

### DICOM Correction Item

Correction Number CP-1107	
Log Summary: No human readable label for irradiation events in CT Dose SR	
Type of Modification	Name of Standard
Modification	PS 3 -2011
<p>Rationale for Correction:</p> <p>The Dose SR identifies irradiation events only by UID and does not provide any human-readable label to include in a textual rendering of the report; typically in the modality dose screen shots either Acquisition Number or Series Number is used for this, but this varies between manufacturer.</p> <p>Add a generic label and indicate which if any corresponding image information model attribute it corresponds to.</p>	
<p>Sections of documents affected</p> <p>PS 3.6, 3.16</p>	
Correction Wording:	

*Add rows 10b and 10c to TID 10003 and renumbers the rows from row 11*

#### TID 10003 Irradiation Event X-Ray Data

This template conveys the dose and equipment parameters of a single irradiation event.

An irradiation event is the occurrence of radiation being applied to a patient in single continuous time-frame between the start (release) and the stop (cease) of the irradiation. The irradiation event is the “smallest” information entity to be recorded in the realm of Radiation Dose reporting. Individual Irradiation Events are described by a set of accompanying physical parameters that are sufficient to understand the “quality” of irradiation that is being applied. This set of parameters may be different for the various types of equipment that are able to create irradiation events. Any automatic on-off switching of the irradiation source during the event shall not be treated as separate events, rather the event includes the time between start and stop of irradiation as triggered by the user. E.g., a pulsed fluoro X-Ray acquisition shall be treated as a single irradiation event.

As described in Section 6.2.4, measurement concepts may be post-coordinated, even though not explicitly specified in the Template. In particular, post-coordination using modifier concept (121401, DCM, “Derivation”), with modifier values drawn from CID 10009 Measured/Calculated would be appropriate to encode indications of measured or of calculated values.

#### TID 10003 IRRADIATION EVENT X-RAY DATA Type: Extensible

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (113706, DCM, "Irradiation Event X-Ray Data")	1	M		
2	>	HAS CONCEPT MOD	CODE	EV (113764, DCM, "Acquisition Plane")	1	M		DCID (10003) Equipment Plane Identification
3	>	CONTAINS	DATETIME	DT (111526, DCM, "DateTime Started")	1	M		
4	>	CONTAINS	CODE	EV (113721, DCM, "Irradiation Event")	1	M		DCID (10002) Irradiation Event Types

			Type")				
5	>	CONTAINS	TEXT	EV (125203, DCM, "Acquisition Protocol")	1	U	
6	>	CONTAINS	CODE	EV (T-D0005, SRT, "Anatomical structure")	1	U	
7	>>	HAS CONCEPT MOD	CODE	EV (G-C171, SRT, "Laterality")	1	UC	If anatomy is bi-lateral DCID (244) Laterality
8	>	CONTAINS	TEXT	EV (113780, DCM, "Reference Point Definition")	1	MC	IF Row 13 or Row 14 is present and Row 9 is not present
9	>	CONTAINS	CODE	EV (113780, DCM, "Reference Point Definition")	1	MC	IF Row 13 or Row 14 is present and Row 8 is not present DCID (10025) Radiation Dose Reference Points
10	>	CONTAINS	UIDREF	EV (113769, DCM, "Irradiation Event UID")	1	M	
<b>10b</b>	<b>&gt;</b>	<b>CONTAINS</b>	<b>TEXT</b>	<b>EV(113605, DCM, "Irradiation Event Label")</b>	<b>1</b>	<b>U</b>	
<b>10c</b>	<b>&gt;&gt;</b>	<b>HAS CONCEPT MOD</b>	<b>CODE</b>	<b>EV(113606, DCM, "Label Type")</b>	<b>1</b>	<b>MC</b>	<b>IF the value of Row 10b is the value of an Attribute in the images.</b> DCID (10022) Label Type
11	>	CONTAINS	NUM	EV (122130, DCM, "Dose Area Product")	1	MC	IFF TID (10001) Row 2 = (113704, DCM, "Projection X-Ray") Units = EV (Gym2, UCUM, "Gym2")
...	...	...	...	...	...	...	...
51	>	CONTAINS	TEXT	EV (121106, DCM, "Comment")	1	U	
52	>	CONTAINS	INCLUDE	DTID (1020) Person Participant	1-n	U	\$PersonProcedureRole = EV (113851, DCM, "Irradiation Administering")
53	>	CONTAINS	INCLUDE	DTID (1021) Device Participant	1	M	\$DeviceProcedureRole = EV (113859, DCM, "Irradiating Device")
54	>	CONTAINS	IMAGE	EV (113795, DCM, "Acquired Image")	1-n	MC	IFF Image Object is created for this irradiation event

**Content Item Descriptions**

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Add rows 6b and 6c to TID 10013 and rennumbers the rows from row 7

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**TID 10013      CT Irradiation Event Data**

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**TID 10013**  
**CT IRRADIATION EVENT DATA**  
**Type: Extensible**

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (113819, DCM, "CT Acquisition")	1	M		
2	>	CONTAINS	TEXT	EV (125203, DCM, "Acquisition Protocol")	1	U		
3	>	CONTAINS	CODE	EV (123014 , DCM, "Target Region")	1	M		DCID (4030) CT and MR Anatomy Imaged
4	>	CONTAINS	CODE	EV (113820, DCM, "CT Acquisition Type")	1	M		DCID (10013) CT Acquisition Types
5	>	CONTAINS	CODE	EV (G-C32C, SRT, "Procedure Context")	1	U		DCID (10014) Contrast Imaging Technique
6	>	CONTAINS	UIDREF	EV (113769, DCM, "Irradiation Event UID")	1	M		
<b>6b</b>	<b>&gt;</b>	<b>CONTAINS</b>	<b>TEXT</b>	<b>EV(113605, DCM, "Irradiation Event Label")</b>	<b>1</b>	<b>U</b>		
<b>6c</b>	<b>&gt;&gt;</b>	<b>HAS CONCEPT MOD</b>	<b>CODE</b>	<b>EV(113606, DCM, "Label Type")</b>	<b>1</b>	<b>MC</b>	<b>IF the value of Row 6b is the value of an Attribute in the images.</b>	<b>DCID (10022) Label Type</b>
7	>	CONTAINS	CONTAINER	EV (113822, DCM, "CT Acquisition Parameters")	1	M		
8	>>	CONTAINS	NUM	EV (113824, DCM, "Exposure Time")	1	M		Units = EV (s, UCUM, "s")
...	...	...	...	...	...	...	...	...
14	>>	CONTAINS	CONTAINER	EV (113831, DCM, "CT X-ray Source Parameters")	1-n	M		
15	>>>	CONTAINS	TEXT	EV (113832, DCM, "Identification Number of the X-ray Source")	1	M		
...	...	...	...	...	...	...	...	
21	>	CONTAINS	CONTAINER	EV (113829, DCM, "CT Dose")	1	MC	IF row 4 does not equal (113805, DCM, "Constant Angle Acquisition")	
22	>>	CONTAINS	NUM	EV (113830, DCM, "Mean CTDIvol")	1	M		Units = EV (mGy, UCUM, "mGy")
...	...	...	...	...	...	...	...	...
30	>	CONTAINS	TEXT	EV (113842, DCM, "X-ray Modulation Type")	1	U		
31	>	CONTAINS	TEXT	EV (121106, DCM, "Comment")	1	U		
32	>	CONTAINS	INCLUDE	DTID (1020) Person Participant	1-n	U		\$PersonProcedureRole = EV (113851, DCM, "Irradiation Administering")
33	>	CONTAINS	INCLUDE	DTID (1021) Device Participant	1	M		\$DeviceProcedureRole = EV (113859, DCM, "Irradiating Device")

**Content Item Descriptions**

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CID 10022 Label Types

Context ID 10022  
Label Types

Type: Extensible Version: 20110816

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
<u>DCM</u>	<u>113607</u>	<u>Series Number</u>
<u>DCM</u>	<u>113608</u>	<u>Acquisition Number</u>
<u>DCM</u>	<u>113609</u>	<u>Instance Number</u>

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<u>113605</u>	<u>Irradiation Event Label</u>	<u>A human-readable label identifying an irradiation event</u>	
<u>113606</u>	<u>Label Type</u>	<u>The type of a human-readable label</u>	
<u>113607</u>	<u>Series Number</u>	<u>A number that identifies a Series. Corresponds to (0020,0011) in PS 3.3</u>	
<u>113608</u>	<u>Acquisition Number</u>	<u>A number that identifies an Acquisition. Corresponds to (0020,0012) in PS 3.3</u>	
<u>113609</u>	<u>Instance Number</u>	<u>A number that identifies an Instance. Corresponds to (0020,0013) in PS 3.3</u>	

Add new CID UID value tp PS 3.6 Table A-3

Table A-3  
CONTEXT GROUP UID VALUES

Context UID	Context Identifier	Context Group Name
1.2.840.10008.6.1.935	10022	Label Types