

DICOM Correction Item

Correction Number		CP-764
Log Summary: CT Phantom for CTDI Dose Measurement		
Type of Modification	Name of Standard	
Correction, Addition	PS3.3, 3.6, 3-16 – 2007	
Rationale for Correction		
<p>This change proposal requires the CTDI Phantom Type for CT. (CTDIvol = Computed Tomography Dose Index on volume)</p> <p>CTDIvol attribute is defined within the enhanced CT image IOD (PS 3.3 A.38.1.4) and CT image IOD (PS 3.3 A.3.2).</p> <p>The CTDI value is based on measurement in specific phantoms. A differentiation is made between head and body. The definition procedure is defined by IEC 60601-2-44</p> <p>To understand the specified CTDI value within an image object the related phantom type shall be stored in the DICOM header.</p>		
Sections of documents affected		
PS 3.3 Sections 2, C.8.2.1 and C.8.15.3.8 and PS 3.6 Section 6		
Correction Wording		

Add to PS 3.3, Table C.8-3

C.8.2.1 CT Image Module

The table in this Section contains IOD Attributes that describe CT images.

**Table C.8-3
 CT IMAGE MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...			
<i>Include 'General Anatomy Optional Macro' Table 10-7</i>			Defined Context ID for the Anatomic Region Sequence is 4030.
<u>CTDI Phantom Type Code Sequence</u>	<u>(0018,9346)</u>	<u>3</u>	<u>The type of phantom used for CTDI measurement according to IEC 60601-2-44. Only a single Item shall be permitted in this Sequence.</u>
<u>>Include Code Sequence Macro Table 8.8-1</u>			<u>DCID 4052</u>

Add to PS 3.3, Table C.8-124

C.8.15.3.8 CT Exposure Macro

Table C.8-124 specifies the attributes of the CT Exposure Functional Group macro.

**Table C.8-124
 CT EXPOSURE MACRO ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...			
>CTDIvol	(0018,9345)	2C	Computed Tomography Dose Index (CTDI _{vol}), in mGy according to IEC 60601-2-44, Ed.2.1 (Clause 29.1.103.4), The Volume CTDI _{vol} . It describes the average dose for this frame for the selected CT conditions of operation. Required if Frame Type (0008,9007) Value 1 of this frame is ORIGINAL. May be present otherwise.
<u>>CTDI Phantom Type Code Sequence</u>	<u>(0018,9346)</u>	<u>3</u>	<u>The type of phantom used for CTDI measurement according to IEC 60601-2-44. Only a single item shall be permitted in this Sequence.</u>
<u>>>Include Code Sequence Macro Table 8.8-1</u>			<u>DCID 4052</u>

Add to PS 3.6, Section 6

6 Registry of DICOM data elements

Tag	Name	VR	VM
...			
<u>(0018,9346)</u>	<u>CTDI Phantom Type Code Sequence</u>	<u>SQ</u>	<u>1</u>