

DICOM Correction Item

Correction Number CP-443	
Log Summary: RT Wedge Position Clarification	
Type of Modification	Name of Standard
Clarification	PS 3.3 2003
<p>Rationale for Correction:</p> <p>A Motorized Wedge radiation field is one where the wedge is both in and out of the field during treatment. This concept is encoded in DICOM using separate control points describing the two states. To avoid potential safety-related misinterpretation of Motorized Wedge encoding, and to be consistent with the manner in which similar parameters such as Beam Limiting Device Position Sequence (300A,011A) are encoded, this Change Proposal clarifies the encoding rules by explicitly requiring the general rule described in C.8.8.14.5, namely that parameters which change at any control point shall be specified at all control points. In addition, a typographical tag error in normative text section C.8.8.14.5 is corrected by this Change Proposal.</p>	
<p>Sections of documents affected</p> <p>PS 3.3, C.8.8.14 (RT Beams Module), C.8.8.21 (RT Beams Session Record Module)</p>	
Correction Wording:	

In PS 3.3, C.8.8.14, Table C.8-46 (RT Beams Module Attributes), change the type of the Wedge Position Sequence (300A,0116) from Type 3 to Type 1C, and replace the attribute description with the following text:

Attribute Name	Tag	Type	Attribute Description
>>Wedge Position Sequence	(300A,0116)	31C	<p>Introduces sequence of Wedge positions for current control point. One or more items may be included in this sequence.</p> <p><u>A Sequence of Items describing Wedge Positions for the current control point.</u></p> <p><u>Required for first item of Control Point Sequence if Number of Wedges (300A,00D0) is non-zero, and in subsequent control points if Wedge Position (300A,0118) changes during Beam. See C.8.8.14.5.</u></p> <p><u>The number of items in this sequence shall equal the value of Number of Wedges (300A,00D0).</u></p>

In PS3.3 C.8.8.14.5 (Control Point Sequence), paragraph 2, change the tag for Wedge Position from (300A,0114) to (300A,0118) to correct a typographical error. Similarly, change the tag for Nominal Beam Energy from (300A,0018) to (300A,0114).

C.8.8.14.5 Control Point Sequence

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Gantry Rotation Direction (300A,011F), Beam Limiting Device Rotation Direction (300A,0121), Patient Support Rotation Direction (300A,0123), and Table Top Eccentric Rotation Direction (300A,0126) are defined as applying to the segment following the control point, and changes to these parameters during treatment may be specified without use of a "non-irradiation" segment. All other Control Point Sequence attributes are defined only at the control point. To unambiguously encode changes in discrete-valued

attributes such as Wedge Position (300A,~~0114~~**0118**) and Nominal Beam Energy (300A,~~0018~~**0114**), a non-irradiation segment where Cumulative Meterset Weight (300A,0134) does not change, shall be used.

In PS 3.3, C.8.8.21, Table C.8-57 (RT Beams Session Record Module Attributes), fix the tag for the Nominal Beam Energy Unit in the description:

Table C.8-57—RT BEAMS SESSION RECORD MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
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>>Nominal Beam Energy Unit	(300A,0015)	1C	Units used for Nominal Beam Energy (300A,0114). Required if Nominal Beam Energy (300A,0114) is sent. Defined Terms: MV = Megavolt MEV = Mega electron-Volt If Radiation Type (300A,00C6) is PHOTON, Nominal Beam Energy Unit (300A, 01 015) shall be MV. If Radiation Type (300A,00C6) is ELECTRON, Nominal Beam Energy Unit (300A, 01 015) shall be MEV.
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