.org/download/attachments/91996069/HL7_GENDER_R1_I1_2021JAN.pdf)
24 describes the information needed in an electronic record to support proper care for gender and sex
25 diverse patients. This includes both clinical information and social information. Further explanatory
26 information can be found in the article "*Gender harmony: improved standards to support affirmative care
27 of gender-marginalized people through inclusive gender and sex representation*" in Journal of the
28 American Medical Informatics Association (JAMIA) (<https://doi.org/10.1093/jamia/ocab196>).

29 HL7 has published and balloted an Implementation Guide that applies to HL7v2, CDA, and FHIR. Each
30 of those standards uses different formats and encodings.

- 31 ■ HL7v2 adds segments, clarifies some existing elements like PID-8, and refers to the
32 Implementation Guide in normative sections (see
33 https://www.hl7.org/implement/standards/product_brief.cfm?product_id=516).
- 34 ■ CDA adds attributes, elements, and templates, clarifies some existing attributes, and refers to the
35 Implementation Guide in normative sections (see
36 https://www.hl7.org/implement/standards/product_brief.cfm?product_id=633).
- 37 ■ FHIR adds attributes, elements, codes, and extensions, clarifies some existing attributes, and
38 refers to the Implementation Guide in normative sections (see [https://hl7.org/xprod/ig/uv/gender-](https://hl7.org/xprod/ig/uv/gender-harmony/informative1/)
39 [harmony/informative1/](https://hl7.org/xprod/ig/uv/gender-harmony/informative1/)).

Commented [RH1]: This goes away for letter ballot

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Part 3

42

Update Part 3, Table C.2-3. Patient Demographic Module Attributes

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C.2.3 Patient Demographic Module

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Table C.2-3 defines the Attributes relevant to generally describing a Patient at a specific point in time,
45 e.g., at the time of admission.

46

Table C.2-3. Patient Demographic Module Attributes

Attribute Name	Tag	Attribute Description
Patient's Sex	(0010,0040)	Sex of the named Patient. Enumerated Values: M male F female O other

<u>Gender Identity Sequence</u>	<u>(0010,xxx)</u>	<u>An individual's personal sense of being a man, woman, boy, girl, nonbinary, or something else, ascertained by asking them what their identity is.</u> <u>One or more items are permitted in this Sequence.</u>
<u>>Gender Code Sequence</u>	<u>(0010,xxx4)</u>	<u>A coded gender identity.</u> <u>See also section C.7.2.2.1.x</u> <u>Only a single item shall be included in this Sequence.</u>
<u>>>Include Table 8.8-1 "Code Sequence Macro Attributes"</u>		<u>DCID CIDxxx1 Person Gender</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>The time at which the content of this sequence item begins to be applicable.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>The time at which the content of this sequence item ceases to be applicable.</u>
<u>>Gender Comment</u>	<u>(0010,xxx8)</u>	<u>Comments on this gender identity, such as the context in which it should be used.</u>
<u>Sex Parameters for Clinical Use Sequence</u>	<u>(0010,xxx2)</u>	<u>Guidance on how to apply settings or reference ranges that are derived from observable information such as an organ inventory, recent hormone lab tests, genetic testing, menstrual status, obstetric history, etc.</u> <u>See also section C.7.2.2.1.x2</u> <u>One or more items are permitted in this Sequence.</u>
<u>>SPCU Code Sequence</u>	<u>(0010,xxx9)</u>	<u>A coded SPCU.</u> <u>Only a single item shall be included in this Sequence.</u>
<u>>>Include Table 8.8-1 "Code Sequence Macro Attributes"</u>		<u>DCID CIDxxx2 Sex Parameters for Clinical Use</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>The time at which the content of this sequence item begins to be applicable.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>The time at which the content of this sequence item ceases to be applicable.</u>
<u>>SPCU Comment</u>	<u>(0010,xxx1)</u>	<u>Further description of clinical implications and reasons for the selected code.</u>
<u>>SPCU Reference</u>	<u>(0010,xx10)</u>	<u>Reference to a resource that explains or extends the SPCU Category code.</u>
<u>Person Names to Use Sequence</u>	<u>(0010,xxx3)</u>	<u>The name(s) that should be used when addressing or referencing the person.</u> <u>One or more items are permitted in this Sequence.</u>

<u>>Name to use</u>	<u>(0010,xx12)</u>	<u>A name that should be used when addressing or referencing the person</u> <u>This need not be an official name nor comply with any particular name structure.</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>The time at which the content of this sequence item begins to be applicable.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>The time at which the content of this sequence item ceases to be applicable.</u>
<u>>Name to Use Comment</u>	<u>(0010,xx13)</u>	<u>Further explanation of appropriate name usage</u>
<u>Third person pronoun Sequence</u>	<u>(0010,xx21)</u>	<u>Pronoun(s) specified by the patient to use when referring to the patient in speech, in clinical notes, and in written instructions to caregivers</u> <u>One or more items are permitted in this sequence.</u>
<u>>Pronoun Code sequence</u>	<u>(0010,xx22)</u>	<u>A pronoun set.</u> <u>Only a single item shall be included in this Sequence.</u>
<u>>>Include Table 8.8-1 "Code Sequence Macro Attributes"</u>		<u>DCID CIDxxx4 Third Person Pronouns.</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>The time at which the content of this sequence item begins to be applicable.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>The time at which the content of this sequence item ceases to be applicable.</u>
<u>>Pronoun Comment</u>	<u>(0010,xx23)</u>	<u>Further explanation of pronoun usage</u>

47

48 **Update Part 3, Table C.4-13. Performed Procedure Step Relationship Module Attributes**

49 **C.4.13 Performed Procedure Step Relationship**

50 Table C.4-13 specifies the Attributes used to reference other SOP Classes and other Information Entities
51 of the DICOM real-world model as defined in Section 7.3.1.6.

52

Table C.4-13. Performed Procedure Step Relationship Module Attributes

Attribute Name	Tag	Attribute Description
Patient's Sex	(0010,0040)	Sex of the named Patient. Enumerated Values: M male F female O other

<u>Gender Identity Sequence</u>	<u>(0010,xxx)</u>	<u>An individual's personal sense of being a man, woman, boy, girl, nonbinary, or something else, ascertained by asking them what their identity is.</u> <u>One or more items are permitted in this Sequence.</u>
<u>>Gender Code Sequence</u>	<u>(0010,xxx4)</u>	<u>A coded gender identity.</u> <u>See also section C.7.2.2.1.x</u> <u>Only a single item shall be included in this Sequence.</u>
<u>>>Include Table 8.8-1 "Code Sequence Macro Attributes"</u>		<u>DCID CIDxxx1 Person Gender</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>The time at which the content of this sequence item begins to be applicable.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>The time at which the content of this sequence item ceases to be applicable.</u>
<u>>Gender Comment</u>	<u>(0010,xxx8)</u>	<u>Comments on this gender identity, such as the context in which it should be used.</u>
<u>Sex Parameters for Clinical Use Sequence</u>	<u>(0010,xxx2)</u>	<u>Guidance on how to apply settings or reference ranges that are derived from observable information such as an organ inventory, recent hormone lab tests, genetic testing, menstrual status, obstetric history, etc.</u> <u>See also section C.7.2.2.1.x2</u> <u>One or more items are permitted in this Sequence.</u>
<u>>SPCU Code Sequence</u>	<u>(0010,xxx9)</u>	<u>A coded SPCU.</u> <u>Only a single item shall be included in this Sequence.</u>
<u>>>Include Table 8.8-1 "Code Sequence Macro Attributes"</u>		<u>DCID CIDxxx2 Sex Parameter for Clinical Use</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>The time at which the content of this sequence item begins to be applicable.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>The time at which the content of this sequence item ceases to be applicable.</u>
<u>>SPCU Comment</u>	<u>(0010,xxx1)</u>	<u>Further description of clinical implications and reasons for the selected code.</u>
<u>>SPCU Reference</u>	<u>(0010,xx10)</u>	<u>Reference to a resource that explains or extends the SPCU Category code.</u>
<u>Person Names to Use Sequence</u>	<u>(0010,xxx3)</u>	<u>The name(s) that should be used when addressing or referencing the person.</u> <u>One or more items are permitted in this Sequence.</u>

<u>>Name to use</u>	<u>(0010,xx12)</u>	<u>A name that should be used when addressing or referencing the person</u> <u>This need not be an official name nor comply with any particular name structure.</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>The time at which the content of this sequence item begins to be applicable.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>The time at which the content of this sequence item ceases to be applicable.</u>
<u>>Name to Use Comment</u>	<u>(0010,xx13)</u>	<u>Further explanation of appropriate name usage</u>
<u>Third person pronoun Sequence</u>	<u>(0010,xx21)</u>	<u>Pronoun(s) specified by the patient to use when referring to the patient in speech, in clinical notes, and in written instructions to caregivers</u> <u>One or more items are permitted in this sequence.</u>
<u>>Pronoun Code sequence</u>	<u>(0010,xx22)</u>	<u>A pronoun set.</u> <u>Only a single item shall be included in this Sequence.</u>
<u>>>Include Table 8.8-1 "Code Sequence Macro Attributes"</u>		<u>DCID CIDxxx4 Third Person Pronouns.</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>The time at which the content of this sequence item begins to be applicable.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>The time at which the content of this sequence item ceases to be applicable.</u>
<u>>Pronoun Comment</u>	<u>(0010,xx23)</u>	<u>Further explanation of pronoun usage</u>

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Update Part 3, Table C.7-1 Patient Module Attributes

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C.7.1 Common Patient IE Modules

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C.7.1.1 Patient Module

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Table C.7-1 specifies the Attributes of the Patient that describe and identify the Patient who is the subject of a Study. This Module contains Attributes of the Patient that are needed for interpretation of the Composite Instances and are common for all Studies performed on the Patient. It contains Attributes that are also included in the Patient Modules in Section C.2.

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Table C.7-1. Patient Module Attributes

Attribute Name	Tag	Type	Attribute Description
Patient's Sex	(0010,0040)	2	Sex of the named Patient. Enumerated Values: M male F female O other See notes 1 and 2.
....			

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66 **Notes:** 1. The DICOM Information Model section 7.3.1.1 requires the value of Patient's Sex (0010,0040) to
67 be the same for all studies performed on the patient. If a patient sex change occurs, then the
68 Patient's Sex (0010,0040) attribute may be updated in all SOP instances in all studies to reflect
69 that change. The policies and mechanisms for such updates are outside the scope of DICOM.
70 There are other sex and gender related attributes that are in the Patient Study Module (see
71 C.7.2.2) for which this constraint does not apply because they are permitted to be different in
72 different studies.
73 2. The value of Patient's Sex (0010,0040) reflects the documentation policies of the local
74 administration for the sex attributes of the patient. It is related to the Sex Parameters for Clinical
75 Use Sequence (0010,xxx2) and will often be used when the Sex Parameters for Clinical Use
76 Sequence (0010,xxx2) is not present. It is often populated based on the PID-8 field in an HL7v2
77 message, and thus may follow the HL7v2 rules that defer the definition to the local
78 administration.

Commented [RH2]: Find proper reference for patient IE

Commented [RH3R2]: PS3 Section 7.3.1.1

80 **Add to Normative References Section 2.4 Health Level Seven (HL7)**

81

82 [HL Gender Harmony Model] The HL7 Informative Document: Gender Harmony - Modeling Sex
83 and Gender Representation, Release 1 provides additional background on sex and gender related
84 concepts used in this table (http://www.hl7.org/implement/standards/product_brief.cfm?product_id=564).

85 [HL7v2.9.2] HL7 Messaging Standard Version 2.9.1 (see HL7 Ballot versions).

86 [HL7 CDA R?] HL7 CDA® R2 Implementation Guide: Gender Harmony - Sex and Gender
87 Representation, Edition 1 (see
88 https://www.hl7.org/implement/standards/product_brief.cfm?product_id=633)

89 [HL7 FHIR 5.1] FHIR (see <https://hl7.org/xprod/ig/uv/gender-harmony/informative1/>).

90 [HL7 Gender Harmony IG] HL7 Cross Paradigm Implementation Guide: Gender Harmony - Sex
91 and Gender Representation, Edition 1 (see <https://hl7.org/xprod/ig/uv/gender-harmony/informative1/>)

92

93 **Update Part 3, Table C.7-4a Patient Study Module Attributes – add attributes**

94 **C.7.2.2 Patient Study Module**

95 Table C.7-4a defines Attributes that provide information about the Patient at the time the Study started.

96 **Notes** 1. In the case of imaging a group of small animals simultaneously, the Attributes in this Module can only
97 have values that apply to the entire group.

98 **2. The HL7 Informative Document: Gender Harmony - Modeling Sex and Gender Representation,**
 99 **Release 1 provides additional background on sex and gender related concepts used in this table**
 100 **(http://www.hl7.org/implement/standards/product_brief.cfm?product_id=564).**
 101 **HL7v2 adds segments, clarifies some existing elements like PID-8, and refers to the**
 102 **Implementation Guide in normative sections (see HL7 Ballot versions).**
 103 **CDA adds attributes, elements, and templates, clarifies some existing attributes, and refers to**
 104 **the Implementation Guide in normative sections (see**
 105 **https://www.hl7.org/implement/standards/product_brief.cfm?product_id=633).**
 106 **FHIR adds attributes, elements, codes, and extensions, clarifies some existing attributes, and**
 107 **refers to the Implementation Guide in normative sections (see [https://hl7.org/xprod/ig/uv/gender-](https://hl7.org/xprod/ig/uv/gender-harmony/informative1/)**
 108 **[harmony/informative1/](https://hl7.org/xprod/ig/uv/gender-harmony/informative1/)).**

Commented [RH4]: Move this to section 2 as a normative reference.

Commented [RH5]: Do we want to include these links?

Table C.7-4a. Patient Study Module Attributes

Attribute Name	Tag	Type	Attribute Description
...			
<u>Gender Identity Sequence</u>	<u>(0010,xxxX)</u>	<u>3</u>	<u>An individual's personal sense of being a man, woman, boy, girl, nonbinary, or something else, ascertained by asking them what their identity is.</u> <u>One or more items are permitted in this Sequence.</u>
<u>>Gender Identity Code Sequence</u>	<u>(0010,xxx4)</u>	<u>1</u>	<u>A coded gender identity.</u> <u>Only a single item shall be included in this Sequence.</u>
<u>>>Include Table 8.8-1 "Code Sequence Macro Attributes"</u>			<u>DCID CIDxxx1 Person Gender Identity</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>3</u>	<u>The time at which the content of this sequence item begins to be applicable.</u> <u>See section C.7.2.2.1.b</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>3</u>	<u>The time at which the content of this sequence item ceases to be applicable.</u> <u>See section C.7.2.2.1.b</u>
<u>>Gender Identity Comment</u>	<u>(0010,xxx8)</u>	<u>3</u>	<u>Comments on this gender identity, such as the context in which it should be used.</u>
<u>Sex Parameters for Clinical Use Sequence</u>	<u>(0010,xxx2)</u>	<u>3</u>	<u>Guidance on how to apply settings or reference ranges that are derived from observable information such as an organ inventory, recent hormone lab tests, genetic testing, menstrual status, obstetric history, etc.</u> <u>See section C.7.2.2.1.x2</u> <u>One or more items are permitted in this Sequence.</u>

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<u>>SPCU Category Code Sequence</u>	<u>(0010,xxx9)</u>	<u>1</u>	<u>A coded SPCU.</u> <u>Only a single item shall be included in this Sequence.</u>
<u>>>Include Table 8.8-1 "Code Sequence Macro Attributes"</u>			<u>DCID CIDxxx2 Sex Parameters for Clinical Use</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>3</u>	<u>The time at which the content of this sequence item begins to be applicable.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>3</u>	<u>The time at which the content of this sequence item ceases to be applicable.</u>
<u>>SPCU Comment</u>	<u>(0010,xxx1)</u>	<u>3</u>	<u>Further description of clinical implications and reasons for the SPCU Category code.</u>
<u>>SPCU Reference</u>	<u>(0010,xx10)</u>	<u>3</u>	<u>Reference to a resource that explains or extends the SPCU Category code.</u>
<u>Person Names to Use Sequence</u>	<u>(0010,xxx3)</u>	<u>3</u>	<u>The name(s) that should be used when addressing or referencing the person.</u> <u>One or more items are permitted in this Sequence.</u>
<u>>Name to Use</u>	<u>(0010,xx12)</u>	<u>1</u>	<u>A name that should be used when addressing or referencing the person</u> <u>See C.7.2.2.1.a.</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>3</u>	<u>The time at which the content of this sequence item begins to be applicable.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>3</u>	<u>The time at which the content of this sequence item ceases to be applicable.</u>
<u>>Name to Use Comment</u>	<u>(0010,xx13)</u>	<u>3</u>	<u>Further explanation of appropriate name usage</u>
<u>Third Person Pronoun Sequence</u>	<u>(0010,xx21)</u>	<u>3</u>	<u>Pronoun(s) specified by the patient to use when referring to the patient in speech, in clinical notes, and in written instructions to caregivers</u> <u>One or more items are permitted in this sequence.</u>
<u>>Pronoun Code Sequence</u>	<u>(0010,xx22)</u>	<u>1</u>	<u>A pronoun set.</u> <u>Only a single item shall be included in this Sequence.</u>
<u>>>Include Table 8.8-1 "Code Sequence Macro Attributes"</u>			<u>DCID CIDxxx4 Third Person Pronoun Sets.</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>3</u>	<u>The time at which the content of this sequence item begins to be applicable.</u> <u>See C.7.2.2.1.b</u>

>Effective Stop Time	(0010,xxx7)	3	The time at which the content of this sequence item ceases to be applicable. See C.7.2.2.1.b
>Pronoun Comment	(0010,xx23)	3	Further explanation of pronoun usage
...			

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Add sections to C.7.2.2 Patient Study Module

C.7.2.2.1.alpha Sex and Gender related attributes

The HL7 Informative Document: Gender Harmony - Modeling Sex and Gender Representation, Release 1 provides the fuller definition of the concepts encoded in these Attributes.

- Note:
1. HL7v2 adds segments, clarifies some existing elements like PID-8, and refers to the Implementation Guide in normative sections (see HL7 ballot version).
 2. CDA adds attributes, elements, and templates, clarifies some existing attributes, and refers to the Implementation Guide in normative sections (see https://www.hl7.org/implement/standards/product_brief.cfm?product_id=633).
- FHIR adds attributes, elements, codes, and extensions, clarifies some existing attributes, and refers to the Implementation Guide in normative sections (see <https://hl7.org/xprod/ig/uv/gender-harmony/informative1/>).

C.7.2.2.1.x1 Gender Identity Sequence

Gender Identity describes the identity of the person. This is important in many social and cultural contexts. It might be missing, as for an infant, or multi-valued in some cultures and specific situations. The meaning, criteria, and implications of specific gender identities is defined by the local culture and society. The terms used to capture gender identity are expected to reflect the variations found in different cultures and locations, so only a minimum value set is defined in the logical model. Local terminology is expected to extend this value set.

If the Person (such as a fetus, infant, or uncommunicative new patient) is unable to express a personal sense of being a man, woman, boy, girl or any point on the gender spectrum, gender identity may be missing. The sequence may be absent in cases where parents do not want to specify a value. Gender identity can be congruent or incongruent with one's Sex Parameters for Clinical Use (SPCU). Persons may identify using different terms at different times for various reasons, or use multiple identities simultaneously, depending on culture.

Given that the gender identity element supports representing multiple gender identities, individuals who identify as having both Male and Female gender identities (or any other combination) at the same time, each gender identity can be modeled with the same effective period. Alternatively, if implementers and/or systems prefer to use a single code, the gender identity value set is expected to be used as a minimum value set that can be extended to meet jurisdictional requirements.

C.7.2.2.1.x2 Sex Parameters for Clinical Use Sequence

The Sex Parameters for Clinical Use Sequence (0010,xxx2) is used in orders, observations, and other clinical situations. SPCU can be highly contextual and allows specific considerations to be provided for potential automated uses and records. These may be reference ranges, procedure setup, diagnostic algorithm parameters, etc. For example, the computation of glomerular filtration rate (GFR) based on blood chemistry may use formulas that are different for "male" and "female".

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151 There are many other situations involving tumors, resections, congenital conditions (i.e., ovotestes), and
152 transgender patients where SPCU can be used to provide information that is needed to perform a
153 procedure properly.

154

155 **C.7.2.2.1.a Person Names to Use Sequence**

156 The Name to Use Sequence (0010,xxx3) enables the name that is chosen by the person to be used by
157 care providers in person-centered healthcare conversations. This name is distinct from a person's legal
158 name. Some cultures have very long names, and expect that for all but mandatory legal situations, the
159 person will use a shorter more manageable name. Also, rules and processes for legal name changes
160 vary, there is often a mismatch that can be prolonged in difficult situations, and Name to Use may be an
161 expedient solution for the care environment.

162 This information is usually provided by the patient.

163 Note: The Value Representation of this attribute is a long text string (LT) rather than a person name (PN) to
164 avoid any constraints on the structure of the name. The Name to Use (0010,xx12) need not be an
165 official name of any sort, nor does it need to comply with any standard naming structure.
166

167 **C.7.2.2.1.x Third Person Pronoun Sequence**

168 Personal pronouns are words used instead of a noun or a noun phrase used to refer to people.
169 Understanding which pronoun(s) to use when referring to someone is important for providing affirming
170 health care. Avoiding incorrect pronoun use and patient misgendering is crucial in transgender and
171 gender-diverse care. It is important to reliably exchange personal pronouns that the individual has
172 specifically reported they want used. Local policy will determine how pronouns are chosen for infants and
173 other similar situations. Policy and local custom will determine what to use when this attribute is not
174 present, or when multiple sets are present.

175 Different pronouns may be used in one care setting than another care setting. The pronouns used in the
176 work environment may be different than those in the care setting.

177

178 **C.7.2.2.1.b Effective Start Time and Effective Stop Time**

179 Each sequence item may have an Effective Start Time (0010,xxx6) and Effective Stop Time (0010,xxx7)
180 specifying the time interval during which the content of the item applies. These attributes are optional.
181 They can be provided when these times are clinically relevant to the performance or interpretation of
182 observations. They are not a substitute for the patient's medical record. They are included when they
183 are expected to be relevant.

184 Multiple items may be present. For example, a male at birth with subsequent orchiectomy for testicular
185 cancer could have a "Male-typical parameters" at birth and a "Neither male typical nor female typical
186 parameters" after the orchiectomy. This could be represented with an Effective Start Time (0010,xxx6) at
187 birth date and an Effective Stop Time (0010,xxx7) at about the date of orchiectomy for the "Male-typical
188 parameters", and an Effective Start Time (0010,xxx7) at about the date of orchiectomy and no Effective
189 Stop Time (0010,xxx7) for the "Neither male typical nor female typical".

190 There is not a requirement that effective times match between Sex Parameters for Clinical Use Sequence
191 (0010,xxx2) and Gender Identity Sequence (0010xxxx) items. The SPCU reflects physiological changes
192 to the patient that are relevant to the performance or interpretation of observations. The historical Gender
193 Identity Sequence items are less likely to be included as relevant.

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Update Part 3, Table C.30.4-1. Unified Procedure Step Relationship Module Attributes

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C.30.4 Unified Procedure Step Relationship Module

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Table C.30.4-1 specifies the Attributes that describe the relationship of a Unified Procedure Step (UPS).

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

Attribute Name	Tag	Type	Attribute Description
Patient's Sex	(0010,0040)	2	Sex of the named Patient. Enumerated Values: M male F female O other
<u>Gender Identity Sequence</u>	<u>(0010,xxxx)</u>	<u>3</u>	<u>An individual's personal sense of being a man, woman, boy, girl, nonbinary, or something else, ascertained by asking them what their identity is.</u> <u>One or more items are permitted in this Sequence.</u>
<u>>Gender Code Sequence</u>	<u>(0010,xxx4)</u>	<u>1</u>	<u>A coded gender identity.</u> <u>See section C.7.2.2.1.x</u> <u>Only a single item shall be included in this Sequence.</u>
<u>>>Include Table 8.8-1 "Code Sequence Macro Attributes"</u>			<u>DCID CIDxxx1 Person Gender</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>3</u>	<u>The time at which the content of this sequence item begins to be applicable.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>3</u>	<u>The time at which the content of this sequence item ceases to be applicable.</u>
<u>>Gender Comment</u>	<u>(0010,xxx8)</u>	<u>3</u>	<u>Comments on this gender identity, such as the context in which it should be used.</u>
<u>Sex Parameters for Clinical Use Sequence</u>	<u>(0010,xxx2)</u>	<u>3</u>	<u>Guidance on how to apply settings or reference ranges that are derived from observable information such as an organ inventory, recent hormone lab tests, genetic testing, menstrual status, obstetric history, etc.</u> <u>See section C.7.2.2.1.x2</u> <u>One or more items are permitted in this Sequence.</u>
<u>>SPCU Code Sequence</u>	<u>(0010,xxx9)</u>	<u>1</u>	<u>A coded SPCU.</u> <u>Only a single item shall be included in this Sequence.</u>

>>Include Table 8.8-1 "Code Sequence Macro Attributes"			DCID CIDxxx2 Sex Parameters for Clinical Use
>Effective Start Time	(0010,xxx6)	3	The time at which the content of this sequence item begins to be applicable.
>Effective Stop Time	(0010,xxx7)	3	The time at which the content of this sequence item ceases to be applicable.
>SPCU Comment	(0010,xxx1)	3	Further description of clinical implications and reasons for the selected code.
>SPCU Reference	(0010,xx10)	3	Reference to a resource that explains or extends the SPCU Category code.
Person Names to Use Sequence	(0010,xxx3)	3	Pronoun(s) specified by the patient to use when referring to the patient in speech, in clinical notes, and in written instructions to caregivers One or more items are permitted in this Sequence.
>Name to use	(0010,xx12)	1	A name that should be used when addressing or referencing the person This need not be an official name nor comply with any particular name structure.
>Effective Start Time	(0010,xxx6)	3	The time at which the content of this sequence item begins to be applicable.
>Effective Stop Time	(0010,xxx7)	3	The time at which the content of this sequence item ceases to be applicable.
>Name to Use Comment	(0010,xx13)	3	Further explanation of appropriate name usage
Third person pronoun Sequence	(0010,xx21)	3	Pronoun(s) to be used for this person One or more items are permitted in this sequence.
>Pronoun Code sequence	(0010,xx22)	1	A pronoun set. Only a single item shall be included in this Sequence.
>>Include Table 8.8-1 "Code Sequence Macro Attributes"			DCID CIDxxx4 Third Person Pronouns.
>Effective Start Time	(0010,xxx6)	3	The time at which the content of this sequence item begins to be applicable.
>Effective Stop Time	(0010,xxx7)	3	The time at which the content of this sequence item ceases to be applicable.
>Pronoun Comment	(0010,xx23)	3	Further explanation of pronoun usage
...			

Part 4

C.6.1 Patient Root SOP Class Group

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Table C.6-1 is not changed. These attributes are included for contextual use by the reviewers.

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

Attribute Name	Tag	Type
Patient's Sex	(0010,0040)	O
Other Patient IDs Sequence	(0010,1002)	O

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

Note: Require/Optional on matching keys is whether the SCP is required to support or not. It's not about contents, presence, etc. The SCP is not required to send a required key for matching, and the objects are not required to contain the attribute to match. This is covered elsewhere in Part 4.

Attribute Name	Tag	Matching Key Type	Return Key Type	Remark
Study Date	(0008,0020)	R	<u>2</u>	
Study Time	(0008,0030)	R	<u>2</u>	
Accession Number	(0008,0050)	R	<u>2</u>	
Study ID	(0020,0010)	R	<u>2</u>	
Study Instance UID	(0020,000D)	U	<u>1</u>	
Modalities in Study	(0008,0061)	O	<u>3</u>	
SOP Classes in Study	(0008,0062)	O	<u>3</u>	
Anatomic Regions in Study Code Sequence	(0008,0063)	O	<u>3</u>	
<i>>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"</i>				
Referring Physician's Name	(0008,0090)	O	<u>3</u>	

Commented [RH7]: Check text of Part 4 carefully. Are these type 2? Or type 1C required if present?

Commented [RH8R7]: Type 2

Attribute Name	Tag	Matching Key Type	Return Key Type	Remark
Study Description	(0008,1030)	O	<u>3</u>	
Procedure Code Sequence	(0008,1032)	O	<u>3</u>	
<i>>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"</i>				
Name of Physician(s) Reading Study	(0008,1060)	O	<u>3</u>	
Admitting Diagnoses Description	(0008,1080)	O	<u>3</u>	
Referenced Study Sequence	(0008,1110)	O	<u>3</u>	
>Referenced SOP Class UID	(0008,1150)	O	<u>3</u>	
>Referenced SOP Instance UID	(0008,1155)	O	<u>3</u>	
Patient's Age	(0010,1010)	O	<u>3</u>	
Patient's Size	(0010,1020)	O	<u>3</u>	
Patient's Weight	(0010,1030)	O	<u>3</u>	
Occupation	(0010,2180)	O	<u>3</u>	
Additional Patient History	(0010,21B0)	O	<u>3</u>	
Other Study Numbers	(0020,1070)	O	<u>3</u>	
Study Update DateTime	(0008,041F)	O	<u>3</u>	
<u>Gender Identity Sequence</u>	<u>(0010,xxxx)</u>	<u>O</u>	<u>3</u>	
<u>>Gender Code Sequence</u>	<u>(0010,xxx4)</u>	<u>R</u>	<u>1</u>	
<i>>>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"</i>				
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Gender Comment</u>	<u>(0010,xxx8)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>Sex Parameters for Clinical Use Sequence</u>	<u>(0010,xxx2)</u>	<u>O</u>	<u>3</u>	
<u>>SPCU Code Sequence</u>	<u>(0010,xxx9)</u>	<u>R</u>	<u>1</u>	

Attribute Name	Tag	Matching Key Type	Return Key Type	Remark
>>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"				
>Effective Start Time	(0010,xxx6)	Q	1C	Return Key required if set.
>Effective Stop Time	(0010,xxx7)	Q	1C	Return Key required if set.
>SPCU Comment	(0010,xxx1)	Q	1C	Return Key required if set.
>SPCU Reference	(0010,xx10)	R	1C	Return Key required if set.
Person Names to Use Sequence	(0010,xxx3)	Q	3	
>Name to use	(0010,xx12)	R	1	
>Effective Start Time	(0010,xxx6)	Q	1C	Return Key required if set.
>Effective Stop Time	(0010,xxx7)	Q	1C	Return Key required if set.
>Name to Use Comment	(0010,xx13)	Q	1C	Return Key required if set.
Third Person Pronouns Sequence	(0010,xx21)	Q	3	
>Pronoun Code sequence	(0010,xx22)	R	1	
>> Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"				
>Effective Start Time	(0010,xxx6)	Q	1C	Return Key required if set.
>Effective Stop Time	(0010,xxx7)	Q	1C	Return Key required if set.
>Pronoun Comment	(0010,xx23)	Q	1C	Return Key required if set.

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Update Part 4, Table C.6-5

221 **C.6.2 Study Root SOP Class Group**

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

Attribute Name	Tag	Matching Key Type	Return Key Type	Remark
Study Date	(0008,0020)	R	<u>2</u>	
Study Time	(0008,0030)	R	<u>2</u>	
Accession Number	(0008,0050)	R	<u>2</u>	
Patient's Name	(0010,0010)	R	<u>2</u>	
Patient ID	(0010,0020)	R	<u>2</u>	
Study ID	(0020,0010)	R	<u>2</u>	
Study Instance UID	(0020,000D)	U	<u>1</u>	
Modalities in Study	(0008,0061)	O	<u>3</u>	
SOP Classes in Study	(0008,0062)	O	<u>3</u>	
Anatomic Regions in Study Code Sequence	(0008,0063)	O	<u>3</u>	
>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"				
Referring Physician's Name	(0008,0090)	O	<u>3</u>	
Study Description	(0008,1030)	O	<u>3</u>	
Procedure Code Sequence	(0008,1032)	O	<u>3</u>	
>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"				
Name of Physician(s) Reading Study	(0008,1060)	O	<u>3</u>	
Admitting Diagnoses Description	(0008,1080)	O	<u>3</u>	
Referenced Study Sequence	(0008,1110)	O	<u>3</u>	
>Referenced SOP Class UID	(0008,1150)	O	<u>3</u>	
>Referenced SOP Instance UID	(0008,1155)	O	<u>3</u>	
Referenced Patient Sequence	(0008,1120)	O	<u>3</u>	
>Referenced SOP Class UID	(0008,1150)	O	<u>3</u>	
>Referenced SOP Instance UID	(0008,1155)	O	<u>3</u>	

Attribute Name	Tag	Matching Key Type	Return Key Type	Remark
Issuer of Patient ID	(0010,0021)	O	<u>3</u>	
Patient's Birth Date	(0010,0030)	O	<u>3</u>	
Patient's Birth Time	(0010,0032)	O	<u>3</u>	
Patient's Sex	(0010,0040)	O	<u>2</u>	
<u>Gender Identity Sequence</u>	<u>(0010,xxx)</u>	<u>O</u>		
<u>>Gender Code Sequence</u>	<u>(0010,xxx4)</u>	<u>R</u>	<u>1</u>	
<u>>>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"</u>				
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Gender Comment</u>	<u>(0010,xxx8)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>Sex Parameters for Clinical Use Sequence</u>	<u>(0010,xxx2)</u>	<u>O</u>	<u>3</u>	
<u>>SPCU Code Sequence</u>	<u>(0010,xxx9)</u>	<u>R</u>	<u>1</u>	
<u>>>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"</u>				
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>SPCU Comment</u>	<u>(0010,xxx1)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>SPCU Reference</u>	<u>(0010,xx10)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>

Attribute Name	Tag	Matching Key Type	Return Key Type	Remark
<u>Person Names to Use Sequence</u>	(0010,xxx3)	<u>O</u>	<u>3</u>	
> <u>Name to use</u>	(0010,xx12)	<u>R</u>	<u>1</u>	
> <u>Effective Start Time</u>	(0010,xxx6)	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
> <u>Effective Stop Time</u>	(0010,xxx7)	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
> <u>Name to Use Comment</u>	(0010,xx13)	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>Third Person Pronouns Sequence</u>	(0010,xx21)	<u>O</u>	<u>3</u>	
> <u>Pronoun Code sequence</u>	(0010,xx22)	<u>R</u>	<u>1</u>	
>> <u>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"</u>				
> <u>Effective Start Time</u>	(0010,xxx6)	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
> <u>Effective Stop Time</u>	(0010,xxx7)	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
> <u>Pronoun Comment</u>	(0010,xx23)	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
Other Patient IDs Sequence	(0010,1002)	O	<u>3</u>	
Other Patient Names	(0010,1001)	O	<u>3</u>	
Patient's Age	(0010,1010)	O	<u>3</u>	
Patient's Size	(0010,1020)	O	<u>3</u>	
Patient's Weight	(0010,1030)	O	<u>3</u>	
Ethnic Group	(0010,2160)	O	<u>3</u>	
Occupation	(0010,2180)	O	<u>3</u>	
Additional Patient History	(0010,21B0)	O	<u>3</u>	

Attribute Name	Tag	Matching Key Type	Return Key Type	Remark
Patient Comments	(0010,4000)	O	<u>3</u>	
All other Attributes at Study Level	Tag	O	<u>3</u>	

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228 **Update Part 4, Table F.7.2-1**

229 **F.7.2 Operations**

230 ...

231 **F.7.2.1.1 Modality Performed Procedure Step Subset Specification**

232

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

235

Attribute Name	Tag	Req. Type N-Create (SCU/SCP)	Req. Type N-SET (SCU/SCP)	Requirement Type Final State (see Note 1)
...				
Patient's Sex	(0010,0040)	2/2	Not Allowed	
Gender Identity Sequence	(0010,xxx)	3/3	Not Allowed	
>Gender Code Sequence	(0010,xxx4)	1/1	Not Allowed	
>>Include Table F.7.2-1a. Modality Performed Procedure Step Enhanced Code Value Macro with no N-SET				
>Effective Start Time	(0010,xxx6)	3/3	Not Allowed	
>Effective Stop Time	(0010,xxx7)	3/3	Not Allowed	
>Gender Comment	(0010,xxx8)	3/3	Not Allowed	
Sex Parameters for Clinical Use Sequence	(0010,xxx2)	O	3	

>SPCU Code Sequence	(0010,xxx9)	3/3	Not Allowed	
>> Include Table F.7.2-1a. Modality Performed Procedure Step Enhanced Code Value Macro with no N-SET				
>Effective Start Time	(0010,xxx6)	3/3	Not Allowed	
>Effective Stop Time	(0010,xxx7)	3/3	Not Allowed	
>SPCU Comment	(0010,xxx1)	3/3	Not Allowed	
>SPCU Reference	(0010,xx10)	3/3	Not Allowed	
Person Names to Use Sequence	(0010,xxx3)	3/3	Not Allowed	
>Name to use	(0010,xx12)	1/1	Not Allowed	
>Effective Start Time	(0010,xxx6)	3/3	Not Allowed	
>Effective Stop Time	(0010,xxx7)	3/3	Not Allowed	
>Name to Use Comment	(0010,xx13)	3/3	Not Allowed	
Third Person Pronouns Sequence	(0010,xx21)	3/3	Not Allowed	
>Pronoun Code sequence	(0010,xx22)	1/1	Not Allowed	
>> Include Table F.7.2-1a. Modality Performed Procedure Step Enhanced Code Value Macro with no N-SET				
>Effective Start Time	(0010,xxx6)	3/3	Not Allowed	
>Effective Stop Time	(0010,xxx7)	3/3	Not Allowed	
>Pronoun Comment	(0010,xx23)	3/3	Not Allowed	

236

237 **Update Part 4, Table F.8.2-1 Modality Performed Procedure Step Retrieve SOP Class N-GET**
238 **Attributes**

239 **F.8.2 Operations**

240

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

Attribute Name	Tag	Req. Type (SCU/SCP)
...		
Patient's Sex	(0010,0040)	3/2
<u>Gender Identity Sequence</u>	<u>(0010,xxxx)</u>	<u>3/3</u>
<u>>Gender Code Sequence</u>	<u>(0010,xxx4)</u>	<u>1/1</u>
<i>>>Include Table 8-2a. "Enhanced Coded Entry Macro with Optional Matching Key Support and Optional Meaning"</i>		
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>3/3</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>3/3</u>
<u>>Gender Comment</u>	<u>(0010,xxx8)</u>	<u>3/3</u>
<u>Sex Parameters for Clinical Use Sequence</u>	<u>(0010,xxx2)</u>	<u>3/3</u>
<u>>SPCU Code Sequence</u>	<u>(0010,xxx9)</u>	<u>3/3</u>
<i>>>Include Table 8-2a. "Enhanced Coded Entry Macro with Optional Matching Key Support and Optional Meaning"</i>		
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>3/3</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>3/3</u>
<u>>SPCU Comment</u>	<u>(0010,xxx1)</u>	<u>3/3</u>
<u>>SPCU Reference</u>	<u>(0010,xx10)</u>	<u>3/3</u>
<u>Person Names to Use Sequence</u>	<u>(0010,xxx3)</u>	<u>3/3</u>
<u>>Name to use</u>	<u>(0010,xx12)</u>	<u>1/1</u>
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>3/3</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>3/3</u>

<u>>Name to use</u>	<u>(0010,xx12)</u>	<u>3/3</u>
<u>Third Person Pronouns Sequence</u>	<u>(0010,xx21)</u>	<u>3/3</u>
<u>>Pronoun Code sequence</u>	<u>(0010,xx22)</u>	<u>1/1</u>
>>Include Table 8.8-1 "Code Sequence Macro Attributes"		
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>3/3</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>3/3</u>
<u>>Pronoun Comment</u>	<u>(0010,xx23)</u>	<u>3/3</u>

242

243 **Update Part 4, Table K.6-1. Attributes for the Modality Worklist Information Model**

244 **K.6.1 Modality Worklist SOP Class**

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

Description / Module	Tag	Matching Key Type	Return Key Type	Remark/Matching Type
...				
Patient's Sex	(0010,0040)	O	2	
<u>Gender Identity Sequence</u>	<u>(0010,xxxx)</u>	<u>O</u>	<u>3</u>	
<u>>Gender Code Sequence</u>	<u>(0010,xxx4)</u>	<u>R</u>	<u>1</u>	
>>Include Table C.8-2a "Enhanced Code Value Keys Macro with Optional Keys"				
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if this attribute is present in a matching instance that is returned.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if this attribute is present in a matching instance that is</u>

Commented [RH9]: Change globally to required if present.

				<u>returned.</u>
<u>>Gender Comment</u>	<u>(0010,xxx8)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if this attribute is present in a matching instance that is returned.</u>
<u>SPCU</u>	<u>(0010,xxx9)</u>	<u>O</u>	<u>3</u>	
<u>>SPCU Code Sequence</u>	<u>(0010,xxx9)</u>	<u>R</u>	<u>1</u>	
<i>>>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"</i>				
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>SPCU Comment</u>	<u>(0010,xxx1)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>SPCU Reference</u>	<u>(0010,xx10)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>Person Names to Use Sequence</u>	<u>(0010,xxx3)</u>	<u>O</u>	<u>3</u>	
<u>>Name to use</u>	<u>(0010,xx12)</u>	<u>R</u>	<u>1</u>	
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Name to Use Comment</u>	<u>(0010,xx13)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>Third Person Pronouns Sequence</u>	<u>(0010,xx21)</u>	<u>O</u>	<u>3</u>	
<u>>Pronoun Code sequence</u>	<u>(0010,xx22)</u>	<u>R</u>	<u>1</u>	
<i>>> Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"</i>				
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key</u>

<u>Time</u>				<u>required if set.</u>
<u>>Pronoun Comment</u>	<u>(0010,xx23)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>---</u>				

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247 **Update Part 4, Table Q.4-1. Attributes for the Relevant Patient Information Model**

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248 **Q.4.3 Relevant Patient Information Model SOP Classes**

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

Description / Module	Tag	Matching Key Type	Return Key Type	Remark/Matching Type
...				
Patient's Sex	(0010,0040)	-	2	
<u>Gender Identity Sequence</u>	<u>(0010,xxxx)</u>	<u>O</u>	<u>3</u>	
<u>>Gender Code Sequence</u>	<u>(0010,xxx4)</u>	<u>R</u>	<u>1</u>	
>>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"				
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Gender Comment</u>	<u>(0010,xxx8)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>Sex Parameters for Clinical Use Sequence</u>	<u>(0010,xxx2)</u>	<u>O</u>	<u>3</u>	
<u>>SPCU Code Sequence</u>	<u>(0010,xxx9)</u>	<u>R</u>	<u>1</u>	
>>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"				
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>SPCU Comment</u>	<u>(0010,xxx1)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>

<u>>SPCU Reference</u>	<u>(0010,xx10)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>Person Names to Use Sequence</u>	<u>(0010,xxx3)</u>	<u>O</u>	<u>3</u>	
<u>>Name to use</u>	<u>(0010,xx12)</u>	<u>R</u>	<u>1</u>	
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Name to Use Comment</u>	<u>(0010,xx13)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>Third Person Pronouns Sequence</u>	<u>(0010,xx21)</u>	<u>O</u>	<u>3</u>	
<u>>Pronoun Code sequence</u>	<u>(0010,xx22)</u>	<u>R</u>	<u>1</u>	
>> Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"				
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Pronoun Comment</u>	<u>(0010,xx23)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
...				

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Update Part 4, Table V.6-2. Attributes for the Substance Approval Query Information Model

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V.6.2 Substance Approval Query SOP Class

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

Description / Module	Tag	Matching Key Type	Return Key Type	Remark/Matching Type
Patient's Sex	(0010,0040)	-	2	
<u>Gender Identity Sequence</u>	<u>(0010,xxx)</u>	<u>O</u>	<u>3</u>	
<u>>Gender Code</u>	<u>(0010,xxx4)</u>	<u>R</u>	<u>1</u>	

<u>Sequence</u>				
>>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"				
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Gender Comment</u>	<u>(0010,xxx8)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>Sex Parameters for Clinical Use Sequence</u>	<u>(0010,xxx2)</u>	<u>O</u>	<u>3</u>	
<u>>SPCU Code Sequence</u>	<u>(0010,xxx9)</u>	<u>R</u>	<u>1</u>	
>>Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"				
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>SPCU Comment</u>	<u>(0010,xxx1)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>SPCU Reference</u>	<u>(0010,xx10)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>Person Names to Use Sequence</u>	<u>(0010,xxx3)</u>	<u>O</u>	<u>3</u>	
<u>>Name to use</u>	<u>(0010,xx12)</u>	<u>R</u>	<u>1</u>	
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Name to Use Comment</u>	<u>(0010,xx13)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>Third Person Pronouns Sequence</u>	<u>(0010,xx21)</u>	<u>O</u>	<u>3</u>	
<u>>Pronoun Code sequence</u>	<u>(0010,xx22)</u>	<u>R</u>	<u>1</u>	
>> Include Table C.6-2a "Enhanced Code Value Keys Macro with Optional Keys"				

<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Pronoun Comment</u>	<u>(0010,xx23)</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
...				

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

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CC.2.5 Create a Unified Procedure Step (N-CREATE)

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

261

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
...								
Patient's Sex	(0010,0040)	2/2	Not Allowed	O	3/2	R	2	
<u>Gender Identity Sequence</u>	<u>(0010,xxxx)</u>	<u>3/3</u>	<u>Not Allowed</u>	<u>O</u>	<u>3/3</u>	<u>O</u>	<u>3</u>	
<u>>Gender Code Sequence</u>	<u>(0010,xxx4)</u>	<u>1/1</u>	<u>Not Allowed</u>	<u>O</u>	<u>1/1</u>	<u>R</u>	<u>1</u>	
>>Include CC.2.5-2a. "UPS Code Sequence Macro"								
<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>1C/1C</u>	<u>Not Allowed</u>	<u>O</u>	<u>1C/1C</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>1C/1C</u>	<u>Not Allowed</u>	<u>O</u>	<u>1C/1C</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Gender Comment</u>	<u>(0010,xxx8)</u>	<u>1C/1C</u>	<u>Not Allowed</u>	<u>O</u>	<u>1C/1C</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>Sex Parameters for</u>	<u>(0010,xxx2)</u>	<u>3/3</u>	<u>Not Allowed</u>	<u>O</u>	<u>3/3</u>	<u>O</u>	<u>3</u>	

<u>Clinical Use Sequence</u>								
> <u>SPCU Code Sequence</u>	(0010,xxx9)	1/1	<u>Not Allowed</u>	<u>O</u>	3/3	<u>R</u>	1	
>>Include CC.2.5-2a. "UPS Code Sequence Macro"								
> <u>Effective Start Time</u>	(0010,xxx6)	1C/1C	<u>Not Allowed</u>	<u>O</u>	1C/1C	<u>O</u>	1C	<u>Return Key required if set.</u>
> <u>Effective Stop Time</u>	(0010,xxx7)	1C/1C	<u>Not Allowed</u>	<u>O</u>	1C/1C	<u>O</u>	1C	<u>Return Key required if set.</u>
> <u>SPCU Comment</u>	(0010,xxx1)	3/3	<u>Not Allowed</u>	<u>O</u>	3/3	<u>O</u>	1C	<u>Return Key required if set.</u>
> <u>SPCU Reference</u>	(0010,xx10)	3/3	<u>Not Allowed</u>	<u>O</u>	3/3	<u>O</u>	1C	<u>Return Key required if set.</u>
<u>Person Names to Use Sequence</u>	(0010,xxx3)	3/3	<u>Not Allowed</u>	<u>O</u>	3/3	<u>O</u>	3	
> <u>Name to use</u>	(0010,xx12)	1/1	<u>Not Allowed</u>	<u>O</u>	1/1	<u>R</u>	1	
> <u>Effective Start Time</u>	(0010,xxx6)	1C/1C	<u>Not Allowed</u>	<u>O</u>	1C/1C	<u>O</u>	1C	<u>Return Key required if set.</u>
> <u>Effective Stop Time</u>	(0010,xxx7)	1C/1C	<u>Not Allowed</u>	<u>O</u>	1C/1C	<u>O</u>	1C	<u>Return Key required if set.</u>
> <u>Name to Use Comment</u>	(0010,xx13)	3/3	<u>Not Allowed</u>	<u>O</u>	3/3	<u>O</u>	1C	<u>Return Key required if set.</u>
<u>Third Person Pronouns Sequence</u>	(0010,xx21)	3/3	<u>Not Allowed</u>	<u>O</u>	3/3	<u>O</u>	3	
> <u>Pronoun Code sequence</u>	(0010,xx22)	1/1	<u>Not Allowed</u>	<u>O</u>	1/1	<u>R</u>	1	
>>Include CC.2.5-2a. "UPS Code Sequence Macro"								

<u>>Effective Start Time</u>	<u>(0010,xxx6)</u>	<u>1C/1C</u>	<u>Not Allowed</u>	<u>O</u>	<u>1C/1C</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Effective Stop Time</u>	<u>(0010,xxx7)</u>	<u>1C/1C</u>	<u>Not Allowed</u>	<u>O</u>	<u>1C/1C</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>
<u>>Pronoun Comment</u>	<u>(0010,xx23)</u>	<u>3/3</u>	<u>Not Allowed</u>	<u>O</u>	<u>3/3</u>	<u>O</u>	<u>1C</u>	<u>Return Key required if set.</u>

262

263

264

265

Part 6

266

Update Part 6, Table 6-1. Registry of DICOM Data Elements

267

Table 6-1. Registry of DICOM Data Elements

268

Tag	Name	Keyword	VR	VM
(0010,xxxx)	Gender Identity Sequence		SQ	1
(0010,xxx1)	SPCU Comment		LT	1..n
(0010,xxx2)	Sex Parameters for Clinical Use Sequence		SQ	1
(0010,xxx3)	Patient Name to Use Sequence		SQ	1
(0010,xxx4)	Gender Code Sequence		SQ	1
(0010,xxx6)	Effective Start Time		DT	1
(0010,xxx7)	Effective Stop Time		DT	1
(0010,xxx8)	Gender Comment		LT	1..n
(0010,xxx9)	SPCU Code Sequence		SQ	1
(0010,xx10)	SPCU Reference		URI	1..n
(0010,xx11)	Patient Name to Use		LT	1
(0010,xx13)	Name to Use Comment		LT	1..n
(0010,xx14)	Recorded Sex or		SQ	1

	Gender Sequence			
(0010,xx15)	Recorded Value Code Sequence		SQ	1
(0010,xx16)	Identity Type Code Sequence		SQ	1
(0010,xx17)	Acquisition Datetime		DT	1
(0010,xx18)	Jurisdiction		LT	1
(0010,xx19)	Source Field Name		LT	1
(0010,xx20)	Source Field Definition		LT? URI?	1
(0010,xx21)	Third Person Pronouns Sequence		SQ	1
(0010,xx22)	Pronoun Code Sequence		SQ	1
(0010,xx23)	Pronoun Comment		LT	1..n
(0010,xx24)	International Equivalent Code Sequence		SQ	1
(0010,xx26)	Source Document Reference		URI	1
(0010,xx27)	Period of Applicability		DT	2

269

270

Update Part 15 Table E.1-1. Application Level Confidentiality Profile Attributes

271

Part 15

272

E.1 APPLICATION LEVEL CONFIDENTIALITY PROFILES

273

....

274

Table E.1-1. Application Level Confidentiality Profile Attributes

Attribute Name	Tag	Ret d. (from PS 3.6)	In Std. Comp. IOD (from PS3.3)	Basic Prof.	Rtn. Safe Priv. Opt.	Rtn. UI Ds Opt.	Rtn. Dev. Id. Opt.	Rtn. Inst. Id. Opt.	Rtn. Pat. Chars. Opt.	Rtn. Long. Full Dates Opt.	Rtn. Long. Modif. Dates Opt.	Clean Desc. Opt.	Clean Struct. Opt.	Clean Graph. Opt.
Patient's Sex	(0010, 0040)	N	Y	Z					K					
<u>Gender Identity Sequence</u>	<u>(0010, xxx)</u>	<u>N</u>	<u>Y</u>	<u>X</u>					<u>K</u>					
<u>Sex Parameters for Clinical Use Sequence</u>	<u>(0010, xxx2)</u>	<u>N</u>	<u>Y</u>	<u>X</u>					<u>K</u>					
<u>Person Names to Use Sequence</u>	<u>(0010, xx12)</u>	<u>N</u>	<u>Y</u>	<u>X</u>										
<u>Third Person Pronoun Sequence</u>	<u>(0010, xx21)</u>	<u>N</u>	<u>Y</u>	<u>X</u>										

275

Part 16

276

277

278

279

280

Add Gender to TID 1007

281

TID 1007 Subject Context, Patient

282

Identifies (and optionally describes) a patient who is the subject.

283

Type: Extensible

284

Order: Significant

285

Root: No

286

287

Table TID 1007. Subject Context, Patient

288

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
10			CODE	EV(33821000087103, SCT, "Gender Identity")	1-n	U		DCID CIDxxx1 Person Gender Identity

289

290

291

Update CID 7455 Sex

292

CID 7455 Sex

293

This Context Group includes terms for the finding of sex of a subject for clinical purposes, such as selection of sex-based growth metrics.

294

295

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML

296

Type: Non-Extensible

297

Version: 20040112

298

UID: 1.2.840.10008.6.1.519

299

Table CID 7455. Sex

300

Coding Scheme Designator	Code Value	Code Meaning	Patient Sex (0010,0040) Equivalent
DCM	M	Male	M
DCM	F	Female	F
DCM	U	Unknown Sex	
DCM	MP	Male Pseudohermaphrodite	
DCM	FP	Female Pseudohermaphrodite Pseudohermaphrodite	
DCM	H	Hermaphrodite	
DCM	MC	Male changed to Female	
DCM	FC	Female changed to Male	
DCM	121104	Ambiguous Sex	
DCM	121102	Other Sex	
DCM	121103	Undetermined Sex	O
DCM	Sup233-01	Female-typical	F
DCM	Sup233-02	Male-typical	M
DCM	Sup233-03	Specified	O

301

- 302 Note
- 303 1. These terms are distinct from the gender of a subject for administrative purposes, although the default
- 304 value for clinical sex is often based on the administrative gender (e.g., see TID 1007 "Subject Context,
- 305 Patient"). The administrative value "O" from Patient's Sex (0010,0040) maps by default to
- 306 "undetermined" for clinical purposes.
- 307 2. This Context Group in a prior edition of the Standard included codes improperly attributed to ISO 5218.
- 308 3. These terms are derived from the terminology and codes for sex in ASTM E1633-02a "Standard
- 309 Specification for Coded Values Used in the Electronic Health Record."

310 **Add CID's to PS 3.16**

311

312 **CIDxxx1 Person Gender Identity**

313 **Resources:** HTML | FHIR JSON | FHIR XML | IHE SVS XML

314 **Type:** Extensible

315 **Version:** 202xmdd

316 **UID:** 1.2.840.TBD

317

318 **Table CID CIDxxx1. Person Gender Identity**

Coding Scheme Designator	Code Value	Code Meaning	UMLS Concept ID
SCT	446141000124107	Identifies as female gender	C3887375
SCT	446151000124109	Identifies as male gender	C3887374
SCT	33791000087105	Identifies as nonbinary gender	C3887376

319

320

321

322 **CIDxxx2 Sex Parameters for Clinical Use**

323 **Resources:** HTML | FHIR JSON | FHIR XML | IHE SVS XML

324 **Type:** Non-Extensible

325 **Version:** 202xmdd

326 **UID:** 1.2.840.TBD

327

328 **Table CID CIDxxx2. Sex Parameters for Clinical Use**

329

Coding Scheme Designator	Code Value	Code Meaning
DCM	Sup233-01	Female typical parameters
DCM	Sup233-02	Male typical parameters

Coding Scheme Designator	Code Value	Code Meaning
DCM	Sup233-03	Neither male typical nor female typical parameters

330
331
332
333

Note: See <https://hl7.org/xprod/ig/uv/gender-harmony/informative1/> for current HL7 IG

334
335

CIDxxx4 Third Person Pronouns

336
337
338
339

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML
Type: Extensible
Version: 202xmmd
UID: 1.2.840.TBD

340

341

Table CID CIDxxx4. Third Person Pronouns

Coding Scheme Designator	Code Value	Code Meaning
LOINC	LA29518-0	He/him/his/his/himself
LOINC	LA29519-8	She/her/her/hers/herself
LOINC	LA29520-6	They/them/their/theirs/themselves

342
343

Note: These LOINC codes are not intended for use in languages other than English.

344

Add SPCU codes to DICOM terminology

345
346

D DICOM Controlled Terminology Definitions (Normative)

347
348
349
350

Table D-1. DICOM Controlled Terminology Definitions (Coding Scheme Designator "DCM" Coding Scheme Version "01")

Code Value	Code Meaning	Definition	Notes
Sup233-01	Apply female-typical setting or reference range	Available data indicates that diagnostics, analytics, and treatments should consider best practices associated with female reference populations.	https://terminology.hl7.org/ValueSet-sex-parameter-for-clinical-use.html
Sup233-02	Apply male-typical setting or reference range	Available data indicates that diagnostics, analytics, and treatments should consider best practices associated with male reference populations.	https://terminology.hl7.org/ValueSet-sex-parameter-for-clinical-use.html

Sup233-03	Apply specified setting or reference range	Available data indicates that diagnostics, analytics, and treatment best practices may be undefined or not aligned with sex-derived reference populations. Additional information may be available in the form of comments and/or observations.	https://terminology.hl7.org/ValueSet-sex-parameter-for-clinical-use.html
-----------	--	---	---

351
352

353 **Add annex with use case and examples to Part 17**

354

355

Part 17

356

Annex XX Sex and Gender Examples

357

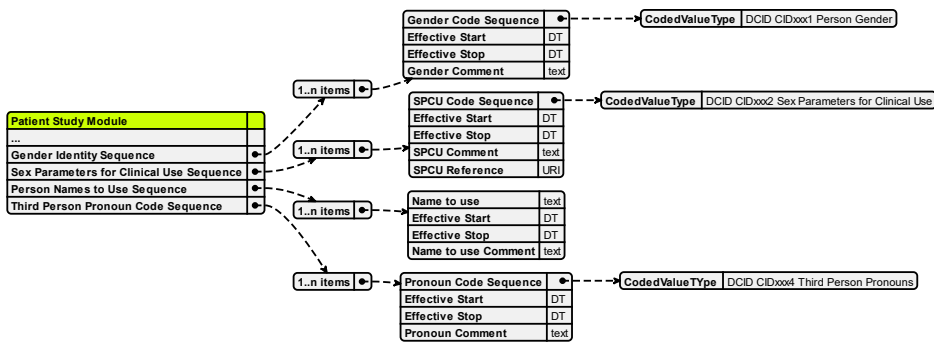
XX.1 Sex and Gender Attributes in the Patient Study Module

358 A patient's sex and gender attributes may change during the patient's lifespan. This is reflected in four
359 optional attributes that are in the Patient Study Module. These are:

- 360 • The Gender Identity Sequence, which contains the patient's chosen gender identity. This
361 attribute may record multiple identities. This may be in order to capture a history of past
362 identities, or it may reflect social choices. During transition a patient might chose to publicly
363 be one identity but privately another.
- 364 • The Sex Parameters for Clinical Use Sequence, which contains codes to describe sex related
365 parameter choices. Most often patients will have the "female-typical" or "male-typical"
366 characteristic. This means that the typical normal reference ranges, alert limits, drug and
367 hormone reactions, body fat characteristics, lean body mass algorithms, etc. apply. But there
368 may be codes or comments to indicate that specific typical parameters should not be used.
369 For example, a cardiology exam may be ordered with the SPCU reference or comment "use
370 the patient's gender identity, per hospital policy XYZ, for eGFR". This could also reflect
371 tumors affecting hormone levels that will change appropriate normal ranges or algorithm
372 selection.
- 373 • The Name to Use Sequence holds the names that the patient wants used. This may reflect
374 social status, rank, name changes, formal vs informal names, etc. It is present so that staff
375 can begin a conversation without unnecessarily annoying the patient. "Herr Doktor Professor
376 Schmidt" may be very sensitive about getting the full list of titles right, or "Captain Smith" may
377 become angry at being addressed as "Joan". Recent name changes might not yet be legally
378 complete, but using the old name can cause serious distress.
- 379 • The Third Person Pronoun Code Sequence provides proper usage guidance for instructions
380 given in writing or to care givers. In direct conversation the third person is rarely used.

381

382 All of these attributes are optional, all are multivalued, and all may be extended with local codes and
383 guidance. The DICOM only specifies the minimum value sets for Gender, SPCU, and Third Person
384 Pronouns. Local extensions for local usage should be expected.



Commented [RH10]: Revise to match applicability changes

Commented [RH11R10]: Label left box with "Patient Study Module" and add a row with "..."

385

386 **Figure XX.1-1 Attributes added to Patient Study Module**

387 Note: "CodedValueType" indicates a code sequence as defined in Table C.6-2a, with the code chosen from
388 the context group specified.

389

390 **XX.2 Patient Level attributes that change over time**

391 In the DICOM Information Model, attributes in the Patient Module and the Clinical Trial Subject Module,
392 exist at the Patient Level. This has implications when:

- 393 • One of these attributes changes in the real world, e.g., a patient's name changes.
- 394 • SOP Instances are imported from a different environment.
- 395 • Hospital merger and consolidated VNA.

396 Most organizations will have policies regarding what should be done when one of these changes takes
397 place. DICOM does not specify or recommend a policy. It tries to adapt and support whatever policies
398 are in use locally.

399 DICOM expects the Patient's Name (0010,0010) to comply with the rules set locally. Similarly, the
400 Patient's Sex (0010,0040) will reflect the local administrative policies for determining sex. If changes to
401 these attributes result in changes to the attribute values (according to local policies), the Original
402 Attributes Sequence (0400,0561) and Instance Coercion DateTime (0008,0015) can be used to capture
403 the changes made.

404 There are also attributes at the Study Level that can change between studies when Patient Root queries
405 are performed. These include:

- 406 • Gender Identity Sequence (0010,xxxx)
- 407 • Sex Parameters for Clinical Use Sequence (0010,xxx2)
- 408 • Person Names to Use Sequence (0010,xxx3)
- 409 • Third person pronoun sequence (0010,xx22)

410 These attributes need to be the same for all the SOP Instances in a single study and are allowed to be
411 different in different studies for the same patient.

412 All references to patient information within the SR tree contents are for a specific time. The information in
413 the content tree takes precedence over the information in the other modules. The information from the
414 other modules is used as the default when this patient information is not present in the SR tree contents.
415 This extends to acquisition contexts, so that within the SR tree there can be results from both an analysis
416 algorithm using SPCU of "male-typical" and SPCU of "female-typical".

417 **XX.3 Example of HL7/DICOM interactions**

418 **XX.3.7 Mappings between HL7 and DICOM**

419 The HL7 Implementation Guides have examples of FHIR, V2, and CDA documents with their gender
420 model encodings. These can be found at

421 https://hl7.org/xprod/ig/uv/gender-harmony/informative1/v2dicom_use_case.html

422 These might be mapped onto the DICOM Patient and Patient Study Module attributes as shown below.
423 These mappings are just illustrative.

424 **XX.3.7.1 Example 01: Imaging Order**

425 The following HL7 message is an order for "PET Myocardial Perfusion, Rest and Stress" imaging
426 procedure.

427 The administrative sex is female based on prior admissions. The patient was given a gender of female at
428 birth in 1978. At admission on July 15 2022, the patient informed the admitting staff that they now identify
429 as male and are taking hormonal treatment.

430 The PET imaging procedure uses creatinine reference ranges to determine details of the procedure.
431 Creatinine reference ranges are sex related. Hormonal treatment for gender changes also affects
432 creatinine reference ranges. At this hospital the medical procedure is that for patients taking hormonal
433 treatment, use affirmed gender creatinine reference ranges.

434 The current SPCU is set as male-typical, with the comment that due to hormonal treatment male-typical
435 creatinine reference ranges should be used. The assumed SPCU at birth is provided for equipment that
436 needs to know the original SPCU as well as the current SPCU. (The SPCU at birth is not needed by the
437 PET/CT system, but might be needed by subsequent analysis systems.)

438

439 The HL7 message is:

```
440 MSH|^~\&|||20220715142240||OMI^O23|WSA5mY0UBuCGrytRTAFR8UWJ|P|2.9.1  
441 PID||patientID^^^MR||Smith^Janet^^^^B~Smith^John^^^^N||19780328000000|F  
442 GSP|1|S||76691-5^Gender identity^LN|446151000124109^Identifies as male  
443 gender^SCT|20220715010000  
444 GSC|1|S||Male-typical^Male typical  
445 parameters^SexParameterForClinicalUse||OBR^4|20220715  
446 090000|Due to hormonal treatment, use male-typical Creatinine reference ranges  
447 GSC|2|S||Female-typical^Female typical  
448 parameters^SexParameterForClinicalUse|19780328000000^20220715090000|OBR^4||Sex at  
449 Birth  
450 ORC|NW  
451 OBR|||241439007^PET heart study^SCT|82800-  
452 4^PET+CT Heart W contrast IV^LN  
453 IPC|accessionNum|procedureID|studyInstanceUID|schProcedureStepId|PT^Positron emission  
454 tomography^DCM|122793^PET Myocardial Perfusion, Rest and Stress^DCM  
455  
456
```


457 These map to DICOM Modality Worklist and can be copied into generated SOP instances. The worklist
458 policy and the modality policy is assumed to be to accurately copy and forward as much of this
459 information as they can.

460

HL7 V2.9.? OMI field	HL7 short name	DICOM MWL Attribute Name	Tag	VR	DICOM Value
PID-5		Patient's Name	(0010,0010)	PN	Smith^Janet^^
PID-7		Patient's Birth Date	(0010,0030)	DA	19780328
PID-8		Patient's Sex	(0010,0040)	CS	F
GSP-4	Gender Identity	Gender Identity Sequence	(0010,xxxx)	SQ	
n/a		<i>Begin item</i>			
n/a		>Gender Code Sequence	(0010,xxx4)	SQ	
n/a		<i>Begin item</i>			
GSP-5-1		>>Code Value	(0008,0100)	SH	446151000124109
GSP-5-3		>>Coding Scheme Designator	(0008,0100)	SH	SCT
GSP-5-2		>>Code Meaning	(0008,0104)	LO	Identifies as male gender
n/a		<i>End item</i>			
GSP-6		Effective Start Time	(0010,xxx6)		20220715010000
n/a		<i>End item</i>			
GSC		Sex Parameters for Clinical Use Sequence	(0010,xxx2)	SQ	
n/a		<i>Begin item</i>			
n/a		>SPCU Code Sequence	(0010,xxx9)	SQ	
n/a		<i>Begin item</i>			
GSC-4-1		>>Code Value	(0008,0100)	SH	Sup233-02 (HL7 "Male-typical")
GSC-4-3		>>Coding Scheme Designator	(0008,0102)	SH	DCM
GSC-4-2		>>Code Meaning	(0008,0104)	LO	Male-typical
n/a		<i>End item</i>			
GSC-8		>SPCU Comment	(0010,xxx1)	LT	Hormonal treatment, use gender identity Creatinine reference ranges

GSC-5-1		Effective Start Time	(0010,xxx6)	DT	20220715
n/a		<i>End item</i>			
n/a		>SPCU Code Sequence	(0010,xxx9)	SQ	
n/a		<i>Begin item</i>			
GSC-4-1		>>Code Value	(0008,0100)	SH	Sup233-01
GSC-4-3		>>Coding Scheme Designator	(0008,0102)	SH	DCM
GSC-4-2		>>Code Meaning	(0008,0104)	LO	Female-typical
n/a		<i>End item</i>			
GSC-8		>SPCU Comment	(0010,xxx1)	LT	Sex at birth
GSC-5-1		Effective Start Time	(0010,xxx6)	DT	197803280000
		Effective Stop Time	(0010,xxx7)	DT	20220715090000
n/a		<i>End item</i>			
PID-5	2A.3.90.15 Called By (ST)	Person Names to Use Sequence	(0010,xxx3)	SQ	
n/a		<i>Begin item</i>			
PID-5		>Name to use	(0010,xx12)	LT	Smith, John
GSC-5-1		Effective Start Time	(0010,xxx6)	DT	20220715
n/a		<i>End item</i>			
GSP-4	Personal Pronouns Reported	Third Person Pronoun Sequence	(0010,xx21)	SQ	
n/a		<i>Begin item</i>			
n/a		>Pronoun Code Sequence	(0010,xxx4)	SQ	
n/a		<i>Begin item</i>			
GSP-5-1		>>Code Value	(0008,0100)	SH	LA29518-0
GSP-5-3		>>Coding Scheme Designator	(0008,0102)	SH	LOINC
GSP-5-2		>>Code Meaning	(0008,0104)	LO	He/him/his/his/himself
n/a		<i>End item</i>			

462 **XX.3.7.2 Example 02: FHIR Mapping**

463 **DISCUSS: Does this example help, or should this be just the reference to FHIR document**
464 **example.**

465 The patient is referenced as the subject of [DiagnosticReport](#reporting), DocumentReference,
466 ImagingStudy or ImagingSelection. Mapping to DICOM is as follows:

467

FHIR Attribute	DICOM Attribute Name	TAG	VR	Value
Patient.name [use=official]	Patient's Name	(0010,0010)	PN	Smith\^John^^
Patient.gender	Patient's Sex	(0010,0040)	CS	F
Patient.extension [PGenderIdentity]	Gender Identity Sequence	(0010,xxxx)	SQ	
-- element start --				
	>Gender Code Sequence	(0010,xxx4)	SQ	
-- element start --				
Patient.extension [value code]	>>Code Value	(0008,0100)	SH	446151000124109
Patient.extension [value system]	>>Coding Scheme Designator	(0008,0102)	SH	SCT
Patient.extension [value display]	>>Code Meaning	(0008,0104)	LO	Identifies as male gender
-- element end --				
Patient.extension [period start]	> Effective Start Time	(0010,xxx6)	DT	20220715010000
-- element end --				
serviceRequest.extension [PatSexParameterForClinicalUse]	Sex Parameters for Clinical Use Sequence	(0010,xxx2)	SQ	
-- element start --				
	>SPCU Code Sequence	(0010,xxx9)	SQ	
-- element start --				
serviceRequest.extension [value code]	>> Code Value	(0008,0100)	SH	Male-typical
serviceRequest.extension [value system]	>>Coding Scheme Designator	(0008,0102)	SH	DCM FIX from FHIR Spec
serviceRequest.extension [value display]	>>Code Meaning	(0008,0104)	LO	Male typical parameters
-- element end --				

serviceRequest.extension [comment]	>SPCU Comment	(0010,xxx1)	LT	Hormonal treatment, use affirmed gender Cr reference ranges
	>Validity Period Sequence	(0010,xxx5)	SQ	
-- element start --				
serviceRequest.extension [period start]	> Effective Start Time	(0010,xxx6)	DT	20220715090000
-- element end --				
serviceRequest.extension [supportingInfo reference]	>SPCU Reference	(0010,xx10)	UR	https://doi.org/10.1210/jendso/bvab048.1607
-- element end --				
-- element start --				
	>SPCU Code Sequence	(0010,xxx9)	SQ	
-- element start --				
serviceRequest.extension [value code]	>> Code Value	(0008,0100)	SH	Female-typical
serviceRequest.extension [value system]	>>Coding Scheme Designator	(0008,0102)	SH	DCM FIX From FHIR Spec
serviceRequest.extension [value display]	>>Code Meaning	(0008,0104)	LO	Female typical parameters
-- element end --				
serviceRequest.extension [comment]	>SPCU Comment	(0010,xxx1)	LT	Sex at birth
	>Validity Period Sequence	(0010,xxx5)	SQ	
-- element start --				
serviceRequest.extension [period start]	> Effective Start Time	(0010,xxx6)	DT	19780410000000
serviceRequest.extension [period end]	> Effective Stop Time	(0010,xxx7)	DT	20220715090000
-- element end --				
-- element end --				
-- element start --	Person Names to Use Sequence	(0010,xxx3)	SQ	
-- element start --				
Patient.name[use=usual]	>Name to use	(0010,xx12)	LT	John Smith
-- element end --				

468

469

470

471 **XX.4 Examples of Name to Use**

472 Person names are culturally and administratively complex. DICOM often uses names to identify the
473 subject of a SOP Instance, and DICOM often uses names as part of queries to find SOP Instances.
474 DICOM does make some assumptions about likely aspects of naming, but expects that external policies
475 and procedures are used to determine the proper name to use for a patient. The name to be used in
476 conversation might not be the same as the Patient's Name (0010,0010) used in the SOP Instances.

477 DICOM applications expect to be provided the name or names to be used as part of a modality worklist,
478 report, or other SOP instance. There may be several kinds of names.

479 The DICOM name attributes related to a patient are:

480 Patient's Name (0010,0010) – a single name at patient level that is required to be supported in
481 many C-FIND services. This is usually coordinated with the other hospital systems to
482 be a primary name for finding records for the patient. This name must be the same for
483 all SOP Instances for that patient when in a Patient Root query model. When using a
484 Study Root query model these are allowed to change from study to study, but they
485 must be the same for all instances in a single study.

486 A Patient's Name (0010,0010) may change, but this must be done systematically and
487 consistently to preserve the Patient Root and Study Root query requirements.

488 Other Patient Names (0010,1001) – optional other names at patient level for the patient. These
489 names must be the same for all SOP Instances for that patient when in a Patient Root
490 query model. When using a Study Root query model these are allowed to change from
491 study to study, but they must be the same for all SOP Instances in a single study.

492 Other Patient Names (0010,1001) may change, but this must be done systematically
493 and consistently to preserve the Patient Root and Study Root query requirements.

494 Person Names to Use Sequence (0010,xxx3) – optional other names at study level for the patient.
495 These names are allowed to change from study to study in both Patient Root and Study
496 Root query models, but they must be the same for all SOP Instances in a single study.

497 A history of past names may be held in this attribute by making use of the applicability
498 dates. When the patient may be known by multiple names, that information can be
499 held in this attribute.

500

501 A patient's name might change for a variety of reasons:

- 502 1. The patient's name was not known prior to performing the study, so a temporary pseudonym is
503 assigned. Later, when the patient is identified, the pseudonym is replaced by the patient's correct
504 name.
- 505 2. The patient gets married, divorced, adopted, or some other social event takes place that results in
506 a name change.
 - 507 ○ This might result in a change to their official registered name, or
 - 508 ○ This might not change their official registered name.
- 509 3. The patient has had gender reassignment and associated name change.

510

511 In some unusual circumstances there are differences between official registered names in different
512 jurisdictions for the same person at the same time.

513 When using a Patient Root model for storage and query of SOP Instances, there will need to be a local
514 policy for how to handle changes to the Patient's Name (0010,0010) or Other Patient Names
515 (0010,1001). This may require modification of many SOP Instances to preserve the restriction that these
516 have the same value for all SOP Instances for that patient, as well as maintaining consistency with
517 Modified Attributes Sequence (0400,0550).

Commented [RH12]: Should we retire Other Patient Names (0010,1001). The requirement that this list be the same for all SOP Instances makes it very difficult to use properly as people change names and situations.

518 There are also a wide variety of kinds of names. For example, the Swiss have identified seven (7) kinds
519 of names that they officially recognize. See <http://fhir.ch/ig/ch-core/ValueSet-ech-11-namedatatype.html>.
520 In addition, there are unofficial informal name uses that can be critically important in social interactions
521 with patients.

522 For example there is the use of a “customary” name in cultures where the registered name is
523 inconvenient and used only in special legal circumstances. For example, there is a Dutch photographer,
524 cinematographer, and director whose official registered name is “Anton Johannes Gerrit Corbijn van
525 Willenswaard” and he uses “Anton Corbijn” for almost all purposes. There will be a local policy for which
526 of his names is used as Patient’s Name (0010,0010), and this may be different from place to place. The
527 Person Name to Use Sequence (0010,xxx3) for him will contain “Anton Corbijn”.

528 The Person Name to Use Sequence (0010,xxx3) can also reflect name changes that are in process, and
529 name uses that are informal personal preferences.

530 The Person Name to Use Sequence includes optional applicability dates and comments. These can be
531 used to capture information about change history, which can be important when understanding the patient
532 record for a patient that has a long history and whose name has changed during that history.

533 The mapping between DICOM and other communications protocols is not specified by DICOM. For
534 example, the HL7 v2.9 encoding of Anton Corbijn’s name might be any of the following five encodings:

- 535 1. PID||patientID^^^^MR||Corbijn van Willenswaard^Anton Johannes
536 Gerrit^^^^L~^^^^^^N^^^^^^^^^Anton Corbijn||19780328000000|M|
- 537 2. PID||patientID^^^^MR||Corbijn van Willenswaard^Anton Johannes
538 Gerrit^^^^L^^^^^^^^^^Anton Corbijn||19780328000000|M|
- 539 3. PID||patientID^^^^MR||Corbijn van Willenswaard^Anton Johannes
540 Gerrit^^^^L~Corbijn^Anton^^^^N||19780328000000|M|
- 541 4. PID||patientID^^^^MR||Corbijn^Anton^^^^N||19780328000000|M|
- 542 5. PID||patientID^^^^MR||Corbijn^Anton^^^^L||19780328000000|M| (this is
543 wrong, but it is a common mistake)

544
545 The corresponding Name to Use (0010,xx12) would contain:

546 “Anton Corbijn”
547

548 ***The following bibliography reflects academic publications that informed the HL7 and DICOM***
549 ***design efforts. It is provided for reviewers of this supplement as background information. The***
550 ***DICOM requirements were not specifically derived from these documents.***

551 ***This will be removed and not included in the DICOM Standard. The academic literature on this***
552 ***topic and the regulatory actions will continue, making any bibliography placed into PS3.17***
553 ***increasingly obsolete.***

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