

DICOM Correction Item

Correction Number	CP-475
Log Summary:	Update Info Model for Relevant Patient Information Query
Type of Modification	Name of Standard
Addition	PS 3.3, PS3.4 -2004
Rationale for Correction: Supplement 75 did not adequately define the information model for the Relevant Patient Information Query. Also the specification of the query attributes was incomplete, missing the description of "structural" attributes not in the information model, but which are required or optional. The information model is updated to include the necessary attributes of the SOP Common and Common Instance Reference Modules to provide the hierarchical access attributes to Composite object reference Content Items. The specification of the Identifier of the C-FIND request and response is modified to define the use of "structural" attributes not in the information model, similar to CP 546.	
Sections of documents affected PS 3.3 Section 5 PS 3.4 Annex Q	
Correction Wording:	

Move paragraph from Part 3 Section 5.4 to a new Section 5.5, and extend to encompass Module specification

5.4 Attribute Macros

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~~When Attribute Macros are invoked in the definition of Normalized Objects in PS3.3 the specified Requirement Types and Conditions do not apply. In PS3.4 Requirement Types and Conditions have to be specified for both SCU and SCP with each invocation of an Attribute Macro.~~

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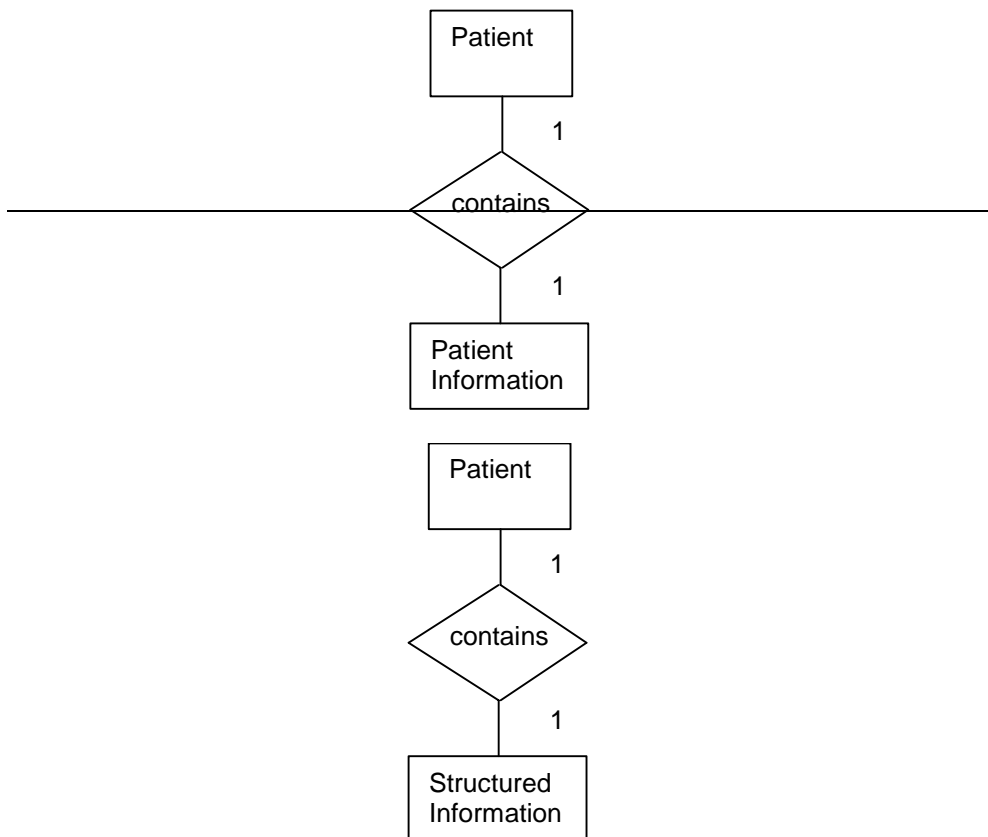
5.5 Types and Conditions in Normalized IODs

When a Normalized Information Object Definition in PS3.3 invokes Modules (e.g., the SOP Common Module) or Attribute Macros that are specified with Data Element Types, those specified Data Element Types and Conditions do not apply. Rather, the Data Element Types and Conditions have to be specified for each Attribute for both SCU and SCP in the appropriate Service definition in PS3.4.

Add the following to Part 4 Annex Q.4.3.1.1 E/R Model:

Q.4.3.1.1 E/R Model

The E/R Model consists of Patient and **Patient Structured** Information, with no relationship to other Information Entities in the DICOM Information model.



The Patient IE includes the attributes of the Patient Identification and Patient Demographics Modules.

The Structured Information IE includes attributes that are not inherently related to a real-world entity, but are interpreted through their coded content. This includes the attributes of the Structured Document Content Module, which in the case of the Relevant Patient Information Query Service has its content constrained by specified templates to convey patient related information. Also included in the Structured Information IE are attributes of the SOP Common and Common Instance Reference Modules that support the interpretation of coded data, or support access to referenced information objects identified in the coded data.

Modify Part 4 Annex Q.2.1.1.3 for structural attributes not in Relevant Patient Information Model:

Q.2.1.1.3.1 Request Identifier Structure

An Identifier in a C-FIND request shall contain:

- Key Attributes with values to be matched against the values of Attributes specified in the SOP Class.
- Content Template Sequence (0040,A504), which shall include a single sequence item containing the Template Identifier (0040,DB00) and Mapping Resource (0008,0105) attributes, to identify the template structure to use in the matching C-FIND responses.
- **Conditionally, the Attribute Specific Character Set (0008,0005). This Attribute shall be included if expanded or replacement character sets may be used in any of the Attributes in the Request Identifier. It shall not be included otherwise.**

The Key Attributes and values allowable for the query are defined in the SOP Class definition for the Relevant Patient Information Model.

Q.2.1.1.3.2 Response Identifier Structure

The C-FIND response shall not contain Attributes that were not in the request or specified in this section.

An Identifier in a C-FIND response shall contain:

- Key Attributes with values corresponding to Key Attributes contained in the Identifier of the request.
- Content Template Sequence (0040,A504), which shall include a single sequence item containing the Template Identifier (0040,DB00) and Mapping Resource (0008,0105) attributes, to identify the template structure used in the C-FIND response. The values shall be the same as specified in the Request Identifier.
- **Conditionally, the Attribute Specific Character Set (0008,0005). This Attribute shall be included if expanded or replacement character sets may be used in any of the Attributes in the Response Identifier. It shall not be included otherwise. The C-FIND SCP is not required to return responses in the Specific Character Set requested by the SCU if that character set is not supported by the SCP. The SCP may return responses with a different Specific Character Set.**

Modify Part 4 Annex Q.4.3.1.2 to add table for structural attributes not in Relevant Patient Information Model, and to add sequence item attribute types.:

Q.4.3.1.2 Relevant Patient Information Attributes

Table Q.4-1 defines the Attributes of the Relevant Patient Information Model:

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

Description / Module	Tag	Match- ing Key Type	Return Key Type	Remark / Matching Type
Specific Character Set	(0008,0005)	-	1C	This attribute is required if expanded or replacement character sets are used. See C.2.2.2 and C.4.1.1.
Patient				
Patient's Name	(0010,0010)	-	1	
Patient ID	(0010,0020)	R	1	Shall be present in the Request Identifier. Shall be retrieved with Single Value Matching. Note: Since only one response is expected, this is a unique key.
Issuer of Patient ID	(0010,0021)	R	2	Shall be retrieved with Single Value Matching. In situations where there are multiple issuers, this key constrains matching of Patient ID (0010,0020) to a domain in which the Patient ID (0010,0020) is unique.
Patient's Birth Date	(0010,0030)	-	2	

Description / Module	Tag	Match- ing Key Type	Return Key Type	Remark / Matching Type
Patient's Sex	(0010,0040)	-	2	
All other Attributes of the Patient Identification module		-	3	
All other Attributes of the Patient Demographic module		-	3	
Patient Structured Information (SR Document Content Module)				
Observation DateTime	(0040,A032)	-	1	
Value Type	(0040,A040)	-	1	See Q.4.3.1.4.1.
Concept Name Code Sequence	(0040,A043)	-	1	See Q.4.3.1.4.1.
<u>>Code Value</u>	<u>(0008,0100)</u>	=	<u>1</u>	
<u>>Coding Scheme Designator</u>	<u>(0008,0102)</u>	=	<u>1</u>	
<u>>Coding Scheme Version</u>	<u>(0008,0103)</u>	=	<u>1C</u>	<u>Required if the value of Coding Scheme Designator (0008,0102) is not sufficient to identify the Code Value (0008,0100) unambiguously.</u>
<u>>Code Meaning</u>	<u>(0008,0104)</u>	=	<u>1</u>	
<u>> All other Attributes of the Concept Name Code Sequence</u>		=	<u>3</u>	<u>See Q.4.3.1.4.1.</u>
Content Sequence	(0040,A730)	-	2	See Q.4.3.1.4.1.
<u>> All Attributes of the Content Sequence</u>		-	-	<u>Content Items as provided by the SCP. Requirements on Content Item Attribute Types shall be in accordance with the definitions in the SR Document Content Module.</u>
Structured Information (SOP Common Module)				
<u>Coding Scheme Identification Sequence</u>	<u>(0008,0110)</u>	=	<u>3</u>	<u>Optional, for the SCP to provide explicit identification of coding schemes in the response Identifier</u>
<u>>Coding Scheme Designator</u>	<u>(0008,0102)</u>	=	<u>1</u>	
<u>>Coding Scheme Registry</u>	<u>(0008,0112)</u>	=	<u>1C</u>	<u>Required if coding scheme is registered.</u>
<u>>Coding Scheme UID</u>	<u>(0008,010C)</u>	=	<u>1C</u>	<u>Required if coding scheme is registered with a UID.</u>
<u>>Coding Scheme External ID</u>	<u>(0008,0114)</u>	=	<u>2C</u>	<u>Required if coding scheme is registered with a non-UID identifier.</u>
<u>> All other Attributes of the Coding Scheme Identification Sequence</u>		=	<u>3</u>	

Description / Module	Tag	Match- ing Key Type	Return Key Type	Remark / Matching Type
<u>HL7 Structured Document Reference Sequence</u>	<u>(0040,A390)</u>	-	<u>1C</u>	<u>Required if Content Sequence (0040,A390) includes Content Items that reference Composite Objects that are HL7 Structured Documents.</u>
<u>>Referenced SOP Class UID</u>	<u>(0008,1150)</u>	-	<u>1</u>	
<u>>Referenced SOP Instance UID</u>	<u>(0008,1155)</u>	-	<u>1</u>	
<u>>HL7 Instance Identifier</u>	<u>(0040,E001)</u>	-	<u>1</u>	
<u>>Retrieve URI</u>	<u>(0040,E010)</u>	-	<u>3</u>	
Structured Information (Common Instance Reference Module)				
<u>Studies Containing Other Referenced Instances Sequence</u>	<u>(0008,1200)</u>	-	<u>1C</u>	<u>Required if Content Sequence (0040,A390) includes Content Items that reference SOP Instances that use the Patient/Study/Series/Instance information model.</u>
<u>>Referenced Series Sequence</u>	<u>(0008,1115)</u>		<u>1</u>	
<u>>>Series Instance UID</u>	<u>(0020,000E)</u>		<u>1</u>	
<u>>>Referenced Instance Sequence</u>	<u>(0008,114A)</u>		<u>1</u>	
<u>>>>Referenced SOP Class UID</u>	<u>(0008,1150)</u>		<u>1</u>	
<u>>>>Referenced SOP Instance UID</u>	<u>(0008,1155)</u>		<u>1</u>	

The attributes in Table Q.4-2 are not part of the Information Model; their inclusion in the C-FIND request and response identifier are governed by rules in sections Q.2.1.1.3.1 and Q.2.1.1.3.2, respectively.

Table Q.4-2 Additional C-FIND Identifier Attributes

Attribute	Tag	Type in Request Identifier	Type in Response Identifier	Remark
<u>Content Template Sequence</u>	<u>(0040,A504)</u>	<u>1</u>	<u>1</u>	
<u>>Mapping Resource</u>	<u>(0008,0105)</u>	<u>1</u>	<u>1</u>	
<u>>Template Identifier</u>	<u>(0040,DB00)</u>	<u>1</u>	<u>1</u>	
<u>Specific Character Set</u>	<u>(0008,0005)</u>	<u>1C</u>	<u>1C</u>	<u>Required if expanded or replacement character sets are used. See Q.2.1.1.3,</u>