AbstractID: 6707 Title: Stereotactic radiotherapy for head and neck cancer: The XPlan, MMLC and the Head and Neck Localizer

Fractionated stereotactic radiotherapy provides dose conformity as well as high precision treatment through stereotactic localization and immobilization in CNS sites. The GTC frame, integrated with XKnife and XPlan, is being used successfully for CNS sites at this hospital. The GTC frame by virtue of its design and the dental bite block assembly, however, imposes constraints on the inferior limit which from our experience is the hard palate. The introduction of the Head and Neck Localizer frame (HNL) now allows for treating sites in the head and neck region stereotactically.

After intense scrutiny of the HNL frame, we became one of the first sites to implement the HNL together with XPlan with 27 patients treated since last June. The HNL consists of a carbon fibre base board, a support frame assembly for attaching the patient-specific dental mouthpiece, a silverman head cup, a localizer box and overlay sheets. A Vak-Lok bag from Med-Tek was also added to the silverman cup to dramatically improve patient reproducibility. The XPlan incorporates the MMLC (mini multi leaf collimator) with leaf width of 4 mm at the isocenter and typically between four and six static fields are used. This new technology is being used as a boost as also a primary mode of treatment allowing dose escalation up to 70 Gy. A new dimension has just been added in its use by the introduction of XPlan stereotactic IMRT. An overview of our experience with examples of patients treated and potential treatment sites for HNL is provided.