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8	Correction Number CP-1589	
9	Log Summary: Equivalent code for GFR in Radiopharmaceutical Radiation Dose SR	
10	Name of Standard	
11	PS3.16	
12	Rationale for Correction:	
13	It is not necessary to use DCM codes to duplicate the LOINC codes for the same method; the LOINC codes can be used as the measurement method.	
14		
15	The content item for Equivalent meaning of concept name for GFR in Radiopharmaceutical Radiation Dose SR is therefore not needed. In the unlikely event that there is a need for an equivalent code, it can be conveyed in the Equivalent Code Sequence (0008,0121).	
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17		
18	Since the same information is needed for contrast administration, it is also factored out into a separate sub-template.	
19	<i>[Ed. Note: An alternative would be just to use the LN concepts from CID 10046 for Row 16, and delete Row 17 as well ... this would require the recipient to recognize every specific GFR method rather than knowing that they were all just variants of the more general GFR concept, which was the objective of the design in the first place.]</i>	
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21		
22	<i>[Ed. Note: The assertion that Equivalent Code Sequence (0008,0121) may be used, which implies that the generic concept of GFR is "equivalent to" a precoordinated code that contains other aspects, such as the method, is in direct contradiction of the direction that CP 1539 is taking, in which it is proposed to define equivalence as "having the same or similar meaning, and requires that equivalent concepts do not include different aspects, properties, features, characteristics, or parameters".</i>	
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25		
26	Correction Wording:	

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

TID 10024 Radiopharmaceutical Administration Patient Characteristics

Table TID 10024. Radiopharmaceutical Administration Patient Characteristics

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (121118, DCM, "Patient Characteristics")				
...
15	>	CONTAINS	NUM	EV (2160-0, LN, "Serum Creatinine")	1	U		UNITS = DT (mg/dl, UCUM, "mg/dl")
16	>	CONTAINS	NUM	EV (F-70210, SRT, "Glomerular Filtration Rate")	1-n	U		UNITS = DT (ml/min{1.73_m2}, UCUM, "ml/min/1.73m2")
17	>>	HAS CONCEPT MOD	CODE	EV (G-C036, SRT, "Measurement Method")	1	U		DCID 10047 "GFR Measurement Methods"
18	>>	HAS CONCEPT MOD	CODE	EV (121050, DCM, "Equivalent meaning of concept name")	1	M		DCID 10046 "GFR Measurements"
15	≥	<u>CONTAINS</u>	<u>INCLUDE</u>	DTID ttt1 "Patient Characteristics Relevant to Contrast Administration"	1	U		

Content Item Descriptions

Row 15	Serum Creatinine level: Observation DateTime (0040,A032) shall be used to record when the measurement was taken.
Row 16	Glomerular Filtration Rate Observation DateTime (0040,A032) shall be used to record when the measurement was taken. The formatting of the UCUM units is aligned with LOINC. See http://unitsofmeasure.org/trac/ticket/98

Add new DICOM PS3.16 template:

TID ttt1 Patient Characteristics Relevant to Contrast Administration

Table TID ttt1. Patient Characteristics Relevant to Contrast Administration

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			NUM	EV (2160-0, LN, "Serum Creatinine")	1	U		UNITS = DT (mg/dl, UCUM, "mg/dl")
2			NUM	EV (F-70210, SRT, "Glomerular Filtration Rate")	1-n	U		UNITS = DT (ml/min{1.73_m2}, UCUM, "ml/min/1.73m2")
3	>	HAS CONCEPT MOD	CODE	EV (G-C036, SRT, "Measurement Method")	1	U		DCID 10046 "GFR Measurements"

Content Item Descriptions

Row 1	Serum Creatinine level. Observation DateTime (0040,A032) shall be used to record when the measurement was taken.
Row 2	Glomerular Filtration Rate. Observation DateTime (0040,A032) shall be used to record when the measurement was taken. The formatting of the UCUM units is aligned with LOINC. See http://unitsofmeasure.org/trac/ticket/98
Row 3	Equivalent codes for the measurement method can be encoded using the Equivalent Code Sequence (0008,0121) and it is not necessary to use (121050, DCM, "Equivalent meaning of concept name"), which has been retired. See PS3.16 yyyyv.

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

CID 10046 GFR Measurements

Type: Extensible
Version: 20140419

Table CID 10046. GFR Measurements

Coding Scheme Designator	Code Value	Code Meaning	UMLS Concept Unique ID
LN	33914-3	Glomerular Filtration Rate (MDRD)	C1316377
LN	48642-3	Glomerular Filtration Rate non-black (MDRD)	C1954228
LN	48643-1	Glomerular Filtration Rate black (MDRD)	C1954230
LN	50044-7	Glomerular Filtration Rate female (MDRD)	C1976998
LN	50210-4	Glomerular Filtration Rate Cystatin-based formula	C1978041
LN	50384-7	Glomerular Filtration Rate Creatinine-based formula (Schwartz)	C1978244
LN	35591-7	Cockcroft-Gault Formula estimation of GFR	C1507751
LN	62238-1	CKD-EPI Formula estimation of GFR	C2973160

CID 10047 GFR Measurement Methods

Type: Extensible
Version: 20140419

Table CID 10047. GFR Measurement Methods

Coding Scheme Designator	Code Value	Code Meaning
DGM	413570	Cockcroft-Gault Formula estimation of GFR
DGM	413571	CKD-EPI Formula estimation of GFR
DGM	413572	Glomerular Filtration Rate (MDRD)
DGM	413573	Glomerular Filtration Rate non-black (MDRD)
DGM	413574	Glomerular Filtration Rate black (MDRD)
DGM	413575	Glomerular Filtration Rate female (MDRD)
DGM	413576	Glomerular Filtration Rate Cystatin-based formula

1	2	3
Coding Scheme Designator	Code Value	Code Meaning
DGM	113577	Glomerular Filtration Rate Creatinine-based formula (Schwartz)

3 **Table D-1. DICOM Controlled Terminology Definitions**

4	5	6	7	8
Code Value	Code Meaning	Definition	Notes	
121050	<i>Equivalent Meaning of Concept Name</i>	<i>The human readable meaning of the name component of a name-value pair that is equivalent to the post-coordinated meaning conveyed by the coded name and its concept modifier children.</i>	<u>Retired</u>	
113570	<i>Cockcroft-Gault Formula estimation of GFR</i>	<i>The measurement method of the Glomerular Filtration Rate is Cockcroft-Gault Formula</i>	<u>Retired</u>	
113571	<i>CKD-EPI Formula estimation of GFR</i>	<i>The measurement method of the Glomerular Filtration Rate is CKD-EPI Formula</i>	<u>Retired</u>	
113572	<i>Glomerular Filtration Rate (MDRD)</i>	<i>The measurement method of the Glomerular Filtration Rate is MDRD</i>	<u>Retired</u>	
113573	<i>Glomerular Filtration Rate non-black (MDRD)</i>	<i>The measurement method of the Glomerular Filtration Rate is non-black MDRD</i>	<u>Retired</u>	
113574	<i>Glomerular Filtration Rate black (MDRD)</i>	<i>The measurement method of the Glomerular Filtration Rate is black (MDRD)</i>	<u>Retired</u>	
113575	<i>Glomerular Filtration Rate female (MDRD)</i>	<i>The measurement method of the Glomerular Filtration Rate is female (MDRD)</i>	<u>Retired</u>	
113576	<i>Glomerular Filtration Rate Cystatin-based formula</i>	<i>The measurement method of the Glomerular Filtration Rate is Cystatin-based formula</i>	<u>Retired</u>	
113577	<i>Glomerular Filtration Rate Creatinine-based formula (Schwartz)</i>	<i>The measurement method of the Glomerular Filtration Rate is Creatinine-based formula (Schwartz)</i>	<u>Retired</u>	