

AbstractID: 10461 Title: Effect of the same plan on doses to patients during radiotherapy with nasopharyngeal carcinoma

**Purpose** To evaluate the feasibility of primitive IMRT plan was used throughout the treatment course in the nasopharyngeal carcinoma. **Methods** 10 patients with nasopharyngeal carcinoma who had undergone radiotherapy by IMRT was selected. A IMRT plan was designed by Pinnacle<sup>3</sup> planning system. During the middle period of the irradiation, the secondary scans were made with the same CT parameters of the first, and then to copy the primitive plan to secondary CT image, The same energy, beam angles, control points, and optimization parameters were used for dose calculations for each paired plans using a treatment optimization system. The two plans were compared using a set of parameters derived from DVHs and dose-volume statistics. Detailed analysis of the dose distribution of the treatment volume. **Result** the secondary plan was compared with the first plan. At the Isocenter layer, the mean length was diminute to 8% in the anterior-posterior direction and 3% in the left-right direction. PTV1 (D95) was decreased to 0.6%–5.3%; the extent of the averaged volume to the right/left parotids was decreased to 13.1%–41.4% and 12.0%–49.0% respectively; The averaged dose to the right/left parotids was increase to 5.6%–45.1% and 3.3%–32.2% respectively; the waving extent of Dmax To the spine cord and brain stem are -4.1%–13.9%, -3.9%–9.3% respectively. **Conclusion** Our planning study showed that there were the essentiality to modify the plan to correcting the target and normal tissue variation in treatment courses in the nasopharyngeal carcinoma.