

DICOM Correction Proposal

STATUS	Final Text
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Correction Number	CP-1290
Log Summary:	Correct ROI Physical Property Value for Elemental Composition
Name of Standard	PS 3.3 2011
Rationale for Correction:	This CP addresses the fact that CP 796 introduced ROI Elemental Composition Sequence (3006, 00B6) but did not change the conditions when updating ROI Physical Property Value (3006, 00B4). Implementers do not know how to deal with the attribute ROI Physical Property Value, which does not apply in case of ELEM_FRACTION. Implementers are forced to use fake data (or omitting this attribute ignoring Type 1, which breaks the type requirement). This CP clarifies the situation.
Correction Wording:	

In PS 3.3 Section C.8.8.8 RT ROI Observations Module, Table C.8-44 RT ROI Observations Module Attributes, make the following updates to Type and Attribute Description of ROI Physical Property Value (3006,00B4):

Table C.8-44—RT ROI OBSERVATIONS MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
RT ROI Observations Sequence	(3006,0080)	1	Introduces sequence of observations related to ROIs defined in the ROI Module. One or more items shall be included in this sequence.
...			
>ROI Physical Properties Sequence	(3006,00B0)	3	Introduces sequence describing physical properties associated with current ROI interpretation. One or more items are permitted in this sequence.
>>ROI Physical Property	(3006,00B2)	1	Physical property specified by ROI Physical Property Value (3006,00B4). Defined Terms: REL_MASS_DENSITY = mass density relative to water REL_ELEC_DENSITY = electron density relative to water EFFECTIVE_Z = effective atomic number EFF_Z_PER_A = ratio of effective atomic

			number to mass (AMU^{-1}) REL_STOP_RATIO = linear stopping power ratio relative to water ELEM_FRACTION = elemental composition of the material
>>ROI Elemental Composition Sequence	(3006,00B6)	1C	The elemental composition of the ROI and the atomic mass fraction of the elements in the ROI. Required if ROI Physical Property (3006,00B2) equals ELEM_FRACTION. One or more items shall be included in this sequence.
>>>ROI Elemental Composition Atomic Number	(3006,00B7)	1	The atomic number of the element for which the ROI Elemental Composition Sequence (3006,00B6) is sent.
>>>ROI Elemental Composition Atomic Mass Fraction	(3006,00B8)	1	The fractional weight of the element for which the ROI Elemental Composition Sequence (3006,00B6) is sent. The sum of all ROI Elemental Composition Atomic Mass Fractions (3006,00B8) sent in the ROI Elemental Composition Sequence (3006,00B6) shall equal 1.0 within acceptable limits of floating point precision.
>>ROI Physical Property Value	(3006,00B4)	1	User-assigned value for physical property. Note: <u>The value has no meaning when ROI Physical Property (3006,00B2) has the value ELEM_FRACTION. Therefore this attribute may contain any value and receivers may ignore that value.</u>