A dosimetric Study of Spatially Fractionated Radiation (GRID) using Linac Grid Block and Newly Designed Virtual TOMOGRID Template

Phantom patient treatment plans were generated using Pinnacle v.9.0 TPS and Helical Tomotherapy v4.0.4 TPS. The dose profiles under different blocks between different treatment modalities were measured and compared. The phantom treatment plans were also compared with the treated GRID patient plans.

The depth dependence of dose profiles was measured under the Linac block. The results were showed in Figure 2(a,b) and Figure 3(a,b). The dose profiles for treated GRID patients were also showed in Figure 2c and Figure 3c.

The dose profiles under virtual TOMOGRID templates were shown in Figure 4 and Figure 5.
The GTV Dose Volume Histogram (DVH) and the isodose distribution under Linac block for phantom and treated GRID patient were shown in Figure 6 and Figure 7. The DVH and isodose distribution under the virtual TOMOGRID template was shown in Figure 8.