

1	Status	Letter Ballot
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7	Submission Date	2023/10/01

8	Correction Number CP-2359	
9	Log Summary: Add representative and boundary point concepts	
10	Name of Standard	
11	PS3.16	
12	Rationale for Correction:	
13	In gathering training annotations, one approach is to have a human user select an arbitrary representative point (Benenson. doi:10.48550/arXiv.2210.14142), rather than one that has a specific spatial relationship (e.g., being the center point) (but which is distinct from a seed point, since there may be no segmentation involved).	
14		
15		
16	Another approach is to sample points nominally on the boundary without providing a complete bounding box (Papadopoulos. doi:10.48550/arXiv.1708.02750), and being on the boundary is distinct from being "bounded by" (contained, typically by a rectangle).	
17		
18	[Ed.Note: definition of "representative" is after <i>The American Heritage® Dictionary, 5Ed</i>]	
19	[Ed.Note: SCT:	
20	711101009 <i>Anatomical point (body structure)</i>	
21	698969006 <i>Material anatomical point (body structure)</i>	
22	413529001 <i>Anatomic reference point (qualifier value)</i>	
23	183973000 <i>Body surface point (body structure)</i>	
24	<i>were also considered, but are not sufficient since not all representative points are anatomic.]</i>	
25	[Ed.Note: NCI: C45793 <i>Reference Point - "A specified location to which measurements are referred." was also considered but is too specific (since there may be no measurement involved).]</i>	
26		
27	Correction Wording:	

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

CID 219 Geometry Graphical Representation

Version: ~~20221004~~yyyymmdd

Table CID 219. Geometry Graphical Representation

Coding Scheme Designator	Code Value	Code Meaning	SNOMED-RT ID	UMLS Concept Unique ID
SCT	75958009	Bounded by	G-C020	C0332297
DCM	111010	Center		
DCM	128137	Geometric Centerpoint		
DCM	128138	Center of Mass		
DCM	111041	Outline		
DCM	130490	Centerline		
DCM	128139	Seed point		
<u>DCM</u>	<u>ddd001</u>	<u>Representative point</u>		
<u>DCM</u>	<u>ddd002</u>	<u>Boundary point</u>		

D DICOM Controlled Terminology Definitions (Normative)

Table D-1. DICOM Controlled Terminology Definitions (Coding Scheme Designator "DCM" Coding Scheme Version "01")

Code Value	Code Meaning	Definition	Notes
111010	Center	The central point of a finding or feature.	May be used as the Purpose of Reference for Content Item of value type COMPOSITE or SCOOD, or a qualitative observation on an ROI.
128137	Geometric Centerpoint	The geometric center point of a feature, such as an organ, implanted device or morphologic anomaly.	
128138	Center of Mass	The center of mass of a feature, such as an organ, implanted device or morphologic anomaly	
128139	Seed point	Point in an image or space from which segmentation is initiated, e.g., by region growing.	May be selected by a human or an algorithm. Not necessarily the center of the feature being segmented.
<u>ddd001</u>	<u>Representative point</u>	<u>Point in an image or space that is representative (serves as an example or type for others of the same classification) of a feature, such as an organ, implanted device or morphologic anomaly.</u>	<u>Not necessarily the center of the feature being segmented.</u>
<u>ddd002</u>	<u>Boundary point</u>	<u>Point in an image or space on the boundary of a feature, such as an organ, implanted device or morphologic anomaly.</u>	