

Outcomes of postoperative hypofractionated radiotherapy (50 Gy in 20 Fractions) in low to intermediate risk oral cavity squamous cell carcinoma; A retrospective study.

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BACKGROUND

- Postoperative radiotherapy is an established treatment modality for selected patients with oral cavity squamous cell carcinoma (OCSCC).
- Conventional fractionation (60 Gy in 30 fractions) requires prolonged treatment courses and may contribute to treatment burden and interruptions.
- Hypofractionated radiotherapy (50 Gy in 20 Fractions) offers a shorter treatment schedule and may improve treatment efficiency while maintaining acceptable oncological outcomes and toxicity.

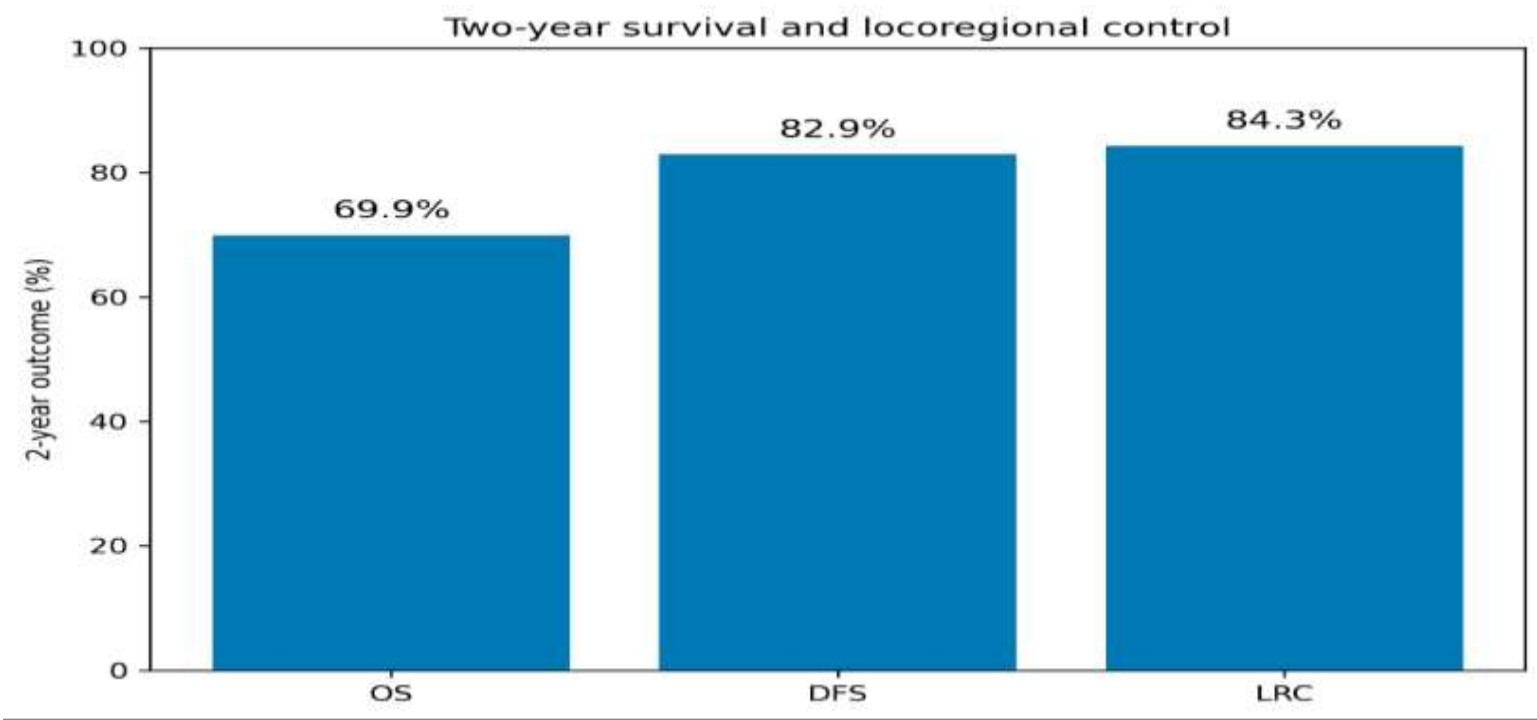
OBJECTIVE

To evaluate **treatment compliance, toxicity, locoregional control (LRC), disease-free survival (DFS), and overall survival (OS)** following postoperative hypofractionated radiotherapy in patients with low- to intermediate-risk OCSCC.

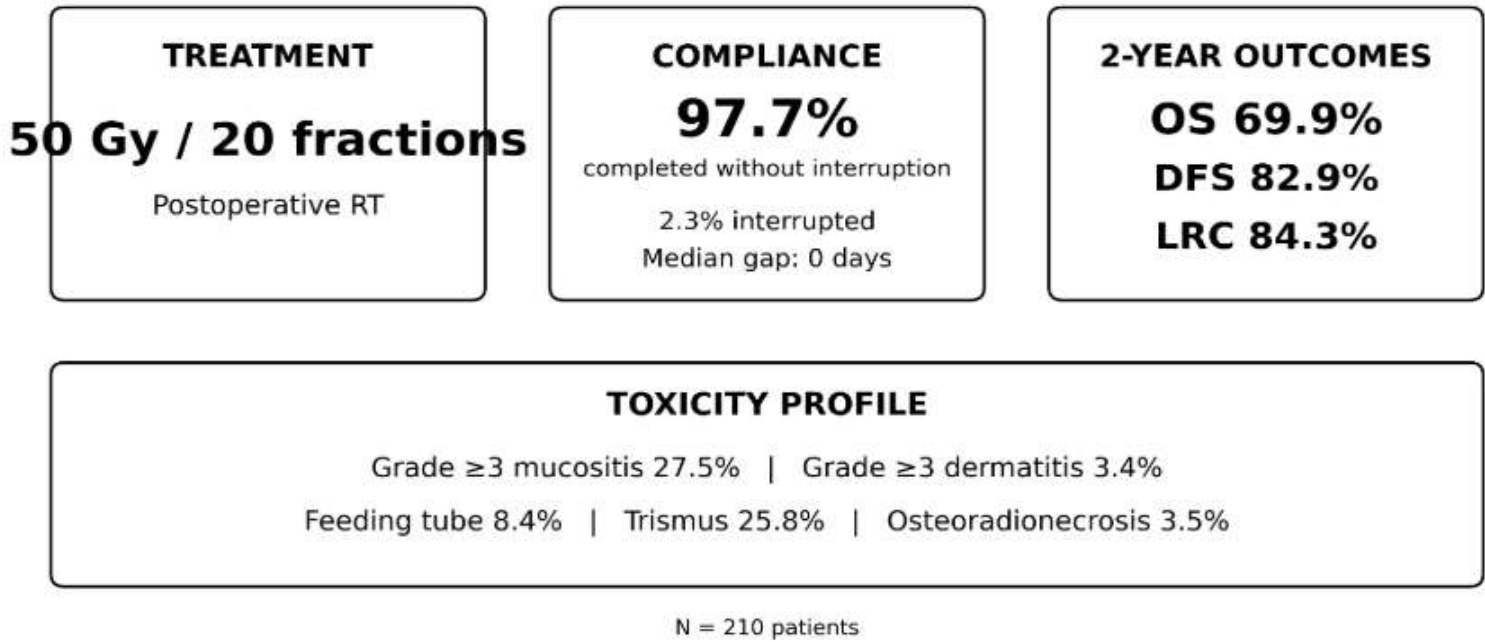
METHODOLOGY

- A **Retrospective study**
- **210** patients with low- to intermediate-risk OCSCC treated with postoperative hypofractionated radiotherapy at **SKMCH&RC, Lahore**.
- **Study period:** 2012–2020
- **Treatment compliance** was assessed using treatment interruptions and treatment gaps.
- **Acute and late toxicities** included grade ≥3 mucositis, grade ≥3 dermatitis, feeding-tube requirement, xerostomia, trismus, fibrosis, and osteoradionecrosis.
- **Overall survival, disease-free survival, and locoregional control** were assessed using Kaplan–Meier survival analysis.

2-year OS, DFS, LRC in postop hypofractionated RT



TREATMENT & OUTCOME SNAPSHOT



RESULTS & ANALYSIS

- A total of 210 patients with median age was 55 years (IQR 17; range 20–86 years).
- In pathological staging, stage II was most common (**41.8%**), followed by stage III (**21.5%**) and stage I (**20.9%**). Pathological N0 disease was present in **83.1%**.
- **Treatment compliance** was high (**97.7%**), with **treatment interruption** in **2.3%**
- **Grade ≥3 mucositis** occurred in **27.5%**, **Grade ≥3 dermatitis** in **3.4%**
- **Feeding tube requirement** in **8.4%**, **Trismus** in **25.8%**, **Osteoradionecrosis** in **3.5%**
- Xerostomia and fibrosis were predominantly low grade.
- At 2 years, **overall survival** was **69.9%**, **disease-free survival** was **82.9%**, and **locoregional control** was **84.3%**.
- Advanced stage, Extranodal extension, Perineural invasion, positive margins, and Lymphovascular invasion were adverse prognostic factors for OS, DFS and LRC.

KEY TAKEAWAYS

- ✓ Uncommon treatment gaps, acceptable acute toxicity levels, low grade late toxicity, 2-years OS, DFS, LRC suggestive of excellent disease control in this low- to intermediate-risk cohort.
- ✓ These findings support hypofractionated regimen as a feasible postoperative therapy in appropriately selected patients with OCSCC.
- ✓ Prospective comparative studies are warranted to confirm long-term oncological outcomes and toxicity.

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