DICOM Correction Proposal

STATUS	Final Text
Date of Last Update	2024/06/12
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Correction Number	CP-2376
Log Summary: Add Table Top Position Alignment UID to Table Top positions	
Name of Standard PS 3.3, PS3.6, PS3.15 2024b	
Rationale for Correction: In radiotherapy treatments the values for Table Top Vertical Position (300A,0128), Table Top Longitudinal Position (300A,0129) and Table Top Lateral Position (300A,012A) are typically acquired during the first treatment session and these acquired values will be reused in the consecutive treatment sessions. It can happen during the course of the treatment, that the patient is treated using a treatment delivery device different from the one that the positions were originally acquired with. In this case if the patient support differs or it has a different positional alignment/calibration, the initial patient position may differ and could even cause a mistreatment if not detected during the patient setup. Therefore, a Table Top Position Alignment UID is added to supplement the Table Top position values in treatment records and plans. This enables the treatment delivery device to take action if the received Table Top position values are not applicable to the used patient support device.	
Correction Wording:	

PS3.3, update C.8.8.14 RT Beams Module

Table C.8-50. RT Beams Module Attributes

Attribute Name	Tag	Type	Attribute Description
Beam Sequence	(300A,00B0)	1	Sequence of treatment beams for current RT Plan. One or more Items shall be included in this Sequence.
…			
…			
>Primary Dosimeter Unit	(300A,00B3)	3	Measurement unit of machine dosimeter. See Section C.8.8.14.1. Enumerated Values: **MU** Monitor Unit **MINUTE** minute
>Table Top Position Alignment UID	**(300A,0054)**	**3**	**Identifies the positional alignment of the Table Top for which the values of Table Top Vertical Position (300A,0128), Table Top Longitudinal Position**

Attribute Name	Tag	Type	Attribute Description
			(300A,0129) and Table Top Lateral Position (300A,012A) in the Control Point Sequence (300A,0111) are applicable. See Section C.8.8.14.20.
…			

C.8.8.14.20 Table Top Position Alignment UID

The Table Top Position Alignment UID (300A,0054) identifies the positional alignment of the Table Top. When different Table Tops have the same Table Top Position Alignment UID (300A,0054), the values of Table Top Vertical Position (300A,0128), Table Top Longitudinal Position (300A,0129) and Table Top Lateral Position (300A,012A) are known to be interchangeable between these devices and when applied, end up at the same treatment position relative to the treatment delivery device.

Table Top position values are typically acquired during the first treatment session and these acquired values will be applied in consecutive treatment sessions. During the course of the treatment, the patient may be treated with a treatment delivery device different from the one that the positions were originally acquired with. If Table Top Position Alignment UID (300A,0054) in plan differs from the Table Top Position Alignment UID configured for the treatment delivery device, the device can take appropriate action and e.g., ignore the incoming positional values or prompt the user to verify the applied Table Top position before actual delivery.

The acquired Table Top positions can be updated into the consecutive treatment plans or communicated using the RT Beams Delivery Instruction IOD.

Table C.8.8.25-1. RT Ion Beams Module Attributes

Attribute Name	Tag	Type	Attribute Description
Ion Beam Sequence	(300A,03A2)	1	Sequence of setup and/or treatment beams for current RT Ion Plan. One or more Items shall be included in this Sequence.
>Beam Number	(300A,00C0)	1	Identification number of the Beam. The value of Beam Number (300A,00C0) shall be unique within the RT Ion Plan in which it is created. See Section C.8.8.25.1.
…			
>Primary Dosimeter Unit	(300A,00B3)	1	Measurement unit of machine dosimeter. Enumerated Values: **MU** Monitor Unit **NP** number of particles
>Table Top Position Alignment UID	**(300A,0054)**	**3**	**Identifies the positional alignment of the Table Top for which the values of Table Top Vertical Position (300A,0128), Table Top Longitudinal Position (300A,0129) and Table Top Lateral Position (300A,012A) in the Ion Control Point Sequence (300A,03A8) are applicable.** **See Section C.8.8.14.20.**
…			

Table C.8-54. RT Treatment Machine Record Module Attributes

Attribute Name	Tag	Type	Attribute Description
Treatment Machine Sequence	(300A,0206)	1	Sequence describing treatment machine used for treatment delivery. Only a single Item shall be included in this Sequence.
…			
>Date of Installation	(0018,1205)	3	The date the equipment used for treatment delivery was installed in its current location. The equipment may or may not have been used prior to installation in its current location.
>Table Top Position Alignment UID	**(300A,0054)**	**3**	**Identifies the positional alignment of the Table Top that was used to acquire the values of Table Top Vertical Position (300A,0128), Table Top Longitudinal Position**

Attribute Name	Tag	Type	Attribute Description
			(300A,0129) and Table Top Lateral Position (300A,012A) in the Control Point Delivery Sequence (3008,0040) or in the Ion Control Point Delivery Sequence (3008,0041). **See Section C.8.8.14.20.**

Table C.8.8.29-1 RT Beams Delivery Instruction Module Attributes

Attribute Name	Tag	Type	Attribute Description
…			
Beam Task Sequence	(0074,1020)	1	Specification of beams to be delivered and/or used for verification of the patient position. One or more Items shall be included in this Sequence.
>…			
>Table Top Position Alignment UID	**(300A,0054)**	**3**	**Identifies the positional alignment of the Table Top for which the values of Table Top Vertical Adjusted Position (0074,1026), Table Top Longitudinal Adjusted Position (0074,1027) and Table Top Lateral Adjusted Position (0074,1028) are applicable.** **See Section C.8.8.14.20.**
>Table Top Vertical Adjusted Position.	(0074,1026)	2	Adjusted Table Top Vertical position in the IEC TABLE TOP coordinate system in mm for patient setup. See Section C.8.8.29.2
…			

Table 6-1. Registry of DICOM Data Elements

Tag	Name	Keyword	VR	VM	
…					
(300A,0054)	**Table Top Position Alignment UID**	**TableTopPositionAlignmentUID**	**UI**	**1**	

Table E.1-1. Application Level Confidentiality Profile Attributes

Attribute Name	Tag	Retd. (from PS3.6)	In Std. Comp. IOD (from PS3.3)	Basic Prof.	Rtn. Safe Priv. Opt.	Rtn. UIDs Opt.	Rtn. Dev. Id. Opt.	Rtn. Inst. Id. Opt.	Rtn. Pat. Chars. Opt.	Rtn. Long. Full Dates Opt.	Rtn. Long. Modif. Dates Opt.	Clean Desc. Opt.	Clean Struct. Cont. Opt.	Clean Graph. Opt.
Table Top Position Alignment UID	**(300A,0054)**	**N**	**Y**	**U**		**K**								