

DICOM Correction Item

Correction Number CP-792	
Log Summary: RT Brachy Source Direction Vector	
Type of Modification Addition	Name of Standard PS 3.3 2007
Rationale for Correction: In the current version of the standard, the source or seed for a brachy treatment can only be specified by a point in space. For determination of the effect of the anisotropy of the source on the dose distribution, one must also know the orientation of the source in space.	
Sections of documents affected: PS 3.3, PS 3.6	
Correction Wording:	

In Section C.8.8.15 RT Brachy Application Setups Module, Table C.8-51 RT Brachy Application Setups Module Attributes, add the attribute following immediately after >>>Control Point 3D Position (300A,02D4):

>>>Control Point 3D Position	(300A,02D4)	3	Coordinates (x, y, z) of Control Point in the patient based coordinate system described in C.7.6.2.1.1 (mm). See C.8.8.15.10.
>>>Control Point Orientation	(300A,0412)	3	<u>(x,y,z) component of the direction vector of the brachy source or seed at the Control Point 3D Position (300A,02D4). See C.8.8.15.14.</u>

In Section C.8.8.15 RT Brachy Application Setups Module, add the following immediately before paragraph C.8.8.16: Approval Module:

C.8.8.15.14 Orientation of Brachy Sources

The Control Point Orientation (300A,xxxx) shall be used to define the orientation of an anisotropic brachytherapy source or seed for the purpose of calculating the effect of the anisotropy on the dose calculation. The Control Point Orientation (300A,xxxx) shall be given by the direction vector of the long axis of the Brachy source or seed in the insertion direction, in the DICOM Patient Coordinate System. The direction vector shall be oriented from the source center as defined by the Control Point 3D Position (300A,02D4) along the long axis of the source and in the insertion direction.

In PS 3.6 add the following:

(300A,0412)	Control Point Orientation	FL	3
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