

DICOM Correction Proposal Form

Correction Number		CP-369
Log Summary: Missing number of items in Contrast/Bolus Module, MR Diffusion and MR Anatomy Macros, Purpose of Reference Code Sequence		
Type of Modification	Name of Standard	
Clarification	PS 3.3 2003	
<p>Rationale for Correction</p> <p>In the Contrast/Bolus Module, none of the sequences have the number of permissible items specified.</p> <p>In the MR Diffusion Macro, the Diffusion Gradient Direction Sequence does not have the number of permissible items specified.</p> <p>In many places in PS 3.3 the Purpose of Reference Code Sequence does not have the number of permissible items specified.</p> <p>Number of items requirement on Anatomic Region Sequence is inconsistent with it being a Type 2.</p> <p>Condition on Primary Anatomic Structure Modifier Sequence Type 3 is redundant. It obviously can't be there if the parent is not sent.</p>		
<p>Sections of documents affected</p> <p>PS 3.3 C.7.6.4</p> <p>PS 3.3 C.8.13.5.9</p> <p>PS 3.3 C.7.6.1, C.7.6.16.2.5, C.7.6.16.2.6, C.12.1, C.19.1</p> <p>PS 3.3 C.7.6.16.2.8</p>		
Correction Wording:		

**Table C.7-12
CONTRAST/BOLUS MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
Contrast/Bolus Agent Sequence	(0018,0012)	3	Sequence that identifies the contrast agent. <u>One or more Items may be present.</u>
<i>>Include 'Code Sequence Macro' Table 8.8-1</i>		<i>Baseline Context ID is 12.</i>	
Contrast/Bolus Route	(0018,1040)	3	Administration route of contrast agent
Contrast/Bolus Administration Route Sequence	(0018,0014)	3	Sequence that identifies the route of administration of contrast agent. <u>Only a single Item shall be permitted in this sequence.</u>
<i>>Include 'Code Sequence Macro' Table 8.8-1</i>		<i>Baseline Context ID is 11.</i>	

>Additional Drug Sequence	(0018,002A)	3	Sequence that identifies any additional drug that is administered with the contrast agent bolus. One or more items may be present.
>>Include 'Code Sequence Macro' Table 8.8-1		No Baseline Context ID is defined.	
...

Table C.8.13-23
MR DIFFUSION MACRO ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
...
>Diffusion Gradient Direction Sequence	(0018,9076)	1C	Sequence containing orientations of all diffusion sensitization gradients that were applied during the preparation phase for this frame. One or more items may be present. Required if Diffusion Directionality (0018,9075) equals DIRECTIONAL
>>Diffusion Gradient Orientation	(0018,9089)	1C	The direction cosines of the diffusion gradient vector with respect to the patient Required if Frame Type (0008,9007) Value 1 of this frame is ORIGINAL. May be present otherwise.
...

**Table C.7-9
GENERAL IMAGE MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
Referenced Image Sequence	(0008,1140)	3	A sequence that references other images significantly related to this image (e.g. post-localizer CT image or Mammographic biopsy or partial view images). One or more Items may be included in this sequence.
>Referenced SOP Class UID	(0008,1150)	1C	Uniquely identifies the referenced SOP Class. Required if Referenced Image Sequence (0008,1140) is sent.
>Referenced SOP Instance UID	(0008,1155)	1C	Uniquely identifies the referenced SOP Instance. Required if Referenced Image Sequence (0008,1140) is sent.
...
>Purpose of Reference Code Sequence	(0040,A170)	3	Describes the purpose for which the reference is made. Only a single Item shall be permitted in this sequence.
>>Include 'Code Sequence Macro' Table 8.8-1			Defined Context ID is 7201.
...
Source Image Sequence	(0008,2112)	3	A Sequence that identifies the set of Image SOP Class/Instance pairs of the Images that were used to derive this Image. Zero or more Items may be included in this Sequence. See C.7.6.1.1.4 for further explanation.
...
>Purpose of Reference Code Sequence	(0040,A170)	3	Describes the purpose for which the reference is made, that is what role the source image or frame(s) played in the derivation of this image. Only a single Item shall be permitted in this sequence.
>>Include 'Code Sequence Macro' Table 8.8-1			Defined Context ID is 7202.
Referenced Waveform Sequence	(0008,113A)	3	References to waveforms acquired in conjunction with this image. These Waveforms may or may not be temporally synchronized with this image. One or more Items may be included in this Sequence.
>Include 'SOP Instance Reference Macro' Table C.17-3			

>Purpose of Reference Code Sequence	(0040,A170)	1	Code describing the purpose of the reference to the waveform(s). Only a single Item shall be permitted in this sequence.
>>Include 'Code Sequence Macro' Table 8.8-1		Defined Context ID is CID 7004	

...

**Table C.7.6.16-6
REFERENCED IMAGE MACRO ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
>Purpose of Reference Code Sequence	(0040,A170)	1	Describes the purpose for which the reference is made. Only a single Item shall be permitted in this sequence. See C.7.6.16.2.5.1 for further explanation.
>>Include 'Code Sequence Macro' Table 8.8-1		Defined Context ID is 7201.	

...

**Table C.7.6.16-7
DERIVATION IMAGE MACRO ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
>>Purpose of Reference Code Sequence	(0040,A170)	1	Describes the purpose for which the reference is made, that is what role the source image or frame played in the derivation of this image or frame. Only a single Item shall be permitted in this sequence.
>>>Include 'Code Sequence Macro' Table 8.8-1		Defined Context ID is 7202.	

...

**Table C.12-1
SOP COMMON MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
Contributing Equipment Sequence	(0018,A001)	3	Sequence of Items containing descriptive attributes of related equipment which has contributed to the acquisition, creation or modification of the composite instance. One or more Items may be included in this Sequence. See C.12.1.1.5 for further explanation.

>Purpose of Reference Code Sequence	(0040,A170)	1	Describes the purpose for which the related equipment is being reference. Only a single Item shall be permitted in this sequence. See C.12.1.1.5 for further explanation.
>>Include 'Code Sequence Macro' Table 8.8-1			Defined Context ID 7005.
>Manufacturer	(0008,0070)	1	Manufacturer of the equipment that contributed to the composite instance.

...

**Table C.19-1
RAW DATA MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
>Purpose of Reference Code Sequence	(0040,A170)	1	Describes the purpose for which the reference is made. Only a single Item shall be permitted in this sequence. See C.7.6.16.2.5.1.
>>Include 'Code Sequence Macro' Table 8.8-1			No Baseline Context ID is defined.
<i>Include any private attributes that contain Raw Data information. See section C.19.1.1 for further explanation.</i>			

**Table C.7.6.16-9
FRAME ANATOMY MACRO ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
Frame Anatomy Sequence	(0020,9071)	1	Identifies anatomic characteristics of this frame. Only a single Item shall be permitted in this sequence.
>Frame Laterality	(0020,9072)	1	<p>Laterality of (possibly paired) body parts (as described in Anatomic Region Sequence (0008,2218)) examined.</p> <p>Enumerated Values: R = right L = left U = unpaired B = both left and right</p> <p>Note: This Attribute is mandatory, in order to ensure that frames may be positioned correctly relative to one another for display.</p> <p>Shall be consistent with any laterality information contained in Primary Anatomic Structure Modifier Sequence (0008,2230), if present.</p>

>Anatomic Region Sequence	(0008,2218)	2	<p>Sequence that identifies the anatomic region of interest in this frame (i.e. external anatomy, surface anatomy, or general region of the body).</p> <p>Note: It is strongly recommended that this Attribute be sent with a value.</p> <p>See C.8.11.2.1.1 for further explanation. Only a single Item shall Zero or one item may be permitted in this Sequence.</p>
>>Include 'Code Sequence Macro' Table 8.8-1			Defined Context ID is 4009.
>>Anatomic Region Modifier Sequence	(0008,2220)	3	<p>Sequence that modifies the anatomic region of interest in this frame (i.e. prone, supine, decubitus right).</p> <p>May be present only if Anatomic Region Sequence (0008,2218) is sent.</p> <p>See C.8.11.2.1.1 for further explanation. One or more Items may be included in this Sequence.</p>
>>>Include 'Code Sequence Macro' Table 8.8-1			Defined Context ID is 2.
>Primary Anatomic Structure Sequence	(0008,2228)	3	<p>Sequence that identifies the primary anatomic structures of interest in this frame.</p> <p>See C.8.11.2.1.2 for further explanation. One or more Items may be included in this Sequence.</p>
>>Include 'Code Sequence Macro' Table 8.8-1			Defined Context ID is 1.
>>Primary Anatomic Structure Modifier Sequence	(0008,2230)	3	<p>Sequence that modifies the primary anatomic structure of interest in this frame.</p> <p>May be present only if Primary Anatomic Structure Sequence (0008,2228) is sent.</p> <p>See C.8.11.2.1.2 for further explanation. One or more Items may be included in this sequence.</p>
>>>Include 'Code Sequence Macro' Table 8.8-1			Defined Context ID is 2.