

DICOM Correction Item

Correction Number CP-436	
Log Summary: Additional Dose Volume Histogram Type	
Type of Modification	Name of Standard
Omission	PS 3 2003
<p>Rationale for Correction:</p> <p>In the RT DVH Module of the RT Dose object the DVH Type (3004,0001) has enumerated values DIFFERENTIAL and CUMULATIVE.</p> <p>In Brachytherapy treatment planning there is an additional type of DVHs (NATURAL) used to eliminate the influences of the steep dose gradient that is typical for Brachytherapy.</p>	
Sections of documents affected PS 3.3, C.8.8.4 (RT DVH Module)	
Correction Wording:	

In PS 3.3, Section C.8.8.4 (RT DVH Module), Table C.8-36 (RT DVH Module Attributes) modify the following attributes:

Attribute Name	Tag	Type	Attribute Description
>DVH Type	(3004,0001)	1	Type of DVH. Enumerated Values: DIFFERENTIAL = differential dose-volume histogram CUMULATIVE = cumulative dose-volume histogram <u>NATURAL = natural dose volume histogram</u>
>Dose Volume Units	(3004,0054)	1	Volume axis units. Enumerated Values: CM3 = cubic centimeters PERCENT = percent <u>PER U = volume per u with u(dose)=dose^{-3/2}. See C.8.8.4.3.</u>
>DVH Data	(3004,0058)	1	A data stream describing the dose bin widths D_n and associated <u>Dose Volume Units (3004,0054)</u> V_n in the order $D_1 V_1, D_2 V_2, \dots, D_n V_n$.

In PS 3.3, after Section C.8.8.4.2, add the following:

C.8.8.4.3 Dose Volume Units

The unit PER U is defined in: Anderson, LL: "A "natural" volume-dose histogram for brachytherapy", Medical Physics 13(6) pp 898-903, 1986.