

DICOM Correction Proposal Form

Correction Number CP-389	
Log Summary: Add Volume Measurement to TID 40xx	
Type of Modification Clarification	Name of Standard PS 3.16 2003
<p>Rationale for Correction</p> <p>During development of the Mammography CAD SR IOD an omission was made regarding volumetric measurements based on single images. In mammography it is common to measure the volume of a lesion based on the projection of that lesion onto two orthogonal planes. However, mammography practice in some countries does not use orthogonal views on a regular basis, but volume measurements might still be calculated for Single Image Findings.</p> <p>Given a single image with a two-dimensional measurement of a finding, it is possible to calculate an estimate of the third dimension based on the nature of the finding. For example, masses are dense and do not always compress (i.e., flatten). So the round, or spherical nature of masses could be used to calculate a third dimension for the measurement. Note that the concept name for a volume measurement, "Volume estimated from single 2D region" already exists in CID 7472, invoked from row 1 of TID 1402.</p> <p>This correction proposal adds one row to each of five templates: TID 4009, 4010, 4011, 4012 and 4013.</p>	
Sections of documents affected PS 3.16, Annex A	
Correction Wording: Add a user optional row to include Volume Measurement (TID 1402) to each of the following templates	

TID 4009
MAMMOGRAPHY CAD INDIVIDUAL CALCIFICATION
Type: Non-Extensible

NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		CODE	EV (111009, DCM, "Calcification Type")	1-n	MC	At least one of rows 1, 2, 3 shall be present	DCID (6010) "Mammography Calcification Types"
2		INCLUDE	DTID (1400) "Linear Measurement"	1-n	MC	At least one of rows 1, 2, 3 shall be present	The by-reference relationship to the IMAGE in TID (1400) "Linear Measurement" shall be used.
3		INCLUDE	DTID (1401) "Area Measurement"	1-n	MC	At least one of rows 1, 2, 3 shall be present	The by-reference relationship to the IMAGE in TID (1401) "Area Measurement" shall be used.
4		INCLUDE	DTID (1402) "Volume Measurement"	1-n	U		The by-reference relationship to the IMAGE in TID (1402) "Volume Measurement" shall be used.

TID 4010
MAMMOGRAPHY CAD CALCIFICATION CLUSTER
Type: Non-Extensible

NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		CODE	EV (111009, DCM, "Calcification Type")	1-n	MC	At least one of rows 1, 2, 3, 4, 5 shall be present	DCID (6010) "Mammography Calcification Types"
2		CODE	EV (111008, DCM, "Calcification Distribution")	1	MC	At least one of rows 1, 2, 3, 4, 5 shall be present	DCID (6012) "Calcification Distribution Modifier"
3		NUM	EV (111038, DCM, "Number of calcifications")	1	MC	At least one of rows 1, 2, 3, 4, 5 shall be present	UNITS = EV (1, UCUM, "Unity") Value = Integer >= 1
4		INCLUDE	DTID (1400) "Linear Measurement"	1-n	MC	At least one of rows 1, 2, 3, 4, 5 shall be present	The by-reference relationship to the IMAGE in TID (1400) "Linear Measurement" shall be used.
5		INCLUDE	DTID (1401) "Area Measurement"	1-n	MC	At least one of rows 1, 2, 3, 4, 5 shall be present	The by-reference relationship to the IMAGE in TID (1401) "Area Measurement" shall be used.
6		INCLUDE	DTID (1402) "Volume Measurement"	1-n	U		The by-reference relationship to the IMAGE in TID (1402) "Volume Measurement" shall be used.

TID 4011
MAMMOGRAPHY CAD DENSITY
Type: Non-Extensible

NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		CODE	EV (111035, DCM, "Lesion Density")	1	MC	At least one of rows 1, 2, 3, 4, 5 shall be present	DCID (6008) "Density Modifier"
2		CODE	EV (M-020F9, SNM3, "Shape")	1	MC	At least one of rows 1, 2, 3, 4, 5 shall be present	DCID (6004) "Mammography Characteristics of Shape"

NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
3		CODE	EV (111037, DCM, "Margins")	1-n	MC	At least one of rows 1, 2, 3, 4, 5 shall be present	DCID (6006) "Mammography Characteristics of Margin"
4		INCLUDE	DTID (1400) "Linear Measurement"	1-n	MC	At least one of rows 1, 2, 3, 4, 5 shall be present	The by-reference relationship to the IMAGE in TID (1400) "Linear Measurement" shall be used.
5		INCLUDE	DTID (1401) "Area Measurement"	1-n	MC	At least one of rows 1, 2, 3, 4, 5 shall be present	The by-reference relationship to the IMAGE in TID (1401) "Area Measurement" shall be used.
6		INCLUDE	DTID (1402) "Volume Measurement"	1-n	U		The by-reference relationship to the IMAGE in TID (1402) "Volume Measurement" shall be used.

TID 4012
MAMMOGRAPHY CAD NON-LESION
Type: Non-Extensible

NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		CODE	EV (111039, DCM, "Object type")	1	M		DCID (6040) "Non-Lesion Object Type"
2		INCLUDE	DTID (1400) "Linear Measurement"	1-n	U		The by-reference relationship to the IMAGE in TID (1400) "Linear Measurement" shall be used.
3		INCLUDE	DTID (1401) "Area Measurement"	1-n	U		The by-reference relationship to the IMAGE in TID (1401) "Area Measurement" shall be used.
4		INCLUDE	DTID (1402) "Volume Measurement"	1-n	U		The by-reference relationship to the IMAGE in TID (1402) "Volume Measurement" shall be used.

TID 4013
MAMMOGRAPHY CAD SELECTED REGION
Type: Non-Extensible

NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		TEXT	EV (111058, DCM, "Selected Region Description")	1	M		
2		INCLUDE	DTID (1400) "Linear Measurement"	1-n	U		The by-reference relationship to the IMAGE in TID (1400) "Linear Measurement" shall be used.
3		INCLUDE	DTID (1401) "Area Measurement"	1-n	U		The by-reference relationship to the IMAGE in TID (1401) "Area Measurement" shall be used.
4		INCLUDE	DTID (1402) "Volume Measurement"	1-n	U		The by-reference relationship to the IMAGE in TID (1402) "Volume Measurement" shall be used.