

DICOM Correction Proposal

STATUS	Final Text
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Person Assigned	David Clunie dclunie@dclunie.com
Submitter Name	David Clunie dclunie@dclunie.com
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Correction Number	CP-1299
Log Summary: Add volume based calculation technique for tomosynthesis	
Name of Standard PS 3.3 2011	
Rationale for Correction: The X-Ray 3D IODs (including Breast Tomosynthesis) encode slices reconstructed from projection images that can be described with a Volumetric Properties attribute (0008,9206) value of VOLUME, but there is no appropriate defined term for Volume Based Calculation Technique attribute (0008,9207). A new term of TOMOSYNTHESIS is added, and the use of VOLUME or SAMPLED is suggested. Other tomosynthesis-related images are also described in terms of how they are generated.	
Correction Wording:	

PS 3.3: Add new defined term for Tomosynthesis for X-Ray 3D:

- C.8.21** **X-Ray 3D**
- C.8.21.1** **X-Ray 3D Image Module**

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**Table C.8.21.1-1
X-Ray 3D IMAGE MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
Image Type	(0008,0008)	1	Image identification characteristics. See C.8.21.1.1.1 for specialization.
<i>Include 'Common CT/MR Image Description Macro' Table C.8-131</i>			
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C.8.21.1.1 X-Ray 3D Image Module Attribute Description

C.8.21.1.1.1 Image Type and Frame Type

In addition to the requirements specified in C.8.16.1 Image Type, the following additional requirements and Defined Terms are specified.

C.8.21.1.1.1.1 Pixel Data Characteristics

Value 1 of Image Type (0008,0008) and Frame Type (0008,9007) is discussed in C.8.16.1.1. No additional requirements or Defined Terms.

C.8.21.1.1.1.2 Patient Examination Characteristics

Value 2 of Image Type (0008,0008) and Frame Type (0008,9007) is discussed in C.8.16.1.2. No additional requirements or Defined Terms.

C.8.21.1.1.2 Volumetric Properties Attribute

The value of the Volumetric Properties attribute (0008,9206) is discussed in C.8.16.2.1.2.

- Notes:
- 1. For regularly sampled tomosynthesis slices reconstructed from projection X-Ray data, a value of VOLUME or SAMPLED is appropriate.
 - 2. For slabs constructed by averaging adjacent regularly sampled tomosynthesis slices to produce thicker slices, a value of SAMPLED is appropriate.
 - 3. For mathematically generated 2D views (e.g., constructed as Maximum Intensity Projections) of regularly sampled tomosynthesis slices, a value of SAMPLED is appropriate.

C.8.21.1.1.3 Volume Based Calculation Technique Attribute

The value of the Volume Based Calculation Technique attribute (0008,9207) is discussed in C.8.16.2.1.3.

Table C.8-x3 specifies the additional Defined Terms for the Volume Based Calculation Technique (0008,9207) attribute to those in Table C.8-134 in C.8.16.2.1.3.

Table C.8-x3

ADDITIONAL VOLUME BASED CALCULATION TECHNIQUE ATTRIBUTE VALUES FOR X-RAY 3D

<u>Defined Term Name</u>	<u>Defined Term Description</u>
<u>TOMOSYNTHESIS</u>	<u>Construction of tomographic slices or slabs from limited angle projection data.</u>

- Notes:
- 1. For tomosynthesis slices or slabs reconstructed from projection X-Ray data, a value of TOMOSYNTHESIS is appropriate.
 - 3. For mathematically generated 2D views constructed as Maximum Intensity Projections of tomosynthesis slices, a value of MAX IP is appropriate.