

## Stereotactic Body Radiotherapy As Primary Treatment For Medically Inoperable Head And Neck Cancer

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## Abstract

**Objectives:** Patients with medically inoperable head and neck cancer represent an increasing challenge with limited prospective data to guide management. Conventional local therapies, such as surgery and external beam radiotherapy ± chemotherapy, can significantly impact patients' quality of life (QoL).

**Methods:** Retrospectively reviewed medical records of 45 patients with medically inoperable head and neck cancer prospectively treated with Stereotactic Body Radiotherapy (SBRT) ± cetuximab. SBRT consisted of primarily 40Gy in five fractions delivered biweekly over 2.5 weeks. Patient-reported quality of life (PR-QoL) following irradiation was prospectively acquired using the validated MD Anderson Symptom Inventory Head and Neck Cancer Module (MDASI-HN), Dysphagia Inventory (MDADI), and Xerostomia Questionnaire. Acute radiation toxicities – within 90 days of the start of RT – were scored using CTCAE Version 4.0 guidelines and late complications by the RTOG/EORTC scale. Local-regional control and overall survival were recorded.

**Results:** Median clinical follow-up was 6 months (range: 1.5–15 months). Median age was 74 years (55- 95 years). Anatomical sites treated: 13 tumors (29%) in the upper aerodigestive tract, 12 (26%) tumors in the oral cavity, 12 (26%) in the skull base, and 9 (20%) in the lateral neck. The 1-year actuarial local progression-free survival, regional progression-free survival, distant progression-free survival, and overall survival for definitively treated patients were 80, 72, 58, and 64%, respectively. Radiological responses were complete response in 30 % of patients, partial response and stable disease in 38,18% respectively. Four patients (9%) experienced acute grade 3 Chondronecrosis and three patient (6 %) experienced late grade 3 mucositis; there were no grade 4–5 toxicities. Among the 43 (96%) patients who completed the MDASI-HN and MDADI questionnaires, there were no significant differences between PR-QoL before irradiation and at last follow-up (all P values > 0.35).

**Conclusions:** Stereotactic body radiotherapy shows encouraging local control with relatively low toxicity in medically inoperable head and neck cancer patients, which may provide an aggressive potentially curative local therapy while maintaining quality of life.

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#### Abstract

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