

1	Status	Final Text
2	Date of Last Update	2018/11/10
3	Person Assigned	David Clunie
4		mailto:dclunie@dclunie.com
5	Submitter Name	QIICR
6	Submission Date	2018/02/13

7	Correction Number CP-1789	
8	Log Summary: Allow categorical observations without measurements for ROIs in TID 1500	
9	Name of Standard	
10	PS3.16 2018d	
11	Rationale for Correction:	
12	There are use cases for spatially locating ROIs and providing findings or categorical observations (qualitative evaluations) without	
13	measurements.	
14	Relax the requirement to always have measurements for planar and volumetric ROIs and other measurements in Measurement	
15	Reports, and rename the templates accordingly.	
16	Correction Wording:	

Amend DICOM PS3.16 as follows (changes to existing text are bold and underlined for additions and ~~struckthrough~~ for removals):

TID 1410 Planar ROI Measurements and Qualitative Evaluations

This Template provides a general structure to report ~~one or more~~ measurements for some metric, e.g., density, flow, or concentration, and/or qualitative evaluations over a planar region of interest in an image. The ROI may be specified by an SCOORD on an image, or by a Segmentation Image.

Table TID 1410. Planar ROI Measurements

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (125007, DCM, "Measurement Group")	1	M		
...				
5	>	CONTAINS	SCOORD	EV (111030, DCM, "Image Region")	1	MC	XOR Row 7	GRAPHIC TYPE = not {MULTIPOINT}
6	>>	SELECTED FROM	IMAGE		1	M		
7	>	CONTAINS	IMAGE	EV (121214, DCM, "Referenced Segmentation Frame")	1	MC	XOR Row 5	Reference shall be to a Segmentation Image, with a single value specified in Referenced Frame Number, and with a single value specified in Referenced Segment Number
8	>	CONTAINS	IMAGE	EV (121233, DCM, "Source image for segmentation")	1	MC	IFF Row 7	
9	>	CONTAINS	IMAGE	EV (121200, DCM, "Illustration of ROI")	1	U		
10	>	CONTAINS	COMPOSITE	EV (126100, DCM, "Real World Value Map used for measurement")	1	U		SOP Class UID shall be Real World Value Mapping Storage ("1.2.840.10008.5.1.4.1.1.67")

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
11	>	CONTAINS	INCLUDE	DTID 1419 "ROI Measurements"	1	MU		\$Measurement = \$Measurement \$Units = \$Units \$ModType = \$ModType \$ModValue = \$ModValue \$Method = \$Method \$Derivation = \$Derivation \$TargetSite = \$TargetSite \$TargetSiteMod = \$TargetSiteMod \$Equation = \$Equation \$RefAuthority = \$RefAuthority \$RangeAuthority = \$RangeAuthority \$DerivationParameter = \$DerivationParameter \$DerivationParameterUnits = \$DerivationParameterUnits
12	>	CONTAINS	CODE	\$QualitativeEvaluations	1-n	U		
13	>	CONTAINS	TEXT	\$QualitativeEvaluations	1-n	U		

Content Item Descriptions

>...	...
Row 5	<u>To describe an infinitely small area, such as the center of a lesion, a Graphic Type of POINT may be used.</u>
>...	...
Row 11	<u>Measurements may be omitted, for example if it is desired to describe only the location of a finding or to provide categorical information about it.</u>
Rows 12, 13	Allows encoding a flat list of name-value pairs that are coded questions with coded or text answers, for example, to record categorical observations related to the subject of the measurement group.

TID 1411 Volumetric ROI Measurements and Qualitative Evaluations

This Template provides a general structure to report **one or more** measurements for some metric, e.g., density, flow, or concentration, **and/or qualitative evaluations** over a volumetric region of interest in a set of images or a Frame of Reference. The volumetric ROI may be specified by a set of SCOODs on an image set representing a volume, by a volumetric Segmentation Image, by a volume defined in a Surface Segmentation, or by a SCOOD3D.

Table TID 1411. Volumetric ROI Measurements

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (125007, DCM, "Measurement Group")	1	M		

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint	
3	...								
4	5	>	CONTAINS	SCOORD	EV (111030, DCM, "Image Region")	1-n	MC	XOR Rows 7, 10	GRAPHIC TYPE = not {MULTIPOINT}
6	6	>>	SELECTED FROM	IMAGE		1	M		
8	7	>	CONTAINS	IMAGE	EV (121191, DCM, "Referenced Segment")	1	MC	XOR Rows 5, 10	Reference shall be to a Segmentation Image or Surface Segmentation object, with a single value specified in Referenced Segment Number
13	10	>	CONTAINS	SCOORD3D	EV (121231, DCM, "Volume Surface")	1	MC	XOR Rows 5, 7	GRAPHIC TYPE = {ELLIPSOID or POINT}
16	11	>	CONTAINS	IMAGE	EV (121233, DCM, "Source image for segmentation")	1-n	MC	XOR Row 12 and IFF (Row 7 or Row 10)	
19	12	>	CONTAINS	UIDREF	EV (121232, DCM, "Source series for segmentation")	1	MC	XOR Row 11 and IFF ((Row 7 or Row 10)	
22	...								
23	15	>	CONTAINS	INCLUDE	DTID 1419 "ROI Measurements"	1	MU		\$Measurement = \$Measurement \$Units = \$Units \$ModType = \$ModType \$ModValue = \$ModValue \$Method = \$Method \$Derivation = \$Derivation \$TargetSite = \$TargetSite \$TargetSiteMod = \$TargetSiteMod \$Equation = \$Equation \$RefAuthority = \$RefAuthority \$RangeAuthority = \$RangeAuthority \$DerivationParameter = \$DerivationParameter \$DerivationParameterUnits = \$DerivationParameterUnits
41	16	>	CONTAINS	CODE	\$QualitativeEvaluations	1-n	U		
42	17	>	CONTAINS	TEXT	\$QualitativeEvaluations	1-n	U		

Content Item Descriptions

...	...
-----	-----

1 2	Rows 5, 10	<u>To describe an infinitely small volume, such as the center of a lesion, a Graphic Type of POINT may be used.</u>
3
4 5	Row 15	<u>Measurements may be omitted, for example if it is desired to describe only the location of a finding or to provide categorical information about it.</u>
6 7	Rows 16, 17	Allows encoding a flat list of name-value pairs that are coded questions with coded or text answers, for example, to record categorical observations related to the subject of the measurement group.

TID 1501 Measurement and Qualitative Evaluation Group

This Template groups Measurements and/or qualitative evaluations into a Measurement Group.

...

Table TID 1501. Measurement Group

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
14 15	1	CONTAINS	CONTAINER	EV (125007, DCM, "Measurement Group")	1	M		
16	...							
17 32 18	10	>	CONTAINS	INCLUDE	DTID 300 "Measurement"	1-n	MU	\$Measurement = \$Measurement \$Units = \$Units \$ModType = \$ModType \$ModValue = \$ModValue \$Method = \$Method \$Derivation = \$Derivation \$TargetSite = \$TargetSite \$TargetSiteMod = \$TargetSiteMod \$Equation = \$Equation \$RefAuthority = \$RefAuthority \$RangeAuthority = \$RangeAuthority \$DerivationParameter = \$DerivationParameter \$DerivationParameterUnits = \$DerivationParameterUnits
33	11	>	CONTAINS	CODE	\$QualitativeEvaluations	1-n	U	
34	12	>	CONTAINS	TEXT	\$QualitativeEvaluations	1-n	U	