

DICOM Correction Item

Correction Number		CP-446
Log Summary: Distance Source to Detector and SID errors		
Type of Modification	Name of Standard	
Correction	PS 3.3-2003	
<p>Rationale for Correction</p> <p>On a number places there is an error in the description of X-ray geometrical attributes: In Table C.4-16 the Distance Source to Detector attribute (0018,1110) and in Table C.8-30, C8-31 and C.8-68 the Estimated Radiographic Magnification attribute (0018,1114) contains Source Image Distance instead of Source Image Receptor Distance as explanation for SID. This lead to confusion.</p> <p>Defenition of SID: "Source-image receptor distance" means the distance from the source to the center of the input surface of the image receptor.</p> <p>As second issue the descriptions of the Distance Source to Detector attribute (0018,1110) and Distance Source to Patient (0018,1111) are made consistent: add note with explanation of SID or SOD.</p>		
Sections of documents affected		
PS 3.3-2003 4, C.4.16, C.8.1.2, C.8.2.1, C.8.7.5, C.8.7.6, C.8.7.8, C.8.11.5, C.8.15.3.6		
Correction Wording:		

4 Symbols and abbreviations

SID	Source-image distance Source Image Receptor Distance
<u>SOD</u>	<u>Source Object Distance</u>

C.4.16 Radiation Dose

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**Table C.4-16
RADIATION DOSE MODULE ATTRIBUTES**

Attribute Name	Tag	Attribute Description
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Distance Source to Detector (SID)	(0018,1110)	Distance in mm from the source to detector center; SID: Source Image Distance. Note: This value is traditionally referred to as Source Image Receptor Distance (SID).
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C.8.1.2 CR Image Module

Table C.8-2
CR IMAGE MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
Distance Source to Detector	(0018,1110)	3	Distance in mm from source to detector center. Note: <u>This value is traditionally referred to as Source Image Receptor Distance (SID).</u>
Distance Source to Patient	(0018,1111)	3	Distance in mm from source to isocenter (center of field of view). Note: <u>This value is traditionally referred to as Source Object Distance (SOD).</u>

C.8.2.1 CT Image Module

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Table C.8-3
CT IMAGE MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
Distance Source to Detector	(0018,1110)	3	Distance in mm from source to detector center. Note: <u>This value is traditionally referred to as Source Image Receptor Distance (SID).</u>
Distance Source to Patient	(0018,1111)	3	Distance in mm from source to isocenter (center of field of view). Note: <u>This value is traditionally referred to as Source Object Distance (SOD).</u>

C.8.7.5 XA Positioner Module

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Table C.8-30
XA POSITIONER MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
Distance Source to Patient	(0018,1111)	3	Distance in mm from source to isocenter (center of field of view). Note: <u>This value is traditionally referred to as Source Object Distance (SOD).</u>
Distance Source to Detector	(0018,1110)	3	Distance in mm from source to detector center. Note: <u>This value is traditionally referred to as Source Image Receptor Distance (SID).</u>

Estimated Radiographic Magnification Factor	(0018,1114)	3	Ratio of Source Image Receptor Distance (SID) over Source Object Distance (SOD).
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C.8.7.6 XRF Positioner Module

**Table C.8-31
XRF POSITIONER MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
Distance Source to Detector	(0018,1110)	3	Distance in mm from source to detector center. Note: This value is traditionally referred to as Source Image Receptor Distance (SID) .
Distance Source to Patient	(0018,1111)	3	Distance in mm from source to isocenter (center of field of view). Note: This value is traditionally referred to as Source Object Distance (SOD) .
Estimated Radiographic Magnification Factor	(0018,1114)	3	Ratio of SID (Source Image Receptor Distance) over SOD (Source Object Distance).
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C.8.7.8 X-Ray Acquisition Dose Module

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**Table C.8-33
X-RAY ACQUISITION DOSE MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
Distance Source to Detector	(0018,1110)	3	Distance in mm from source to detector center. Note: This value is traditionally referred to as Source Image Receptor Distance (SID).
Distance Source to Patient	(0018,1111)	3	Distance in mm from source to the table, support or bucky side that is closest to the Imaging Subject, as measured along the central ray of the X-Ray beam. Note: 1. This definition is less useful in terms of estimating geometric magnification than a measurement to a defined point within the Imaging Subject, but accounts for what is realistically measurable in an automated fashion in a clinical setting. 2. This measurement does not take into account any air gap

			<p>between the Imaging Subject and the "front" of the table or bucky.</p> <p>3. If the detector is not mounted in a table or bucky, then the actual position relative to the patient is implementation or operator defined.</p> <p>4. This value is traditionally referred to as Source Object Distance (SOD).</p>
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C.8.11.5 DX Positioning Module

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**Table C.8-68
DX POSITIONING MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
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Distance Source to Detector	(0018,1110)	3	Distance in mm from source to detector center. Note: This value is traditionally referred to as Source Image Receptor Distance (SID).
Estimated Radiographic Magnification Factor	(0018,1114)	3	Ratio of Source Image Receptor Distance (SID) over Source Object Distance (SOD).
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C.8.15.3.6 CT Geometry Macro

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**Table C.8-122
CT GEOMETRY MACRO ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
>Distance Source to Detector	(0018,1110)	1C	Distance in mm from source to detector center. See C.8.15.3.6.1. Note: This value is traditionally referred to as Source Image Receptor Distance (SID). Required if Frame Type (0008,9007) Value 1 of this frame is ORIGINAL. May be present otherwise.
>Distance Source to Data Collection Center	(0018,9335)	1C	Distance in mm from source to data collection center. See C.8.15.3.6.1. Required if Frame Type (0008,9007) Value 1 of this frame is ORIGINAL. May be present otherwise.