DICOM Correction Proposal

STATUS	Assigned
Date of Last Update	2026/01/11
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Correction Number CP-2322
Log Summary: Record CT Image Quality Reference Parameters
Name of Standard PS 3.16 2024
Rationale for Correction: Various CT vendors provide parameters related to image quality level, dose modulation and reduction that can be adjusted by the technologist. As these parameters affect other (dose relevant) parameters like CTDIvol, and influence the resulting CT image, it is valuable to capture such values and make them available to radiologists and physicists troubleshooting poor image quality and/or optimizing protocols to reduce dose. To capture and facilitate display, an Image Quality Reference Parameter sub-template is added to the RDSR. These Image Quality Reference Parameters could be presented in the rendered RDSR screens described in the pending REM Display Option.
Correction Wording:

Modify PS3.16 TID 10013 CT Irradiation Event Data as shown

Table TID 10013. CT Irradiation Event Data

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
…								
7	>	CONTAINS	CONTAINER	EV (113822, DCM, "CT Acquisition Parameters")	1	M		
…								
12	>>	CONTAINS	NUM	EV (113828, DCM, “Pitch Factor”)	1	MC	IF value of Row 4 = (116152004, SCT, "Spiral Acquisition") or equals (113804, DCM, "Sequenced Acquisition")	UNITS = EV ({ratio}, UCUM, "ratio")
12a	**>>**	**CONTAINS**	**INCLUDE**	**DTID newtid1 “Image Quality Reference Parameters”**	**1**	**U**		

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
13	>>	CONTAINS	NUM	EV (113823, DCM, "Number of X-Ray Sources")	1	M		UNITS = EV ({X-Ray sources}, UCUM, "X-Ray sources")
...								

Modify PS3.16 TID 10042 Irradiation Event Summary Data as shown

Table TID 10042. Irradiation Event Summary Data

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
…								
42	>>	CONTAINS	INCLUDE	DTID 10015 “CT Dose Check Details”	1	M		
43	>	CONTAINS	TEXT	EV (113842, DCM,"X-Ray Modulation Type")	1	U		
43a	**>**	**CONTAINS**	**INCLUDE**	**DTID newtid1 “Image Quality Reference Parameters”**	**1**	**U**		
44	>	CONTAINS	TEXT	EV (121106, DCM, "Comment")	1	U		
...								

10 Add new TID to PS3.16 as shown

TID newtid1. Image Quality Reference Parameters

Type: Extensible
Order: Non-Significant
Root: No

15 **Table TID newtid1. Image Quality Reference Parameters**

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (newcode0, DCM, "Image Quality Reference Parameters")	1	M		
2	>	CONTAINS	CODE	DCID newcid1 “Image Quality Reference Parameter”	0-n	U		
3	>	CONTAINS	TEXT	DCID newcid1 “Image Quality Reference Parameter”	0-n	U		
4	>	CONTAINS	NUM	DCID newcid1 “Image Quality Reference Parameter”	0-n	U		

Content Item Descriptions

Rows 2, 3, 4	These three rows permit parameter values to be coded, numerical, or text. It is not intended th given parameter be present in multiple forms (e.g. text and code). Vendors that extend CID newcid1 to make use of vendor-specific codes are encouraged to document those codes in the Conformance Statement of the implementation. Note: It is possible that two different codes (i.e., from two different vendors) might have the sa code meaning text but different definitions.

Formatiert: Table Entry

Formatierte Tabelle

Formatiert: Table Entry

CID newcid1 Image Quality Reference Parameter

Resources: **HTML | FHIR JSON | FHIR XML | IHE SVS XML**
Type: **Extensible**
Version: **yyyymmdd**
UID: **1.2.840.nnnd**

Table CID newcid1. Image Quality Reference Parameter

Coding Scheme Designator	Code Value	Code Meaning
DCM	newcode1	Noise Index
DCM	newcode2	Reference mAs

Add the following definitions to PS3.16 Table D-1.

Table D-1. DICOM Controlled Terminology Definitions

Code Value	Code Meaning	Definition	Notes
…			
newcode0	**Image Quality Reference Parameters**	**Parameters that determine quality and exposure for the resulting image**	
Newcode1	**Noise Index**	**An image quality reference parameter that is a target noise level for the reconstructed image**	
Newcode2	**Reference mAs**	**An image quality reference parameter that is proportional to effective mAs**	