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## DICOM Correction Item

Correction Number		CP-295
Log Summary: Eliminate Duplicate Codes from Context Groups in Part 16		
Type of Modification	Name of Standard	
Modification	PS 3.3 and 3.16 2001	
<p>DICOM defines Context Groups as “attribute value sets defined by a Mapping Resource.” The value set is a set of coded concepts, identified by its Code Value and CSD (and possibly a version). However the published DICOM Standard also includes the Code Meaning as a convenience for the human reader. Unfortunately, inclusion of the Code Meaning has led to duplicate codes—with different Code Meanings—within Context Groups. DICOM now has Context Groups with synonyms such as “ethanol” and “ethyl alcohol” or even potentially non-synonymous Code Meanings such as C-10520 CO2 (NOS) vs. CO2 (gas). This leads to undesirable or unacceptable consequences.</p> <ul style="list-style-type: none"> <li>- It implies that the Code Meaning is the Context Group member rather than the concept—contradicting DICOM intent.</li> <li>- It invites a proliferation of Code Meanings to satisfy the vast number of possible text expressions</li> <li>- It complicates incorporation of other languages into the standard since by extension, foreign Code Meanings and their synonyms must also become part of each Context Group.</li> <li>- It invites non-synonymous Code Meanings. In effect this moves the semantics from the definition to the Code Meaning, introducing code ambiguity, and defeating the very purpose of using coded concept vocabulary.</li> <li>- Adds redundancy that increases maintenance effort and the chance of errors and inconsistencies</li> </ul> <p>As agreed in the March WG6 meeting, this Change Proposal:</p> <ul style="list-style-type: none"> <li>- Allows only one occurrence of a Code Value in a Context Group and removes each duplicate code from all context groups</li> <li>- Puts Code Meaning Synonyms in a separate Annex</li> <li>- Clarifies the definition of a Context Group as the set of concepts.</li> <li>- Clarifies the freedom of choice in choosing or creating a Code Meaning</li> </ul>		
Sections of documents affected		
PS 3, 3.16		
Correction Wording:		

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***In section 8 of PS 3.3, clarify definition***

- 6 Context Groups are defined in a Mapping Resource, such as the DICOM Content Mapping  
 Resource (DCMR) specified in PS 3.16. Context Groups consist of lists of **contextually**  
 8 **related coded concepts** terms, including the Code Value (0008,0100) and Coding Scheme  
 Designator (0008,0102). **Each concept is unique within the Context Group and identified**  
 10 **by its Code Value (0008,0100) and Coding Scheme Designator (0008,0102)**. The Context  
 Group specification identifies whether it is extensible, i.e., whether it may be modified in an  
 12 Application to use additional, but not different terms. Whether a Context Group is used as a

2 Baseline or Defined Context Group is defined not in the mapping resource, but rather in the Template or Module in which the Code Sequence Attribute is used.

4 ***In section 8.3 of PS 3.3, clarify definition***

### 8.3 CODE MEANING

6 The Code Meaning (0008,0104) is text which has meaning to a human and which conveys  
 8 the meaning of the term defined by the combination of Code Value and Coding Scheme  
 10 Designator. Though such a meaning can be “looked up” in the dictionary for the coding  
 12 scheme, it is encoded for the convenience of applications that do not have access to such a  
 14 dictionary.

12 It should be noted that for a particular Coding Scheme Designator (0008,0102) and Code  
 14 Value (0008,0100), several alternative values for Code Meaning (0008,0104) may be defined.  
 16 These may be synonyms in the same language –or translations of the Coding Scheme into  
 18 other languages. Hence the value of Code Meaning (0008,0104) shall never be used as a  
 20 key, index or decision value, rather the combination of Coding Scheme Designator  
 (0008,0102) and Code Value (0008,0100) may be used. Code Meaning (0008,0104) is a  
 purely annotative, descriptive Attribute.

18 This does not imply that Code Meaning (0008,0104) can be filled with arbitrary free text.  
 20 **Available values from the Coding Scheme or translation in the chosen language shall  
 be used.**

***In section 7 of PS 3.16, DCMR Context Group Specifications***

## 22 7 DCMR Context Group Specifications

24 Context Groups specify Value Set restrictions for Code Value (0008,0100) and Code Meaning  
 (0008,0104) of Code Sequence Attributes for given functional or operational contexts. This  
 Section specifies the semantics of DCMR Context Group Tables.

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***In section 7.1 of PS 3.16, DCMR Context Group Specifications add the paragraph***

28 In those cases where it is necessary, Coding Scheme Version (0008,0103) may also be  
 specified.

30 **The value specified in the Code Meaning field is an acceptable value for the specified  
 32 code value, but does not preclude the use of other synonymous text in the same or  
 other language.**

34 **Note: Some coding schemes such as LOINC do not specify the equivalent of a  
 Code Meaning.**

36 If further description of the concept represented by the code is required in the DCMR (rather  
 than referring to an external coding scheme), it is included in a separate table.

38 ***In section Annex B of PS 3.16, DCMR Context Group Specifications remove all  
 40 occurrences of duplicate elements in the same Context Group, choosing one Code  
 Meaning.***

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**Context ID 2**  
**Anatomic Modifier**

<b>Coding Scheme Designator (0008,0102)</b>	<b>Code Value (0008,0100)</b>	<b>Code Meaning (0008,0104)</b>
SNM3	G-A100	Right
SNM3	G-A100	Right lateral
SNM3	G-A101	Left
SNM3	G-A101	Left lateral
SNM3	G-A102	Right and left
SNM3	G-A102	Bilateral
SNM3	G-A103	Unilateral
SNM3	G-A103	One-sided
SNM3	G-A104	Lateral
SNM3	G-A105	Anterior
SNM3	G-A105	Ventral
SNM3	G-A106	Posterior
SNM3	G-A106	Dorsal
SNM3	G-A107	Cephalic
SNM3	G-A107	Cephalad
SNM3	G-A107	Rostral
SNM3	G-A108	Caudal
SNM3	G-A108	Caudad
SNM3	G-A109	Medial
SNM3	G-A109	Median
SNM3	G-A109	Middle
SNM3	G-A110	Central
SNM3	G-A111	Peripheral
SNM3	G-A112	External
SNM3	G-A112	Outer
SNM3	G-A113	Internal
SNM3	G-A113	Inner
SNM3	G-A114	Intermediate
SNM3	G-A115	Inferior
SNM3	G-A116	Superior
SNM3	G-A116	Upper
SNM3	G-A117	Transverse
SNM3	G-A118	Proximal
SNM3	G-A119	Distal
SNM3	G-A120	Postaxial
SNM3	G-A121	Preaxial

SNM3	G-A122	Apical
SNM3	G-A123	Basal
SNM3	G-A127	Afferent
SNM3	G-A128	Efferent
SNM3	G-A138	Coronal
SNM3	G-A138	Frontal
SNM3	G-A139	Superficial
SNM3	G-A140	Deep
SNM3	G-A140	Profundis
SNM3	G-A142	Horizontal
SNM3	G-A143	Longitudinal
SNM3	G-A144	Vertical
SNM3	G-A145	Sagittal
SNM3	G-A147	Axial
SNM3	G-A151	Extra-articular
SNM3	G-A168	Surface
SNM3	G-A169	Gutter
SNM3	G-A170	Hilar
SNM3	G-A170	Hilus
SNM3	G-A171	Capsular
SNM3	G-A172	Subcapsular
SNM3	G-A174	Along edge
SNM3	G-A174	Edge
SNM3	G-A180	Anterolateral
SNM3	G-A182	Posterolateral
SNM3	G-A15A	Intra-articular
SNM3	G-A428	Marginal

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**Context ID 4****Anatomic Region**

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**(Most Restrictive Use: Baseline)**

<b>Coding Scheme Designator (0008,0102)</b>	<b>Code Value (0008,0100)</b>	<b>Code Meaning (0008,0104)</b>
SNM3	T-15460	Joint of wrist, NOS
SNM3	T-15460	Wrist joint, NOS
SNM3	T-D4450	Omental bursa
SNM3	T-D4450	Lesser peritoneal sac
SNM3	T-32000	Endo-cardiac
SNM3	T-32000	Intra-cardiac
SNM3	T-41000	Endo-arterial

SNM3	T-41000	Intra-arterial
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**Context ID 5****Transducer Approach**

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**(Most Restrictive Use: Baseline)**

<b>Coding Scheme Designator (0008,0102)</b>	<b>Code Value (0008,0100)</b>	<b>Code Meaning (0008,0104)</b>
SNM3	G-A105	Anterior
SNM3	G-A105	Ventral
SNM3	G-A106	Posterior
SNM3	G-A106	Dorsal
SNM3	G-A115	Inferior
SNM3	G-A115	Lower
SNM3	G-A116	Superior
SNM3	G-A116	Upper
SNM3	G-A10A	Cranial
SNM3	G-A10A	Midline
SNM3	G-A16C	Direct contact
SNM3	G-A16C	Contact

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**Context ID 9****Image Guided Therapeutic Procedures**

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**(Most Restrictive Use: Baseline)**

<b>Coding Scheme Designator (0008,0102)</b>	<b>Code Value (0008,0100)</b>	<b>Code Meaning (0008,0104)</b>
SNM3	P1-05535	Catheterization
SNM3	P1-05535	Insertion of catheter
SNM3	P1-30350	Atherectomy, NOS
SNM3	P1-30350	Removal of atherosclerotic plaque from artery, NOS

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**Context ID 10****Interventional Drug**

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**(Most Restrictive Use: Baseline)**

<b>Coding Scheme Designator (0008,0102)</b>	<b>Code Value (0008,0100)</b>	<b>Code Meaning (0008,0104)</b>
SNM3	C-21005	Ethyl alcohol
SNM3	C-21005	Ethanol
SNM3	C-81100	Hypotensive agent, NOS

SNM3	C-81100	Antihypertensive agent, NOS
SNM3	C-81100	Antihypertensive drug, NOS
SNM3	C-A7400	Thrombolytic agent, NOS
SNM3	C-A7400	Fibrinolytic agent, NOS
SNM3	C-A7440	Injectable fibrinolysin
SNM3	C-A7440	Injectable plasmin

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**Context ID 11****Route of Administration**

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**(Most Restrictive Use: Baseline)**

<b>Coding Scheme Designator (0008,0102)</b>	<b>Code Value (0008,0100)</b>	<b>Code Meaning (0008,0104)</b>
SNM3	G-D105	Intracutaneous route
SNM3	G-D105	Intradermal route
SNM3	G-D140	Oral route
SNM3	G-D140	Peroral route
SNM3	G-D164	Per vagina
SNM3	G-D164	Vaginal route

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**Context ID 12****Radiographic Contrast Agent**

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**(Most Restrictive Use: Baseline)**

<b>Coding Scheme Designator (0008,0102)</b>	<b>Code Value (0008,0100)</b>	<b>Code Meaning (0008,0104)</b>
SNM3	C-10520	Carbon dioxide, NOS
SNM3	C-10520	Carbon dioxide gas
SNM3	C-12217	Barium Sulfate
SNM3	C-B0300	Radiographic contrast agent, NOS
SNM3	C-B0300	Contrast agent, NOS

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**Context ID 23****Cranio-caudad Angulation**

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**(Most Restrictive Use: Baseline)**

<b>Coding Scheme Designator (0008,0102)</b>	<b>Code Value (0008,0100)</b>	<b>Code Meaning (0008,0104)</b>
SNM3	G-A107	Cephalic
SNM3	G-A107	Cephalad
SNM3	G-A107	Rostral
SNM3	G-A107	Caudal-cranial

SNM3	G-A107	Caudal-cranial
SNM3	G-A107	Caudo-cranial
SNM3	G-A107	Caudo-cranial
SNM3	G-A108	Caudal
SNM3	G-A108	Caudal
SNM3	G-A108	Cranial-caudal
SNM3	G-A108	Cranial-caudal
SNM3	G-A108	Cranio-caudal
SNM3	G-A108	Cranio-caudal
SNM3	G-A107	Cranial

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**Context ID 25****Radiopharmaceuticals**

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**(Most Restrictive Use: Baseline)**

<b>Coding Scheme Designator (0008,0102)</b>	<b>Code Value (0008,0100)</b>	<b>Code Meaning (0008,0104)</b>
SNM3	C-B1109	Iodine <sup>131</sup> polyvinylpyrrolidone
SNM3	C-B1109	Iodine <sup>131</sup> -PVP
SNM3	C-B1091	Iodine <sup>131</sup> -hippuran
SNM3	C-B1091	Iodohippurate I <sup>131</sup> sodium
SNM3	C-B1225	Technetium Tc <sup>99</sup> -labeled HIDA
SNM3	C-B1225	Technetium Tc <sup>99</sup> N-substituted iminodiacetate

**Context ID 26****Nuclear Medicine Projections**

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**(Most Restrictive Use: Baseline)**

<b>Coding Scheme Designator (0008,0102)</b>	<b>Code Value (0008,0100)</b>	<b>Code Meaning (0008,0104)</b>
SNM3	G-A138	Coronal
SNM3	G-A138	Frontal
SNM3	G-A145	Sagittal
SNM3	G-5200	Antero-posterior
SNM3	G-5200	AP
SNM3	G-5201	Postero-anterior
SNM3	G-5201	PA
SNM3	G-5210	Oblique axial
SNM3	G-5210	Oblique caudo-cranial
SNM3	G-5210	Oblique cranio-caudal
SNM3	G-5210	Oblique transaxial
SNM3	G-5210	Off-axial

SNM3	G-5210	Off-axial projection
SNM3	G-5220	Medial-lateral
SNM3	G-5220	Medio-lateral
SNM3	G-5221	Lateral-medial
SNM3	G-5221	Latero-medial
SNM3	G-5222	Right lateral projection
SNM3	G-5222	Left to right beam projection
SNM3	G-5223	Left lateral projection
SNM3	G-5223	Right to left beam projection
SNM3	G-A145	Lateral Projection

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**Context ID 3010**  
**Cardiovascular Anatomic Locations**  
**(Most Restrictive Use: Defined)**

Coding Scheme	Coding Scheme Version	Code Value	Code Meaning
SNM3	3.5	T-46010	Brachiocephalic artery
SNM3	3.5	T-46010	Brachiocephalic trunk
SNM3	3.5	T-48620	Brachiocephalic vein
SNm	3.5	D3-40208	Congenital coronary artery fistula to pulmonary artery
SNM3	3.5	D3-40208	Congenital pulmonary arteriovenous fistula
SRT	V1	D4-33142	Congenital pulmonary artery conduit
SRT	V1	D4-33512	Congenital pulmonary vein confluence
SRT	V1	D4-33514	Congenital pulmonary venous atrium
SRT	V1	D4-33516	Congenital systemic venous atrium
SNM3	3.5	T-46010	Innominate artery
SNM3	3.4	T-48620	Innominate vein
SNM3	3.5	T-48170	Internal jugular vein
SRT	V1	D4-31022	Left ventricle outflow chamber
SNM3	3.5	T-48810	Portal vein
SRT	V1	D4-33142	Pulmonary artery conduit
SRT	V1	D4-33512	Pulmonary vein confluence
SRT	V1	D4-33514	Pulmonary venous atrium
SRT	V1	D4-310232	Right ventricle outflow chamber
SRT	V1	D4-33516	Systemic venous atrium
SNM3	3.4	T-48170	Vena jugularis interna
SNM3	3.5	T-48810	Vena portae

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***In PS 3.16, DCMR Annex B, remove term with no Code Value or CSD***



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**Context ID 4020  
PET Radionuclide  
(Most Restrictive Use: Baseline)**

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
		$\text{O}^{15}\text{Oxygen}$

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*In PS 3.16, DCMR Annex B, edit CID 7000*

6

**CID 7000 Diagnostic Imaging Report Document Titles**

8

**Context ID 7000  
Diagnostic Imaging Report Document Titles  
Type: Extensible Version: 20020904**

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
LN	11522-0	<del>Echo Heart Report</del> <u>Echocardiography Report</u>
LN	11525-3	<del>Obstetric Echo Pelvis+Fetus Report</del> <u>Ultrasound Obstetric and Gyn Report</u>
...	...	...
LN	18760-9	<del>Echo</del> <u>Ultrasound</u> Report

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*In PS 3.16, DCMR Context Group Specifications create a new Annex for code synonyms*

12

**Annex G English Code Meanings of Selected Codes**

Coding Scheme Designator (0008,0102)	Coding Scheme Version	Code Value (0008,0100)	Code Meaning (0008,0104)
SNM3		C-10520	Carbon dioxide, NOS
			Carbon dioxide gas
SNM3		C-21005	Ethanol
			Ethyl alcohol
SNM3		C-81100	Hypotensive agent, NOS
			Antihypertensive agent, NOS
			Antihypertensive drug, NOS
SNM3		C-A7400	Thrombolytic agent, NOS
			Fibrinolytic agent, NOS
SNM3		C-A7440	Injectable fibrinolysin
			Injectable plasmin

SNM3		C-B0300	Contrast agent, NOS
			Radiographic contrast agent, NOS
SNM3		C-B1091	Iodohippurate I <sup>131</sup> sodium
			Iodine <sup>131</sup> hippuran
SNM3		C-B1109	Iodine <sup>131</sup> polyvinylpyrrolidone
			Iodine <sup>131</sup> PVP
SNM3		C-B1225	Technetium Tc <sup>99</sup> N-substituted iminodiacetate
			Tc <sup>99</sup> labeled HIDA
SNM3	3.5	D3-40208	Congenital pulmonary arteriovenous fistula
			Congenital coronary artery fistula to pulmonary artery
SRT	V1	D4-33142	Pulmonary artery conduit
			Congenital pulmonary artery conduit
SRT	V1	D4-33512	Pulmonary vein confluence
			Congenital pulmonary vein confluence
SRT	V1	D4-33514	Pulmonary venous atrium
			Congenital pulmonary venous atrium
SRT	V1	D4-33516	Systemic venous atrium
			Congenital systemic venous atrium
SNM3		G-5200	Antero-posterior
			AP
SNM3		G-5201	Postero-anterior
			PA
SNM3		G-5210	Oblique axial
			Oblique caudo-cranial
			Oblique cranio-caudal
			Oblique transaxial
			Off-axial
			Off-axial projection
SNM3		G-5220	Medial-lateral
			Medio-lateral
SNM3		G-5221	Lateral-medial
			Latero-medial
SNM3		G-5222	Right lateral projection
			Left to right beam projection
SNM3		G-5223	Left lateral projection
			Right to left beam projection
SNM3		G-A100	Right
			Right lateral
SNM3		G-A101	Left
			Left lateral

SNM3		G-A102	Bilateral
			Right and left
SNM3		G-A103	Unilateral
			One-sided
SNM3		G-A105	Anterior
			Ventral
SNM3		G-A106	Posterior
			Dorsal
SNM3		G-A107	Cephalic
			Cephalad
			Rostral
			Caudal-craniad
			Caudal-cranial
SNM3		G-A108	Caudal
			Caudad
			Cranial-caudad
			Cranial-caudal
			Cranio-caudal
SNM3		G-A109	Medial
			Median
			Middle
SNM3		G-A10A	Cranial
			Midline
SNM3		G-A112	External
			Outer
SNM3		G-A113	Internal
			Inner
SNM3		G-A115	Inferior
			Lower
SNM3		G-A116	Superior
			Upper
SNM3		G-A138	Coronal
			Frontal
SNM3		G-A140	Deep
			Profundis
SNM3		G-A145	Sagittal
			Lateral Projection
SNM3		G-A16C	Contact

			Direct contact
SNM3		G-A170	Hilar
			Hilus
SNM3		G-A174	Edge
			Along edge
SNM3		G-D105	Intracutaneous route
			Intradermal route
SNM3		G-D140	Oral route
			Peroral route
SNM3		G-D164	Vaginal route
			Per vagina
SNM3		P1-05535	Catheterization
			Insertion of catheter
SNM3		P1-30350	Atherectomy, NOS
			Removal of atherosclerotic plaque from artery, NOS
SNM3		T-15460	Wrist joint, NOS
			Joint of Wrist, NOS
SNM3		T-32000	Endo-cardiac
			Intra-cardiac
SNM3		T-41000	Endo-arterial
			Intra-arterial
SNM3	3.5	T-46010	Innominate artery
			Brachiocephalic artery
			Brachiocephalic trunk
SNM3	3.5	T-48170	Internal jugular vein
			Vena jugularis interna
SNM3	3.4	T-48620	Innominate vein
			Brachiocephalic vein
SNM3	3.5	T-48810	Portal vein
			Vena portae
SNM3		T-D4450	Omental bursa
			Lesser peritoneal sac

<b>Coding Scheme Designator (0008,0102)</b>	<b>Code Value (0008,0100)</b>	<b>Code Meaning (0008,0104)</b>
LN	11522-0	<del>Echo Heart Report</del> <b>Echocardiography Report</b>
LN	11525-3	<del>Obstetric Echo Pelvis+Fetus Report</del> <b>Ultrasound Obstetric and Gyn Report</b>
LN	11528-7	Radiology Report
LN	11538-6	CT Chest Report
LN	11539-4	CT Head Report
LN	11540-2	CT Abdomen Report
LN	11541-0	MRI Head Report
LN	18745-0	Cardiac Catheterization Report
LN	18747-6	CT Report
LN	18748-4	Diagnostic Imaging Report
LN	18755-9	MRI Report
LN	18756-7	MRI Spine Report
LN	18757-5	Nuclear Medicine Report
LN	18758-3	PET Scan Report
LN	18760-9	<del>Echo-Ultrasound</del> Report