

DICOM Change Proposal

STATUS	Assigned
Date of Last Update	2024/12/20
Person Assigned	Nick Bevins
Submitter Name	Nick Bevins on behalf of WG28
Submission Date	2024/10/30

Change Number	CP-2470
Log Summary:	Add organ dose ref authorities and attenuator categories, materials
Name of Standard	PS3.16
Rationale for Change:	This CP adds additional coded terms to CIDs 10040, 10066, and 10067 with additional radiopharmaceutical organ dose reference authorities, an attenuator category, and attenuator materials, respectively. For the reference authorities (CID 10040), the CP adds ICRP Publication 128 (the latest in the 53, 80, 106 series) and RADAR 2017 (a well-established reference for radiopharmaceutical dose assessment). The attenuator category (CID 10066) added in this CP is a compression device to account for mammography systems. The attenuator materials (CID 10067) added are PMMA and polycarbonate. Both plastics are commonly used in medical imaging equipment.
Change Wording:	

Modify PS3.16 CID 10040 as follows:

5 CID 10040 Radiopharmaceutical Organ Dose Reference Authority

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML
Keyword: RadiopharmaceuticalOrganDoseReferenceAuthority
FHIR Keyword: dicom-cid-10040-RadiopharmaceuticalOrganDoseReferenceAuthority
Type: Extensible
Version: 20140419
UID: 1.2.840.10008.6.1.972

Table CID 10040. Radiopharmaceutical Organ Dose Reference Authority

Coding Scheme Designator	Code Value	Code Meaning
DCM	113520	MIRD Pamphlet 1
DCM	113521	ICRP Publication 53
DCM	113526	MIRDOSE
DCM	113527	OLINDA-EXM
DCM	113528	Package Insert

Coding Scheme Designator	Code Value	Code Meaning
DCM	113529	Institutionally Approved Estimates
DCM	113530	Investigational New Drug
DCM	113522	ICRP Publication 80
DCM	113523	ICRP Publication 106
<u>DCM</u>	<u>xxxxx1</u>	<u>ICRP Publication 128</u>
<u>DCM</u>	<u>xxxxx2</u>	<u>RADAR 2017</u>

15 **Modify PS3.16 CID 10066 and CID 10067 as follows:**

CID 10066 Attenuator Category

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML
 Keyword: AttenuatorCategory
 FHIR Keyword: dicom-cid-10066-AttenuatorCategory
 Type: Extensible
 Version: 20170405
 UID: 1.2.840.10008.6.1.1160

Table CID 10066. Attenuator Category

Coding Scheme Designator	Code Value	Code Meaning	SNOMED-RT ID	UMLS Concept Unique ID
DCM	128459	Table		
DCM	128460	Table Core		
DCM	128461	Table Outer Liner		
DCM	128462	Table Pad		
DCM	65577000	X-Ray shield	A-2C152	C0183263
DCM	128431	Beam Block		
DCM	228739009	Shielding block	A-010FE	C0454148
DCM	128492	Patient Support		
DCM	113771	X-Ray Filter		
<u>SCT</u>	<u>129460009</u>	<u>Compression paddle</u>		

CID 10067 Radiation Attenuator Material

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML
 Keyword: RadiationAttenuatorMaterial
 FHIR Keyword: dicom-cid-10067-RadiationAttenuatorMaterial
 Type: Extensible
 Version: 20170405
 UID: 1.2.840.10008.6.1.1161

Table CID 10067. Radiation Attenuator Material

Coding Scheme Designator	Code Value	Code Meaning	SNOMED-RT ID	UMLS Concept Unique ID
<i>Include CID 10006 "X-Ray Filter Material"</i>				
SCT	256501007	Carbon Fiber	F-61202	C0108411
UMLS	C0064329	Kevlar Aramid Fiber		C0064329
SCT	88014003	Beryllium	C-12300	C0108411
<u>SCT</u>	<u>427811002</u>	<u>Polymethyl methacrylate</u>		
<u>SCT</u>	<u>412154003</u>	<u>Polycarbonate</u>		

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Modify PS3.16 Table D-1 as follows:

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

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Code Value	Code Meaning	Definition	Notes
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<u>xxxxx1</u>	<u>ICRP Publication 128</u>	<u>Reference Authority</u> <u>ICRP, 2015. Radiation Dose to Patients from Radiopharmaceuticals: A Compendium of Current Information Related to Frequently Used Substances. ICRP Publication 128. Ann. ICRP 44(2S).</u>	
<u>xxxxx2</u>	<u>RADAR 2017</u>	<u>Reference Authority</u> <u>Stabin MG, Siegel JA. RADAR Dose Estimate Report: A Compendium of Radiopharmaceutical Dose Estimates Based on OLINDA/EXM Version 2.0. J Nucl Med. 2018 Jan;59(1):154-160. doi: 10.2967/jnumed.117.196261.</u>	
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