

**Title:** The efficacy of neoadjuvant chemotherapy as compared to upfront surgery for the management of oral squamous cell carcinoma- a systematic review and meta-analysis

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**Abstract:**

The efficacy of neoadjuvant chemotherapy in the field of head and neck oncology has always been debated. The aim of this study was to determine the efficacy of neoadjuvant chemotherapy followed by surgery in patients with oral squamous cell carcinoma (OSCC) by comparison to upfront surgery, in terms of overall survival, disease-free survival, response rates, positive surgical margins, loco-regional recurrence, distant metastasis, and toxicity. Three randomized clinical trials and five retrospective studies reporting a total of 1373 patients were retrieved (493 treated with NACT, 880 treated with upfront surgery). All statistical analyses were done using RevMan 5.4. There was no statistically significant difference between the treatment groups for all outcomes (overall survival  $P = 0.41$ , disease-free survival  $P = 0.91$ , loco-regional recurrence  $P = 0.12$ , distant metastasis  $P = 0.23$ ), except positive margins ( $P = 0.007$ ); a reduced risk of positive margins was observed for neoadjuvant chemotherapy. The pooled proportion of patients with a complete pathological response (17%) was inadequate to obtain an improvement in survival. The lower margin positivity rate, leading to resectability with clear margins, may be a benefit of neoadjuvant chemotherapy in locally advanced OSCC; however, this treatment failed to provide a benefit in terms of survival and the response rate.

**Biography:**

Dr Varthangpuii is a young oral and maxillofacial surgeon from Mizoram, a small Northeastern state of India who completed her Masters in the Dept of OMFS in 2022 from Government Dental College and Hospital, Mumbai. She is currently serving her one year compulsory bond service as a dental surgeon, which is to be completed by April 2024. She has 4 PUBMED indexed publications out of which this current presentation was published in the renowned International Journal of Oral and Maxillofacial Surgery (IJOMS).