



Contribution ID: 64

Type: Poster

## Conversion of measured percentage depth dose to Tissue maximum ratio values in the small fields: Is it worth?

Thursday, June 22, 2017 3:35 PM (5 minutes)

### Abstract:

The goal is to find if there were clear differences between the direct measurement of TMR and that calculated from PDD. The dedicated 6-MV and 10-MV treatments were delivered on Siemens (Siemens Medical Solutions, Malvern, PA) ONCOR Expression linear accelerator with an 82 multi-leaf collimator (MLC)-based Stereotactic radiosurgery and radiotherapy (SRS/SRT) is used in Children's Cancer Hospital. The dosimetric data were taken using PTW water phantom. The cone sizes vary from 12.5 to 40.0 mm diameter. Mean error  $\leq 1.5\%$  was observed between the measured and calculated TMR values for all clinically relevant field sizes and depths. The data Present of no significant differences between TMR values with a p-value  $< 0.05$ . The differences between measured and calculated TMR values averaged over depth shows a strong positive correlation with the field size ranging from 1 cm x1cm to 10 cm x10cm.

Keywords: TMR, PDD, Dosimetry

### Country

Cairo, Egypt.

### Institution

Children's Cancer Hospital, National Cancer Institute, Cairo University

**Primary author:** ATTALLA, Ehab (Children's Cancer Hospital, National Cancer Institute, Cairo University, Cairo, Egypt)

**Co-authors:** ELAWADY, Rasha (National Cancer Institute, Cairo University); SHOER, Shaimaa (Children's Cancer Hospital)

**Presenter:** ATTALLA, Ehab (Children's Cancer Hospital, National Cancer Institute, Cairo University, Cairo, Egypt)

**Session Classification:** Thursday afternoon - Poster Presentations - Screen2

**Track Classification:** Dosimetry