

DICOM Correction Proposal Form

Tracking Information - Administration Use Only	
Correction Proposal Number	CP-1019
STATUS	Assigned
Date of Last Update	2010/01/26
Person Assigned	Kevin O'Donnell
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Submission date	2009/08/21

Correction Number CP-1019	
Log Summary: Add Body Part at the Study Level	
Type of Modification Addition	Name of Standard PS 3-2009
<p>Rationale for Correction:</p> <p>C-FIND</p> <p>In the current Query/Retrieve query models (Patient Root Query/Retrieve Information Model, Study Root Query/Retrieve Information Model), study-level queries do not support body parts as a matching key or return attribute. The body part information is currently only defined at the series level, therefore the query SCU has to query all series of a study to identify body parts present in the study.</p> <p>Body part is a primary attribute used to determine relevancy of studies for a given patient. To practically address this key user need, this proposal introduces modality as an optional query and a return key attribute in the query models and in the normalized study objects.</p> <p>It is proposed to create a new "Body Parts Examined in Study" Attribute (0008,xxxx), and make it multi-valued to allow for cases where multiple body parts are present in different series. This would be similar to (0008,0061) Modalities in Study.</p> <p>MWL</p> <p>It is also proposed to add "Body Parts Examined in Study" (0018,xxxx) to the DICOM Modality Work List Query as an optional matching and return key.</p> <p>This would identify what body part(s) are the subject of each Scheduled Procedure Step. The reading workstation could then prepare relevant prior studies by using MWL to find out what patients are scheduled and what body parts will be of its interest, and then find and retrieve relevant data by DICOM Q/R.</p>	
Sections of documents affected	
PS 3.4, PS 3.6	
Correction Wording:	

Q. Given that it this is proposed as a search key, do we want to feed off Body Part Examined (text), or the "more robust, consistent" Anatomic Region Sequence (code)?

Q. Do we want this to be Body Parts in Study, or Body Parts Examined in Study?

<<Need to add Part 3 insertions into the Study module>>

Modify Table C.3-1 in PS 3.4

C.3.4 Additional Query/Retrieve Attributes

Some optional attributes that may be used in Query/Retrieve Information Models that are not Attributes of an Information Object Definition and, therefore, are not defined in PS 3.3. These attributes are defined in Table C.3-1.

**Table C.3-1
 ADDITIONAL QUERY/RETRIEVE ATTRIBUTES**

Attribute Name	Tag	Attribute Description
Number of Patient Related Studies	(0020,1200)	The number of studies that match the Patient level Query/Retrieve search criteria
Number of Patient Related Series	(0020,1202)	The number of series that match the Patient level Query/Retrieve search criteria
Number of Patient Related Instances	(0020,1204)	The number of composite object instances that match the Patient level Query/Retrieve search criteria
Number of Study Related Series	(0020,1206)	The number of series that match the Study level Query/Retrieve search criteria
Number of Series Related Instances	(0020,1209)	The number of composite object instances in a Series that match the Series level Query/Retrieve search criteria
Number of Study Related Instances	(0020,1208)	The number of composite object instances that match the Study level Query/Retrieve search criteria
Modalities in Study	(0008,0061)	All of the distinct values used for Modality (0008,0060) in the Series of the Study.
SOP Classes in Study	(0008,0062)	The SOP Classes contained in the Study.
Body Parts in Study	(0008,xxxx)	All of the distinct values used for Body Part Examined (0018, 0015) in the Series of the Study.
Alternate Representation Sequence	(0008,3001)	A Sequence of Items, each identifying an alternate encoding of an image that matches the Instance level Query/Retrieve search criteria (see C.6.1.1.5.1)

Modify Table C.6-2 in PS 3.4

C.6.1.1.3 Study Level

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

- Notes:
1. A description of the attributes of this Information Model is contained in Section C.3 of this Part.
 2. Although the Patient ID may not be globally unique, the Study Instance UID is globally unique ensuring that no two studies may be mis-identified.

**Table C.6-2
STUDY LEVEL KEYS FOR THE PATIENT ROOT
QUERY/RETRIEVE INFORMATION MODEL**

Description	Tag	Type
Study Date	(0008,0020)	R
Study Time	(0008,0030)	R
Accession Number	(0008,0050)	R
Study ID	(0020,0010)	R
Study Instance UID	(0020,000D)	U
Modalities in Study	(0008,0061)	O
SOP Classes in Study	(0008,0062)	O
Body Parts in Study	(0008,xxxx)	O
Referring Physician's Name	(0008,0090)	O
Study Description	(0008,1030)	O
Procedure Code Sequence	(0008,1032)	O
>Code Value	(0008,0100)	O
>Coding Scheme Designator	(0008,0102)	O
>Coding Scheme Version	(0008,0103)	O
>Code Meaning	(0008,0104)	O
Name of Physician(s) Reading Study	(0008,1060)	O
Admitting Diagnoses Description	(0008,1080)	O
Referenced Study Sequence	(0008,1110)	O
>Referenced SOP Class UID	(0008,1150)	O
>Referenced SOP Instance UID	(0008,1155)	O
Patient's Age	(0010,1010)	O
Patient's Size	(0010,1020)	O
Patient's Weight	(0010,1030)	O
Occupation	(0010,2180)	O
Additional Patient History	(0010,21B0)	O
Other Study Numbers	(0020,1070)	O
Number of Study Related Series	(0020,1206)	O
Number of Study Related Instances	(0020,1208)	O
All other Attributes at Study Level		O

Modify Table C.6-5 in PS 3.4

C.6.2.1.2 Study level

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

- Notes:
1. A description of the attributes of this Information Model is contained in Section C.3.
 2. Although the Patient ID may not be globally unique, the Study Instance UID is globally unique ensuring that no two studies may be mis-identified.

**Table C.6-5
STUDY LEVEL KEYS FOR THE STUDY
ROOT QUERY/RETRIEVE INFORMATION MODEL**

Description	Tag	Type
Study Date	(0008,0020)	R
Study Time	(0008,0030)	R
Accession Number	(0008,0050)	R
Patient's Name	(0010,0010)	R
Patient ID	(0010,0020)	R
Study ID	(0020,0010)	R
Study Instance UID	(0020,000D)	U
Modalities in Study	(0008,0061)	O
SOP Classes in Study	(0008,0062)	O
Body Parts in Study	(0008,xxxx)	O
Referring Physician's Name	(0008,0090)	O
Study Description	(0008,1030)	O
Procedure Code Sequence	(0008,1032)	O
>Code Value	(0008,0100)	O
>Coding Scheme Designator	(0008,0102)	O
>Coding Scheme Version	(0008,0103)	O
>Code Meaning	(0008,0104)	O
Name of Physician(s) Reading Study	(0008,1060)	O
Admitting Diagnoses Description	(0008,1080)	O
Referenced Study Sequence	(0008,1110)	O
>Referenced SOP Class UID	(0008,1150)	O
>Referenced SOP Instance UID	(0008,1155)	O
Referenced Patient Sequence	(0008,1120)	O
>Referenced SOP Class UID	(0008,1150)	O
>Referenced SOP Instance UID	(0008,1155)	O
Issuer of Patient ID	(0010,0021)	O

Patient's Birth Date	(0010,0030)	O
Patient's Birth Time	(0010,0032)	O
Patient's Sex	(0010,0040)	O
Other Patient Ids	(0010,1000)	O
Other Patient Names	(0010,1001)	O
Patient's Age	(0010,1010)	O
Patient's Size	(0010,1020)	O
Patient's Weight	(0010,1030)	O
Ethnic Group	(0010,2160)	O
Occupation	(0010,2180)	O
Additional Patient History	(0010,21B0)	O
Patient Comments	(0010,4000)	O
Other Study Numbers	(0020,1070)	O
Number of Patient Related Studies	(0020,1200)	O
Number of Patient Related Series	(0020,1202)	O
Number of Patient Related Instances	(0020,1204)	O
Number of Study Related Series	(0020,1206)	O
Number of Study Related Instances	(0020,1208)	O
All other Attributes at Study Level		O

Modify Table K.6-1 in PS 3.4

K.6.1.2.2 Modality Worklist Attributes

Table K.6-1 defines the Attributes of the Modality Worklist Information Model:

**Table K.6-1
ATTRIBUTES FOR THE MODALITY WORKLIST INFORMATION MODEL**

Description / Module	Tag	Match- ing Key Type	Return Key Type	Remark/Matching Type
Scheduled Procedure Step				
Scheduled Procedure Step Sequence	(0040,0100)	R	1	The Attributes of the Scheduled Procedure Step shall only be retrieved with Sequence Matching. The Scheduled Procedure Step Sequence shall contain only a single Item.
>Scheduled Station AE Title	(0040,0001)	R	1	The Scheduled station AE title shall be retrieved with Single Value Matching only.
>Scheduled Procedure Step	(0040,0002)	R	1	Scheduled Step Start Date shall be

Start Date				retrieved with Single Value Matching or Range Matching. See remark under Scheduled Procedure Step Start Time (0040,0003).
>Scheduled Procedure Step Start Time	(0040,0003)	R	1	Scheduled Step Start Time shall be retrieved with Single Value Matching or Range Matching. Scheduled Step Start Date and Scheduled Step Start Time are subject to Range Matching. If both keys are specified for Range Matching, e.g. the date range July 5 to July 7 and the time range 10am to 6pm specifies the time period starting on July 5, 10am until July 7, 6pm. Note: If the Information System does not provide scheduling for individual Procedure Steps, it may use the closest scheduling information it possesses (e.g. Procedures are subject to scheduling instead of Procedure Steps).
>Modality	(0008,0060)	R	1	The Modality shall be retrieved with Single Value Matching.
>Scheduled Performing Physician's Name	(0040,0006)	R	2	Scheduled Performing Physician's Name shall be retrieved with Single Value Matching or Wild Card Matching.
>Scheduled Procedure Step Description	(0040,0007)	O	1C	Either the Scheduled Procedure Step Description (0040,0007) or the Scheduled Protocol Code Sequence (0040,0008) or both shall be supported by the SCP.
>Scheduled Station Name	(0040,0010)	O	2	
>Scheduled Procedure Step Location	(0040,0011)	O	2	
>Scheduled Protocol Code Sequence	(0040,0008)	O	1C	Either the Scheduled Procedure Step Description (0040,0007) or the Scheduled Protocol Code Sequence (0040,0008) or both shall be supported by the SCP. The Scheduled Protocol Code Sequence contains one or more Items.
>>Code Value	(0008,0100)	O	1	

>>Coding Scheme Version	(0008,0103)	O	3	
>>Coding Scheme Designator	(0008,0102)	O	1	
>>Code Meaning	(0008,0104)	O	3	
>>Protocol Context Sequence	(0040,0440)	-	3	The Protocol Context Sequence and its Items shall not be used for matching
>>>Value Type	(0040,A040)	-	1	
>>>Concept Name Code Sequence	(0040,A043)	-	1	
>>>>Code Value	(0008,0100)	-	1	
>>>>Coding Scheme Designator	(0008,0102)	-	1	
>>>>Coding Scheme Version	(0008,0103)	-	3	
>>>>Code Meaning	(0008,0104)	-	1	
>>>DateTime	(0040,A120)	-	1C	Required if Value Type (0040,A040) is DATETIME.
>>>Person Name	(0040,A123)	-	1C	Required if Value Type (0040,A040) is PNAME.
>>>Text Value	(0040,A160)	-	1C	Required if Value Type (0040,A040) is TEXT.
>>>Concept Code Sequence	(0040,A168)	-	1C	Required if Value Type (0040,A040) is CODE.
>>>>Code Value	(0008,0100)	-	1	
>>>>Coding Scheme Designator	(0008,0102)	-	1	
>>>>Coding Scheme Version	(0008,0103)	-	3	
>>>>Code Meaning	(0008,0104)	-	1	
>>>Numeric Value	(0040,A30A)	-	1C	Required if Value Type (0040,A040) is NUMERIC.
>>>Measurement Units Code Sequence	(0040,08EA)	-	1C	Required if Value Type (0040,A040) is NUMERIC.
>>>>Code Value	(0008,0100)	-	1	
>>>>Coding Scheme Designator	(0008,0102)	-	1	
>>>>Coding Scheme Version	(0008,0103)	-	3	
>>>>Code Meaning	(0008,0104)	-	1	
>>>All other attributes from Protocol Context Sequence		-	3	
>Pre-Medication	(0040,0012)	O	2C	Required if Pre-Medication is to be

				applied to that Scheduled Procedure Step.
>Scheduled Procedure Step ID	(0040,0009)	O	1	
>Requested Contrast Agent	(0032,1070)	O	2C	Required if Contrast Media is to be applied to that Scheduled Procedure Step.
>Scheduled Procedure Step Status	(0040,0020)	O	3	
>All other Attributes from the Scheduled Procedure Step Sequence		O	3	
Scheduled Specimen Sequence	(0040,0500)	O	3	One or more Items may be returned in this Sequence.
>Container Identifier	(0040,0512)	O	1	
>Container Type Code Sequence	(0040,0518)	-	2	Zero or one Item shall be returned in this Sequence.
>>Code Value	(0008,0100)	-	1	
>>Coding Scheme Designator	(0008,0102)	-	1	
>>Coding Scheme Version	(0008,0103)	-	3	
>>Code Meaning	(0008,0104)	-	1	
>Specimen Description Sequence	(0040,0550)	O	1	One or more Items may be returned in this Sequence.
>>Specimen Identifier	(0040,0551)	O	1	
>>Specimen UID	(0040,0554)	O	1	
>>All other Attributes from the Specimen Description Sequence		O	3	Specimen Preparation Sequence (0040,0610), if present, describes preparation steps already performed, not scheduled procedure steps
>All other Attributes from the Scheduled Specimen Sequence		O	3	
Requested Procedure				
Requested Procedure ID	(0040,1001)	O	1	
Requested Procedure Description	(0032,1060)	O	1C	The Requested Procedure Description (0032,1060) or the Requested Procedure Code Sequence (0032,1064) or both shall be supported by the SCP.
Requested Procedure Code Sequence	(0032,1064)	O	1C	The Requested Procedure Description (0032,1060) or the Requested Procedure Code Sequence (0032,1064) or both

				shall be supported by the SCP. The Requested Procedure Code Sequence shall contain only a single Item.
>Code Value	(0008,0100)	O	1	
>Coding Scheme Designator	(0008,0102)	O	1	
>Coding Scheme Version	(0008,0103)	O	3	
>Code Meaning	(0008,0104)	O	3	
Study Instance UID	(0020,000D)	O	1	
Study Date	(0008,0020)	O	3	See note 5.
Study Time	(0008,0030)	O	3	See note 5.
Referenced Study Sequence	(0008,1110)	O	2	
>Referenced SOP Class UID	(0008,1150)	O	1	
>Referenced SOP Instance UID	(0008,1155)	O	1	
Body Parts in Study	(0008,xxxx)	O	2	
Requested Procedure Priority	(0040,1003)	O	2	
Patient Transport Arrangements	(0040,1004)	O	2	
All other Attributes from the Requested Procedure Module		O	3	
Imaging Service Request				
Accession Number	(0008,0050)	O	2	
Requesting Physician	(0032,1032)	O	2	
Referring Physician's Name	(0008,0090)	O	2	
All other Attributes from the Imaging Service Request Module		O	3	
Visit Identification				
Admission ID	(0038,0010)	O	2	
All other Attributes from the Visit Identification Module		O	3	
...				
Visit Relationship				
Referenced Patient Sequence	(0008,1120)	O	2	
>Referenced SOP Class UID	(0008,1150)	O	1	
>Referenced SOP Instance	(0008,1155)	O	1	

UID				
All other Attributes from the Visit Relationship Module except those explicitly included in this table (see Note 3)		O	3	
Visit Admission				
All Attributes from the Visit Admission Module		O	3	
Patient Relationship				
All Attributes from the Patient Relationship Module except those explicitly included in this table (see Note 3)		O	3	
...				

Add element in PS 3.6

Tag	Name	Keyword	VR	VM
<u>(0008,xxx)</u>	<u>Body Parts in Study</u>	<u>BodyPartsInStudy</u>	<u>CS</u>	<u>1-n</u>