

DICOM Correction Proposal

STATUS	Letter Ballot
Date of Last Update	2025-01-20
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Correction Number	CP-2409	
Log Summary:	Multiple Inconsistencies of DCM Code Meanings in PS3.16 table D-1 versus Context Groups	
Name of Standard:	PS3.16	
Rationale for Correction: PS 3.16 contains inconsistencies where the Code Meaning used in a CID is different than the Code Meaning given in Table D-1. DICOM Controlled Terminology Definitions.		
Table D-1. DICOM Controlled Terminology Definitions is the formal definition of a DCM Coded Concept. A code may be changed in the wording of the Code Meaning (i.e., correct typos). But a Coded Concept must not be changed in its definition.		
a. In the case of DCM codes 109931 / 109932, Code Meaning is swapped in D-1 against in CID 8301		
DCM Code	Code Meaning in D-1	Code Meaning in CID 3487
109931	DIN Grayscale Pattern	DIN Geometry Pattern
109932	DIN Geometry Pattern	DIN Grayscale Pattern
<ul style="list-style-type: none">- (109931, DCM, "DIN Grayscale Pattern") will be continued in use, as is in D-1.- (109931, DCM, "DIN Geometry Pattern") will be continued in use, as is in D-1.- Context Groups must be aligned with Table D-1.		
b. In the case of codes 122383 / 122384, Code Meaning is swapped in D-1 against in CID 3487		
DCM Code	Code Meaning in D-1	Code Meaning in CID 3487
122383	Entire Pullback	Stented Region
122384	Stented Region	Entire Pullback
<ul style="list-style-type: none">- (122383, DCM, "Entire Pullback") will be continued in use, as is in D-1.- (122384, DCM, "Stented Region") will be continued in use, as is in D-1.- Context Groups must be aligned with Table D-1.		
c. Some differences highlight obvious typos:		
126345 in D-1:	Gamma Capillary Transit Time (GCCT) Model	
126345 in CID 4101:	Gamma Capillary Transit Time (GCTT) Model	
➔ The abbreviation in parenthesis will be dropped in both variants, because Code Meaning already contains the long text of the abbreviation. Other Codes may exist that have abbreviation and long text of abbreviation in Code Meaning are also addressed in this CP:		
(126310, DCM, "Least Mean Square (LMS) deconvolution")		
(126311, DCM, "Singular Value Decomposition (SVD) deconvolution")		

- d. There are cases where the same Code Meaning from D-1 is used multiple times in Context Groups, but different in other Context Groups.

Patient Positioning **Problem** used in CID 4222
Positioning from D-1 correctly used in CID 6135, CID 7011, E-1. French, F-1. Japanese

→ In such cases the more often variant should be favored.

In the observed cases it was the variant from D-1 to be favored. Context Group to be changed.

- e. In most of the other cases the text is slightly textual different between D-1 and Context Groups.

There are a few cases where only a space makes the difference

122247 in D-1: $VO2_{male} = BSA (138.1 - 11.49 * \log_e(\text{age}) + 0.378 \text{ HRf})$

122247 in CID 3664: $VO2_{male} = BSA (138.1 - 11.49 * \log_e(\text{age}) + 0.378 \text{ HRf})$

→ Corrections will be made to D-1 (Code Meaning), not in the Context Groups (Code Meaning), as long as changes do not change the purpose of a Coded Concept, and the Definition does not need changes.

In some cases the text in D-1 is more precise and its interpretation does not depend on context:

CodeValue	Code Meaning in D-1	Code Meaning in CID 6164 Time Interval
111399	Timeframe uncertain	Not sure

→ In most other cases it is proposed to change the text in table D-1, and to keep the text used in the Context Groups.

→ In some cases, there is inconsistency between the use of “Radiotherapy” vs. “RT” in Code Meaning
It is understood that the radiotherapy community favors the term “RT” in their (WG-07) latest CPs and Supplements, so it is proposed to change in D-1 the “Radiotherapy*” concepts to use the terms “RT ...” in Code Meaning.

Discussion of necessary changes to Table D-1 (the changed table is listed below):

CodeValue	Code Meaning in Table D-1 before change:	Code Meaning in Table D-1 after change (Code Meaning as taken from CID):	In which Context Group Code/Code Meaning is used
109014	350f thermal CO	350f thermal/dye dilution CO	CID 3337 Hemodynamic Annotation CID is also referenced in PS3.3 A.34.6.4.9 Waveform Annotation Module
109015	700f thermal CO	700f thermal/dye dilution CO	
109031	Start of thermal cardiac output bolus	Start of thermal CO	
111443	Target completely contained in the specimen	Target contained in the specimen	CID 6066 Target Confirmation
113082	N-acetylaspartate/Creatine Ratio	N-acetylaspartate/Creatine Ratio	CID 4033 MR Proton Spectroscopy Metabolite Delete obsolete space characters.
113083	N-acetylaspartate/Choline Ratio	N-acetylaspartate/Choline Ratio	
113096	Creatine+Choline/Citrate Ratio	Creatine+Choline/Citrate Ratio	
113132	Single subject selected from group	Single subject extracted from group	CID 7165 Abstract Segmentation Type
113211	Deterministic Tracking Algorithm	Deterministic	CID 7262 Diffusion Tractography Algorithm Family CID is used in PS3.3, C.8.33.2 Tractography Results Module , but codes not mentioned there.
113212	Probabilistic Tracking Algorithm	Probabilistic	
113213	Global Tracking Algorithm	Global	
113217	Bootstrap Tracking Algorithm	Bootstrap	CID 7260 Diffusion Acquisition Value Type referenced in PS3.3 C.8.33.2 Tractography Results Module
113227	Multi Shot EPI	Multiple Shot EPI	
113543	Generator	Radioisotope Generator	CID 10041 Source of Radioisotope Activity Information D-1 column “Notes” has text “Radioisotope Generator”
121130	Start Procedure Action Item	Start Procedure Action	CID 3421 Procedure Action
121131	End Procedure Action Item	End Procedure Action	
121132	Suspend Procedure Action Item	Suspend Procedure Action	
121133	Resume Procedure Action Item	Resume Procedure Action	
121163	By ventilator	Oxygen Administration by ventilator	CID 3531 Oxygen Administration Suggested text matches better similar SCT <small>Table CID 3531. Oxygen Administration</small>

Coding Scheme Designator	Code Value	Code Meaning
SCT	371907003	Oxygen Administration by nasal cannula
SCT	371908008	Oxygen Administration by mask
DCM	121163	Oxygen Administration by ventilator

121734	RT Treatment QA with RT Ion Plan Difference Check	RT Treatment QA by RT Ion Plan Difference Check	Used in CID 9241 Radiotherapy General Workitem Definition Other similar DCM codes 121731, 121732, 121733 have same wording "by" <table><tr><td>121731</td><td>RT Treatment QA by RT Plan Dose Check</td></tr><tr><td>121732</td><td>RT Treatment QA by RT Plan Difference Check</td></tr><tr><td>121733</td><td>RT Treatment QA by RT Ion Plan Dose Check</td></tr><tr><td>121734</td><td>RT Treatment QA with RT Ion Plan Difference Check</td></tr></table>	121731	RT Treatment QA by RT Plan Dose Check	121732	RT Treatment QA by RT Plan Difference Check	121733	RT Treatment QA by RT Ion Plan Dose Check	121734	RT Treatment QA with RT Ion Plan Difference Check
121731	RT Treatment QA by RT Plan Dose Check										
121732	RT Treatment QA by RT Plan Difference Check										
121733	RT Treatment QA by RT Ion Plan Dose Check										
121734	RT Treatment QA with RT Ion Plan Difference Check										
122160	Derived Area, Non-Valve	Derived Non-Valve Area	CID 3614 Non-mitral Valve Area								
122242	BSA = 0.0235*WT^0.51456*HT^0.42246	BSA = 0.0235*WT^0.51456*HT ^{cm} ^0.42246	CID 3663 Body Surface Area Equation D-1 mentions "cm" in Notes column as "BSA = 0.0235*WT[kg]^0.51456*HT ^{cm} ^0.42246"								
122243	BSA = 0.024265*WT^0.5378*HT^0.3964	BSA = 0.024265*WT^0.5378*HT ^{cm} ^0.3964	CID 3663 Body Surface Area Equation D-1 mentions "cm" in Notes column as "BSA = 0.024265*WT[kg]^0.5378*HT ^{cm} ^0.3964"								
122247	VO2male = BSA (138.1 - 11.49 * loge(age) + 0.378 * HRf)	VO2male = BSA (138.1 - 11.49 * loge(age) + 0.378*HRf)	CID 3664 Oxygen Consumption Equation/Table								
122248	VO2female = BSA (138.1 - 17.04 * loge(age) + 0.378 * HRf)	VO2female = BSA (138.1 - 17.04 * loge(age) + 0.378*HRf)									
122465	RCA Region in ROA Projection	RCA Region in RAO Projection	CID 3460 Circumferential Extent Code Meanings and Notes have "RAO" for 6 other codes 122464 to 122469. "RAO" seems to be correct and "ROA" a typo.								
122730	Bazett QTc Algorithm	Bazett QT Correction Algorithm	CID 3678 QT Correction Algorithm								
122731	Hodges QTc Algorithm	Hodges QT Correction Algorithm	CID 3205 Indications for Pharmacological Stress Test Changed text appears in D-1 column "Notes".								
122764	Weight exceeds equipment limit	Patient weight exceeds equipment limit									
125206	Cube	Cube Method	CID 12228 Echocardiography Volume Method								
126037	Standardized Added Metabolic Activity (SAM)	Standardized Added Metabolic Activity	CID 7466 PET Region of Interest Measurement								
126038	Standardized Added Metabolic Activity (SAM) Background	Standardized Added Metabolic Activity Background									
126325	IAUC ^{BN} 60	IAUC60 ^{BN}	CID 4109 Model-Independent Dynamic Contrast Analysis Parameter D-1 column "Notes" mentions "IAUC60 ^{BN} "								
126326	IAUC ^{BN} 90	IAUC90 ^{BN}	CID 4109 Model-Independent Dynamic Contrast Analysis Parameter D-1 column "Notes" mentions "IAUC90 ^{BN} "								
126327	AUC ^{BN} 180 <div>"I" is missing</div>	IAUC180 ^{BN}	CID 4109 Model-Independent Dynamic Contrast Analysis Parameter D-1 column "Notes" mentions "IAUC180 ^{BN} "								
126345	Gamma Capillary Transit Time (GCCT) Model	Gamma Capillary Transit Time (GCTT) Model	CID 4101 Tracer Kinetic Model								
126510	Monoclonal Antibody (mAb) ^64^Cu	Monoclonal Antibody ^64^Cu	CID 4021 PET Radiopharmaceutical, used in PS3.3 C.8.22.4 Enhanced PET Isotope Module								
126511	Monoclonal Antibody (mAb) ^89^Zr	Monoclonal Antibody ^89^Zr									
128011	Neuroradiologic i Imaging Specialty	Neuroradiology y Imaging Specialty	CID 7449 Reader Specialty								
128492	Physical Support	Patient Support	CID 10066 Attenuator Category								
130047	External Body Structure	External Body Model	Used in two Context Groups: CID 9501 Prescription Anatomy Category used in PS3.3 C.36.6 RT Enhanced Prescription Module CID 9580 RT Segmentation Property Category, used in C.8.8.8 RT ROI Observations Module								
130454	Resolved by overriding Interlock	Interlock Overridden	CID 9563 Radiotherapy Interlock Resolution, used in PS3.3 C.36.2.2.18 Interlock Macro								
130455	Resolved by repositioning Patient	Patient Repositioned									
RTDOSE	Radiotherapy Dose	RT Dose	CID 32 Non-Acquisition Modality								
RTIMAGE	Radiotherapy Image	RT Image	CID 29 Acquisition Modality								
RTPLAN	Radiotherapy Plan	RT Plan	CID 32 Non-Acquisition Modality								
RTRECORD	Radiotherapy Treatment Record	RT Treatment Record	CID 32 Non-Acquisition Modality								

RTSTRUC T	Radiotherapy Structure Set	RT Structure Set	CID 32 Non-Acquisition Modality
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Correction Wording:

Swap the code meanings to be consistent with Table D-1 as follows:

Change DICOM PS3.16, Table CID 8301. Test Pattern Code:

Coding Scheme Designator	Code Value	Code Meaning
DCM	109931	DIN Geometry Grayscale Pattern
DCM	109932	DIN Grayscale Geometry Pattern

Change DICOM PS3.16, Table CID 3487. Intravascular Volumetric Region:

Coding Scheme Designator	Code Value	Code Meaning
DCM	122383	Stented Region Entire Pullback
DCM	122384	Entire Pullback Stented Region

For reference, relevant codes in [PS 3-16 Table D-1](#) (unchanged):

CodeValue	Code Meaning	Definition
109931	DIN Grayscale Pattern	Test image "Bild 2" for the gray-scale reproduction of imaging devices. See [DIN 6868-57] .
109932	DIN Geometry Pattern	Test image "Bild 3" for the geometrical imaging properties of imaging devices. See [DIN 6868-57] .
[...]		
122383	Entire Pullback	Measurement region that encompasses the entire vessel imaged in a single pullback acquisition.
122384	Stented Region	Measurement region occupied by the stent .

Correct Code Meanings that contain redundant abbreviations:

Change DICOM PS3.16, Update [Table D-1. DICOM Controlled Terminology Definitions](#), remove abbreviations in parentheses:

Coding Scheme Designator	Code Value	Code Meaning
DCM	126310	Least Mean Square-(LMS) deconvolution
DCM	126311	Singular Value Decomposition-(SVD) deconvolution
DCM	126343	First Pass Leakage Profile-(FPLP) Model
DCM	126344	Shutter-Speed Model-(SSM)
DCM	126345	Gamma Capillary Transit Time-(GCCT) Model
DCM	126346	Adiabatic Tissue Homogeneity-(ATH) Model
DCM	126347	Two Compartment Exchange-(2CX) Model

Change DICOM PS3.16, update [Table CID 4101. Tracer Kinetic Model](#), remove abbreviations in parentheses:

Coding Scheme Designator	Code Value	Code Meaning
DCM	126340	Standard Tofts Model
DCM	126341	Extended Tofts Model
DCM	126343	First Pass Leakage Profile-(FPLP) Model
DCM	126344	Shutter-Speed Model-(SSM)
DCM	126345	Gamma Capillary Transit Time-(GCTT) Model
DCM	126346	Adiabatic Tissue Homogeneity-(ATH) Model
DCM	126347	Two Compartment Exchange-(2CX) Model

Change DICOM PS3.16, update [Table CID 4105. Perfusion Analysis Method](#), remove abbreviations in parentheses:

Coding Scheme Designator	Code Value	Code Meaning
DCM	126310	Least Mean Square-(LMS) deconvolution
DCM	126311	Singular Value Decomposition-(SVD) deconvolution

Make Code Meaning consistent between D-1 and Context Groups:

Informative notes to implementers for both changes:

- In Table D-1 and [CID 30. DICOM Device](#) CodeValue "M3D" has Code Meaning "3D Manufacturing Modeling System"
- [CID 33. Modality](#) includes [CID 32 "Non-Acquisition Modality"](#).
- CID 30, CID 32, CID 33 are not referred in TIDs in PS3.16. Same they are not referenced in PS3.3 and PS3.4.
- Code Meaning from CID 32 seems to be not used.

Update DICOM PS3.16, [Table CID 32. Non-Acquisition Modality](#)

Coding Scheme Designator	Code Value	Code Meaning
DCM	M3D	Model for 3D Manufacturing 3D Manufacturing Modeling System
DCM	OT	Other Modality

Update DICOM PS3.16, [Table CID 3407. Object Reference Purpose](#)

Informative Notes:

Code Meaning "Current procedure evidence" from D-1 (unchanged) is same used in:
CID 7009,
TID 350 References to Supporting Evidence, Row 4
TID 3819 Common Findings, Row5

Coding Scheme Designator	Code Value	Code Meaning
DCM	122073	Analysis or measurements for current procedure Current procedure evidence

Update DICOM PS3.16, [Table CID 4207. Ophthalmic Image Position](#)

Notes to editor: a space is to be added between "Joslin" and "3".

Informative Notes:

- Changed Code Meaning (111621, DCM, "Field 1 for Joslin 3 field") is from D-1.
- Similar Code Meanings exist consistently in whole PS3.16 for (111622, DCM, "Field 2 for Joslin 3 field") and (111623, DCM, "Field 3 for Joslin 3 field")

Coding Scheme Designator	Code Value	Code Meaning
DCM	111621	Field 1 for Joslin 3 field

Update DICOM PS3.16, [Table CID 4222. Ophthalmic Macular Grid Problem](#)

Informative Note: (111209, DCM, "Positioning") exists in tables D-1, CIDs 7011, 6041, 6135, E-1 French (Code Meaning English), F-1 Japanese (Code Meaning English)

Coding Scheme Designator	Code Value	Code Meaning
DCM	111209	Patient Positioning Problem

Update DICOM PS3.16, [Table CID 9510. Purpose of Reference for RT Treatment Planning Input](#) as:

Notes to editor:

- Table D-1 has (128186, DCM, "Dose Calculation Image Series") which is not intended to be used in CID 9510
- checked CID 7023 RT Process Output - codes 128185 and 128186 have the Code Meaning as from D-1)

Coding Scheme Designator	Code Value	Code Meaning
DCM	128186 128185	RT Prescription Result

For reference **Table D-1. DICOM Controlled Terminology Definitions** (unchanged):

Coding Scheme Designator	Code Value	Code Meaning
DCM	128185	RT Prescription Result
DCM	128186	Dose Calculation Image Series

Update DICOM PS3.16, [Table CID 9564. Treatment Session Confirmation Assertion](#)

Note to editor: a space is to be added between Cone and Present

Coding Scheme Designator	Code Value	Code Meaning
DCM	130457	Cone Present

Update DICOM PS3.16, [Table CID 10050. Summary Radiation Exposure Quantity](#)

Coding Scheme Designator	Code Value	Code Meaning
DCM	111637	Accumulated Average Glandular Dose (mamme)

Update DICOM PS3.16, [Table CID 6164. Time Interval](#)

Coding Scheme Designator	Code Value	Code Meaning
DCM	111399	Not sure Timeframe uncertain

Update DICOM PS3.16, [Table CID 29. Acquisition Modality](#)

Coding Scheme Designator	Code Value	Code Meaning
DCM	LS	Laser Surface Sscan

Change [DICOM PS3.16, Table D-1](#), update the column "Code Meaning" as:

Code Value	Code Meaning
109014	350f thermal dye dilution CO
109015	700f thermal dye dilution CO
109031	Start of thermal cardiac output bolus CO
111443	Target completely contained in the specimen
113082	N-acetylaspartate/ Cre Creatine Ratio
113083	N-acetylaspartate/ Cho Choline Ratio
113096	Creatine+Choline/ Cit Citrate Ratio
113132	Single subject selected extracted from group
113211	Deterministic Tracking Algorithm
113212	Probabilistic Tracking Algorithm
113213	Global Tracking Algorithm
113217	Bootstrap Tracking Algorithm
113227	Multiple Shot EPI
113543	Radioisotope Generator
121130	Start Procedure Action Item
121131	End Procedure Action Item
121132	Suspend Procedure Action Item
121133	Resume Procedure Action Item
121163	Oxygen Administration by ventilator
121734	RT Treatment QA with by RT Ion Plan Difference Check
122160	Derived Area Non-Valve Area
122242	BSA = 0.0235*WT^0.51456*HT cm ^0.42246
122243	BSA = 0.024265*WT^0.5378*HT cm ^0.3964
122247	VO2male = BSA (138.1 - 11.49 * loge(age) + 0.378 * HR 0.378*HR)
122248	VO2female = BSA (138.1 - 17.04 * loge(age) + 0.378 * HR 0.378*HR)
122465	RCA Region in ROARAG Projection
122730	Bazett QTc Correction Algorithm
122731	Hodges QTc Correction Algorithm
122764	Patient W eight exceeds equipment limit
125206	Cube Method
126037	Standardized Added Metabolic Activity (SAM)
126038	Standardized Added Metabolic Activity (SAM) Background
126325	IAUC BN60 BN
126326	IAUC BN90 BN
126327	IAUC BN180 BN
126510	Monoclonal Antibody (mAb) ^64 ^64 Cu
126511	Monoclonal Antibody (mAb) ^89 ^89 Zr
128011	Neuroradiology Imaging Specialty
128492	Physical Patient Support
130047	External Body Structure Model
130454	Resolved by overriding Interlock Interlock Overridden
130455	Resolved by repositioning Patient Patient Repositioned
RTDOSE	Radiotherapy RT Dose
RTIMAGE	Radiotherapy RT Image
RTPLAN	Radiotherapy RT Plan
RTRECORD	Radiotherapy RT Treatment Record
RTSTRUCT	Radiotherapy RT Structure Set