

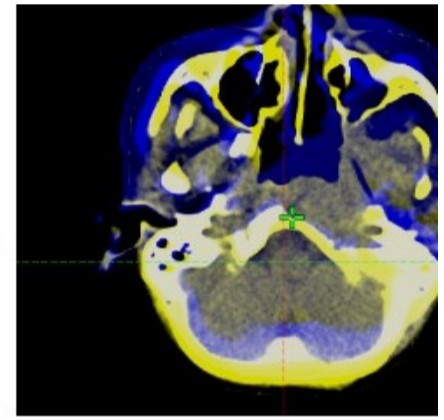
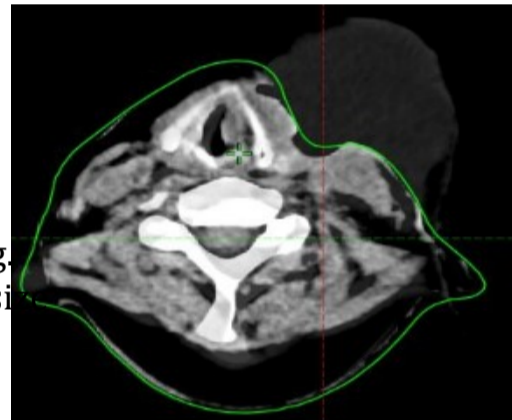
Adaptive Radiotherapy Planning for Advanced Head and Neck Tumors - Kenya's Journey With the First True Beam Technology

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Introduction:

- **Implementation of CBCT with TrueBeam technology** for head and neck tumors significantly advanced adaptive treatment planning in Kenya.
- Radiographers **relied on visual observation** to identify offline changes in immobilization masks and guide re-planning.
- **CBCT introduction** enabled easy detection of changes in tumor size and node reduction, leading to more informed treatment decisions.



This study aims to determine the clinical impact of implementing this technology on head and neck patients.

METHODS AND MATERIALS

A retrospective study was conducted on patients who qualified for adaptive planning.

8 Patients with head and neck tumors who received adjuvant chemotherapy and subsequently received a dose of 66Gy or 70Gy were included. Weekly CBCT images were analyzed during treatment, and cumulative dose **PER FRACTION** to the right and left parotids, oral cavity, and the conformity index (CI) of the GTV were determined.

Conclusion:

- Dose reductions to critical organs like the **parotids** and **oral cavity** likely reduce the incidence of side effects such as **xerostomia** and **dysphagia**,
- while improved conformity index values suggest better target volume coverage.
- This highlights the clinical importance of incorporating adaptive radiotherapy in routine treatment for head and neck cancer.

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RESULTS

