

DICOM Correction Item

Correction Number CP-938	
Log Summary: Multiple RT Plan References in RT Dose	
Type of Modification	Name of Standard
Correction	PS 3.3 - 2008
Rationale for Correction: <p>The currently accepted way of reading or writing Fraction Sequences is that only one item shall be included in the Fraction Group Sequence (300A,0070), whereas the standard allows more than that. For complex treatment plans with more than one fraction group, this results in creating an RT Plan object for each fraction group item.</p> <p>The Referenced RT Plan Sequence (300C,0002) in the RT Dose Module only allows a single item to be included. When Dose Summation Type (3004,000A) is set to PLAN, this should include the dose contribution from all fraction groups and thus all plans. This is currently not possible and therefore the multiplicity should be increased.</p>	
Sections of documents affected	
PS 3.3	
Correction Wording:	

In PS 3.3, Section C.8.8.3 RT Dose Module, Table C.8-39, make the following changes:

Table C.8-39 RT DOSE MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
Dose Summation Type	(3004,000A)	1	Type of dose summation. Defined Terms: PLAN = dose calculated for entire RT Plan <u>MULTI_PLAN = dose calculated for 2 or more RT Plans</u> FRACTION = dose calculated for a single Fraction Group within RT Plan BEAM = dose calculated for one or more Beams within RT Plan BRACHY = dose calculated for one or more Brachy Application Setups within RT Plan CONTROL_POINT = dose calculated for one or more Control Points within a Beam
Referenced RT Plan Sequence	(300C,0002)	1C	<u>Introduces Sequence of one Class/Instance pair</u> describing RT Plan(s) associated with dose. Required if Dose Summation Type (3004,000A) is PLAN, <u>MULTI_PLAN</u> , FRACTION, BEAM, BRACHY or CONTROL_POINT. Only a single item shall be permitted in this sequence, <u>unless Dose Summation Type (3004,000A) is MULTI_PLAN, in which case two or more items shall be included in this sequence.</u> See Note 1.
>>Include 'SOP Instance Reference Macro' Table 10-11			

In PS 3.3, Section C.8.8.3 RT Dose Module, Table C.8-39, make the following changes:

Note: In order to prevent misrepresentation of the dose summation:

- a. **If the Dose Summation Type (3004, 000A) is PLAN, then only a single instance of RT Plan is referenced and the dose will be for the entire plan (i.e. it is not viable to combine only certain fraction groups of different plans).**
- b. **If the Dose Summation Type (3004,000A) is MULTI_PLAN, then 2 or more instances of RT Plan may be referenced. As above, each reference will be for the entire plan.**
- c. **If the Dose Summation Type (3004,000A) is FRACTION, then only a single instance of RT PLAN and a single Fraction Group are referenced (i.e. component beams or brachy application setups are not referenced).**

Note: In order to prevent misrepresentation of dose summation components, if the Dose Summation Type (3004,000A) is PLAN then only a single instance of RT Plan is referenced (i.e. component fraction groups are not referenced). Similarly, if the Dose Summation Type (3004,000A) is FRACTION then only a single instance of RT Plan and a single Fraction Group are referenced (i.e. component beams or brachy application setups are not referenced).