

## DICOM Correction Item

Correction Number		CP 688
Log Summary: Specify Sequence contents for DICOMDIR records		
Type of Modification	Name of Standard	
Modification	PS 3.3 2007	
Rationale for Correction		
<p>Several DICOMDIR directory record Sequence attributes do not specify the attributes to be included in Sequence Items.</p> <p>The Presentation directory record requires adaptation for the Blending Softcopy Presentation State, which includes a Study UID reference for its referenced images.</p> <p>Additionally, some existing Sequence Item attributes are currently incorrectly specified.</p>		
Sections of documents affected		
PS 3.3 Section F		
Correction Wording:		

**Table F.5-23  
PRESENTATION KEYS**

Key	Tag	Type	Attribute Description
Specific Character Set	(0008,0005)	1C	Required if an extended or replacement character set is used in one of the keys.
Instance Number	(0020,0013)	1	A number that identifies this presentation state.
Content Label	(0070,0080)	1	A label that is used to identify this presentation.
Content Description	(0070,0081)	2	A description of this presentation.
Presentation Creation Date	(0070,0082)	1	Date on which this presentation was created.  Note: This date may be different from the date that the DICOM SOP Instance was created, since the presentation state information contained may have been recorded earlier.
Presentation Creation Time	(0070,0083)	1	Time at which this presentation was created.  Note: This time may be different from the time that the DICOM SOP Instance was created, since the presentation state information contained may have been recorded earlier.
Content Creator's Name	(0070,0084)	2	Name of operator saving the presentation state (such as a technologist or physician).
Referenced Series Sequence	(0008,1115)	<b>1C</b>	Sequence of <b>Repeating</b> Items where each Item includes the Attributes of one <del>or more</del> Series <b>to which the Presentation applies.</b>  <b><u>Required if the IOD of the Presentation SOP Instance referenced by this directory record</u></b>

			<b><u>includes the Presentation State Relationship Module. One or more Items may be included in this Sequence.</u></b>
>Series Instance UID	(0020,000E)	1C	Unique identifier of a Series that is part of this Study. <b><u>Required if sequence item is present.</u></b>
>Referenced Image Sequence	(0008,1140)	1C	Sequence of <b>Repeating</b> Items where each Item provides reference to <del>an selected set of</del> Image <b>SOP Class/SOP Instance to which the Presentation applies pairs that are part of this Study and the Series defined by Series Instance UID (0020,000E).</b> <b><u>Required if a sequence item is present.</u></b>
>>Referenced SOP Class UID	(0008,1150)	1C	Uniquely identifies the referenced SOP Class. <b><u>Required if sequence item is present.</u></b> Shall be the same for all Images referenced by this presentation state.
>>Referenced SOP Instance UID	(0008,1155)	1C	Uniquely identifies the referenced SOP Instance. <b><u>Required if sequence item is present.</u></b>
<b><u>Blending Sequence</u></b>	<b><u>(0070,0402)</u></b>	<b><u>1C</u></b>	<b><u>Sequence of exactly two Items where each Item includes the Attributes of a Study to which the Presentation applies.</u></b> <b><u>Required if the SOP Instance referenced by this directory record includes the Blending Sequence (0070,0402) attribute.</u></b>
>Study Instance UID	(0020,000D)	1	Unique identifier for a Study that contains the images to which the Presentation applies.
>Referenced Series Sequence	(0008,1115)	1	Sequence of Items where each Item includes the Attributes of one Series to which the Presentation applies. <b><u>Only a single item shall be permitted in this Sequence.</u></b>
>>Series Instance UID	(0020,000E)	1	<b><u>Unique identifier of the Series</u></b>
>>Referenced Image Sequence	(0008,1140)	1	<b><u>Sequence of Items where each Item provides reference to an Image SOP Instance to which the Presentation applies</u></b>
>>>Referenced SOP Class UID	(0008,1150)	1	<b><u>Uniquely identifies the referenced SOP Class.</u></b>
>>>Referenced SOP Instance UID	(0008,1155)	1	<b><u>Uniquely identifies the referenced SOP Instance.</u></b>
Any other Attribute of the Presentation IE Modules		3	

**Table F.5-25**  
**SR DOCUMENT KEYS**

<b>Key</b>	<b>Tag</b>	<b>Type</b>	<b>Attribute Description</b>
Specific Character Set	(0008,0005)	1C	Required if an extended or replacement character set is used in one of the keys.
Instance Number	(0020,0013)	1	
Completion Flag	(0040,A491)	1	
Verification Flag	(0040,A493)	1	
Content Date	(0008,0023)	1	
Content Time	(0008,0033)	1	
Verification DateTime	(0040,A030)	1C	Most recent Date and Time of verification among those defined in the Verifying Observer Sequence (0040,A073). Required if Verification Flag (0040,A493) is VERIFIED.
Concept Name Code Sequence	(0040,A043)	1	Code describing the concept represented by the root Content Item (Document Title). This sequence shall contain exactly one Item.
<b>&gt;Include Code Sequence Macro Table 8.8-1</b>			
Content Sequence	(0040,A730)	1C	Contains the Target Content Items that modify the Concept Name Code Sequence of the root Content Item (Document Title). Required if the root Content Item is the Source Content Item of HAS CONCEPT MOD relationships. <b><u>One or more Items shall be included in this Sequence. All, and only, Content Items with the HAS CONCEPT MOD relationship from the root Content Item shall be included in this Sequence.</u></b>
<b>&gt;Relationship Type</b>	<b>(0040,A010)</b>	<b>1</b>	<b>Enumerated Value:</b> <b><u>HAS CONCEPT MOD</u></b>
<b>&gt;Include Document Content Macro Table C.17-5</b>			
Any Attribute of the Document IE Modules		3	

**Table F.5-26  
KEY OBJECT DOCUMENT KEYS**

Key	Tag	Type	Attribute Description
Specific Character Set	(0008,0005)	1C	Required if an extended or replacement character set is used in one of the keys.
Instance Number	(0020,0013)	1	
Content Date	(0008,0023)	1	
Content Time	(0008,0033)	1	
Concept Name Code Sequence	(0040,A043)	1	Code describing the concept represented by the root Content Item (Document Title). This sequence shall contain exactly one Item.
<b>&gt;Include Code Sequence Macro Table 8.8-1</b>			
Content Sequence	(0040,A730)	1C	Contains the Target Content Items that modify the Concept Name Code Sequence of the root Content Item (Document Title).  Required if the root Content Item is the Source Content Item of HAS CONCEPT MOD relationships.  <b><u>One or more Items shall be included in this Sequence. All, and only, Content Items with the HAS CONCEPT MOD relationship from the root Content Item shall be included in this Sequence.</u></b>
<b>&gt;Relationship Type</b>	<b><u>(0040,A010)</u></b>	<b><u>1</u></b>	<b><u>Enumerated Value: HAS CONCEPT MOD</u></b>
<b>&gt;Include Document Content Macro Table C.17-5</b>			
Any Attribute of the Document IE Modules		3	

**Table F.5-27  
SPECTROSCOPY KEYS**

Key	Tag	Type	Attribute Description
Specific Character Set	(0008,0005)	1C	Required if an extended or replacement character set is used in one of the keys.
Image Type	(0008,0008)	1	
Content Date	(0008,0023)	1	

Content Time	(0008,0033)	1	
Instance Number	(0020,0013)	1	
Referenced Image Evidence Sequence	(0008,9092)	1C	Required if present in the spectroscopy instance.
<i>&gt;Include 'SOP Instance Reference Macro' Table C.17-3</i>			
Number of Frames	(0028,0008)	1	
Rows	(0028,0010)	1	
Columns	(0028,0011)	1	
Data Point Rows	(0028,9001)	1	
Data Point Columns	(0028,9002)	1	
Icon Image Sequence	(0088,0200)	3	This Icon Image is representative of the Spectroscopy instance.
<b>&gt;Image Pixel Module</b> <b><i>&gt;Include Image Pixel Macro Table C.7-11b</i></b>			See Section F.7 of this Part.
Any other Attribute of the Spectroscopy IE Modules		3	

**Table F.5-28**  
**RAW DATA KEYS**

<b>Key</b>	<b>Tag</b>	<b>Type</b>	<b>Attribute Description</b>
Specific Character Set	(0008,0005)	1C	Required if an extended or replacement character set is used in one of the keys.
Content Date	(0008,0023)	1	
Content Time	(0008,0033)	1	
Instance Number	(0020,0013)	2	
Icon Image Sequence	(0088,0200)	3	This Icon Image is representative of the Raw Data instance.
<b>&gt;Image Pixel Module</b> <b><i>&gt;Include Image Pixel Macro Table C.7-11b</i></b>			See Section F.7 of this Part.
Any other Attribute of the Raw Data IE Modules		3	

**Table F.5-31  
HANGING PROTOCOL KEYS**

<b>Attribute Name</b>	<b>Tag</b>	<b>Type</b>	<b>Attribute Description</b>
Specific Character Set	(0008,0005)	1C	Required if an extended or replacement character set is used in one of the keys
Hanging Protocol Name	(0072,0002)	1	
Hanging Protocol Description	(0072,0004)	1	
Hanging Protocol Level	(0072,0006)	1	
Hanging Protocol Creator	(0072,0008)	1	
Hanging Protocol Creation Datetime	(0072,000A)	1	
Hanging Protocol Definition Sequence	(0072,000C)	1	<b>Sequence that defines the type of imaging studies to which this Hanging Protocol applies. One or more sequence items shall be present.</b>
<b>&gt;Modality</b>	<b>(0008,0060)</b>	<b>1C</b>	<b>Required if Anatomic Region Sequence (0008,2218) is not present. May be present otherwise.</b>
<b>&gt;Anatomic Region Sequence</b>	<b>(0008,2218)</b>	<b>1C</b>	<b>Required if Modality (0008,0060) is not present. May be present otherwise.</b>
<b>&gt;&gt;Include Code Sequence Macro Table 8.8-1</b>			
<b>&gt;Laterality</b>	<b>(0020,0060)</b>	<b>2C</b>	<b>Required if Anatomic Region Sequence (0008,2218) is present.</b>
<b>&gt;Procedure Code Sequence</b>	<b>(0008,1032)</b>	<b>2</b>	<b>One or more Items may be included in this Sequence.</b>
<b>&gt;&gt;Include Code Sequence Macro Table 8.8-1</b>			
<b>&gt;Reason for Requested Procedure Code Sequence</b>	<b>(0040,100A)</b>	<b>2</b>	<b>One or more Items may be included in this sequence.</b>
<b>&gt;&gt;Include Code Sequence Macro Table 8.8-1</b>			
Number of Priors Referenced	(0072,0014)	1	
Hanging Protocol User Identification Code Sequence	(0072,000E)	2	<b>Sequence that provides a coded identifier for the person, group, or site for which this Hanging Protocol was defined. Zero or one Items may be included in this Sequence.</b>
<b>&gt;Include Code Sequence Macro Table 8.8-1</b>			
Any other Attribute of the Hanging Protocol IOD		3	