

Log odds of positive lymph nodes as an independent predictor of overall survival in oral squamous cell carcinoma

Varuni Iyer¹, Kiran Kumar¹, Kaveri Hallikeri¹, Anil Kumar Desai², Niranjana Kumar², Srikant Natarajan³

¹Department of Oral Pathology and Microbiology, SDM College of Dental Sciences and Hospital, A Constituent Unit of Shri Dharmasthala Manjunatheshwara University, ²SDM Craniofacial Surgery and Research Centre, A Constituent Unit of Shri Dharmasthala Manjunatheshwara University, Dharwad, ³Department of Oral Pathology and Microbiology, Manipal College of Dental Sciences, Mangalore, A Constituent Unit of Manipal Academy of Higher Education, Manipal, Karnataka, India

Abstract

Context: Log odds of positive lymph nodes (LODDS) have been recently demonstrated as a very promising staging model and have outperformed AJCC pN, lymph node ratio (LNR) category in major cancers. Literature is scarce concerning the prognostic ability of LODDS in oral squamous cell carcinoma (OSCC) patients. **Aims:** The present study was aimed to evaluate the importance of LODDS in predicting locoregional recurrence and overall survival (OS) in patients with OSCC compared to LNR.

Settings and Design: The retrospective study was carried out on 194 patients with OSCC cases treated by surgery ± adjuvant therapy from 2008 to 2014 at our institution.

Subjects and Methods: Demographical and clinicopathological details of study cases were recorded. LNR and LODDS were calculated and expressed as a percentage and mean ± standard deviation.

Statistical Analysis Used: The OS analysis was done by the Kaplan–Meier curve followed by log-rank (mantel-cox) test. Univariate and multivariate survival analysis was done to analyze the prognostic ability of LNR% and LODDS after adjusting the clinicopathological parameters by the Cox proportional hazards model.

Results: Patients with cut off values of LODDS > -1.2 and LNR% >4 had significantly lower mean OS ($P \leq 0.001$). Multivariate analysis indicated that only mean LODDS > -1.2 was significantly associated with poor OS. Although there was a correlation with locoregional recurrence, LODDS and LNR failed to be the independent predictors of locoregional recurrence.

Conclusions: LODDS was an independent reliable prognostic indicator for patients with OSCCs than conventional staging systems and LNR.

Keywords: Locoregional recurrence, log odds of positive lymph nodes, lymph node ratio, oral squamous cell carcinoma, overall survival

Address for correspondence: Dr. Kiran Kumar, Department of Oral and Maxillofacial Pathology, SDM College of Dental Sciences and Hospital, A Constituent Unit of Shri Dharmasthala Manjunatheshwara University, Sattur, Dharwad - 580 009, Karnataka, India.

E-mail: kirankumarop@gmail.com

Submitted: 18-Mar-2020, **Revised:** 05-Aug-2020, **Accepted:** 13-Aug-2020, **Published:** 09-Jan-2021

Access this article online

Quick Response Code:



Website:

www.jomfp.in

DOI:

10.4103/jomfp.JOMFP_110_20

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Iyer V, Kumar K, Hallikeri K, Desai AK, Kumar N, Natarajan S. Log odds of positive lymph nodes as an independent predictor of overall survival in oral squamous cell carcinoma. *J Oral Maxillofac Pathol* 2020;24:576.