THE CORRELATION BETWEEN PATHOLOGICAL PARAMETERS WITH LYMPH NODE METASTASIS IN ORAL CAVITY SQUAMOUS CELL CARCINOMA (OCSCC)

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Introduction

1. Oral squamous cell carcinoma (OSCC) develops on the mucosal epithelium of the oral cavity and accounts for approximately 90% of oral malignancies.

2. According to the Global Cancer Observatory (GCO), the incidence of OSCC will rise by approximately 40% by 2040.

3. Persistent exposure to various risk factors, including tobacco, alcohol, betel quid (BQ), and human papillomavirus (HPV).

**OBJECTIVE:** To evaluate the association of DOI, LVI and PNI with regional lymph node metastasis in OCSCC.

Results

A total of **106** patients were included in the study. **87** underlines males and **19** females were part of the study. The predominant tumor site included buccal mucosa (81.13%), tongue (16.03%), others (2.83%). Frequently occurring histology included SCC (100%). PNI was present in 32 patients, LVSI in 7 patients, out of the total 106, and mean depth of invasion ranging: 1.3 ± 0.90 cm. Nodal metastasis was present in 48 patients (45.28%).

Chi-square analysis revealed that histological grade (p=0.045), PNI (p=0.019), and DOI (p=0.032) were significantly associated with lymph node metastasis, whereas tumor size (p=0.298) and LVSI (p=0.15) were not significantly associated.

Correlation of Pathological Parameters with Lymph Node Metastasis
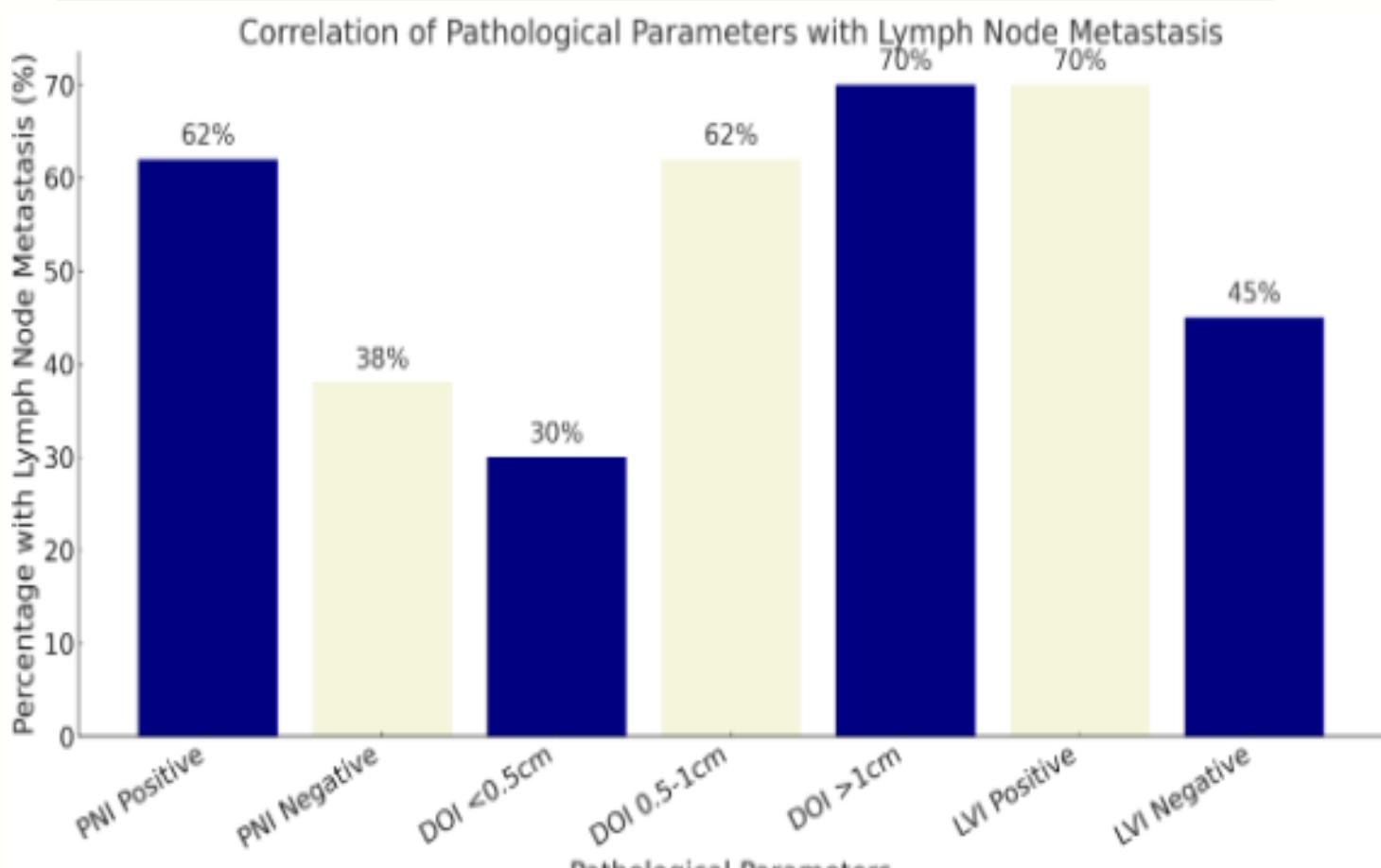
Methodology

This retrospective study was conducted in Dr. Ziauddin Hospital, Karachi, Pakistan in 2025. Patients of oral cavity squamous cell carcinoma from January 2021 till December 2024, from the cancer registry record of Dr. Ziauddin Hospital, Karachi were included. A total of **106** patients fulfilled the inclusion criteria. SPSS version 25 was used for analysis of the data. Chi square and T-test were used to determine p-value of ≤ 0.05.

Correlation of Parameters with Lymph Node Metastasis (Percent vs p-value)
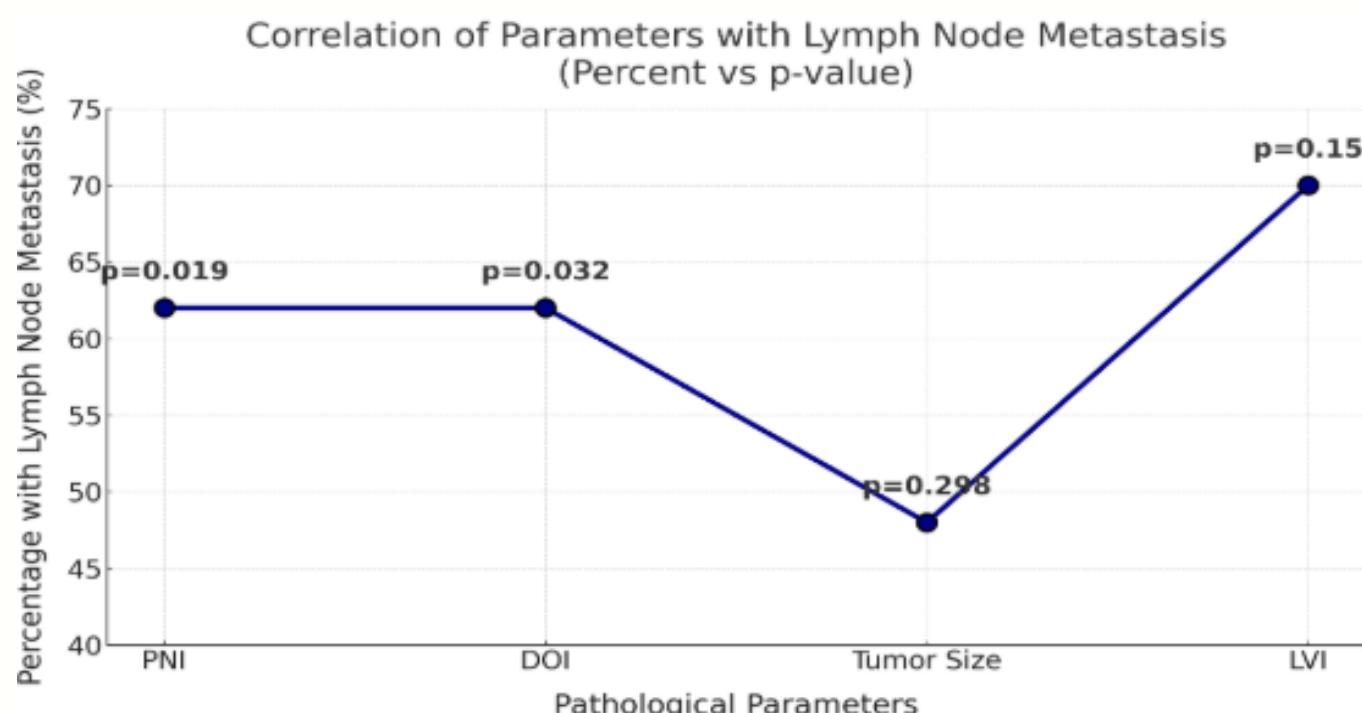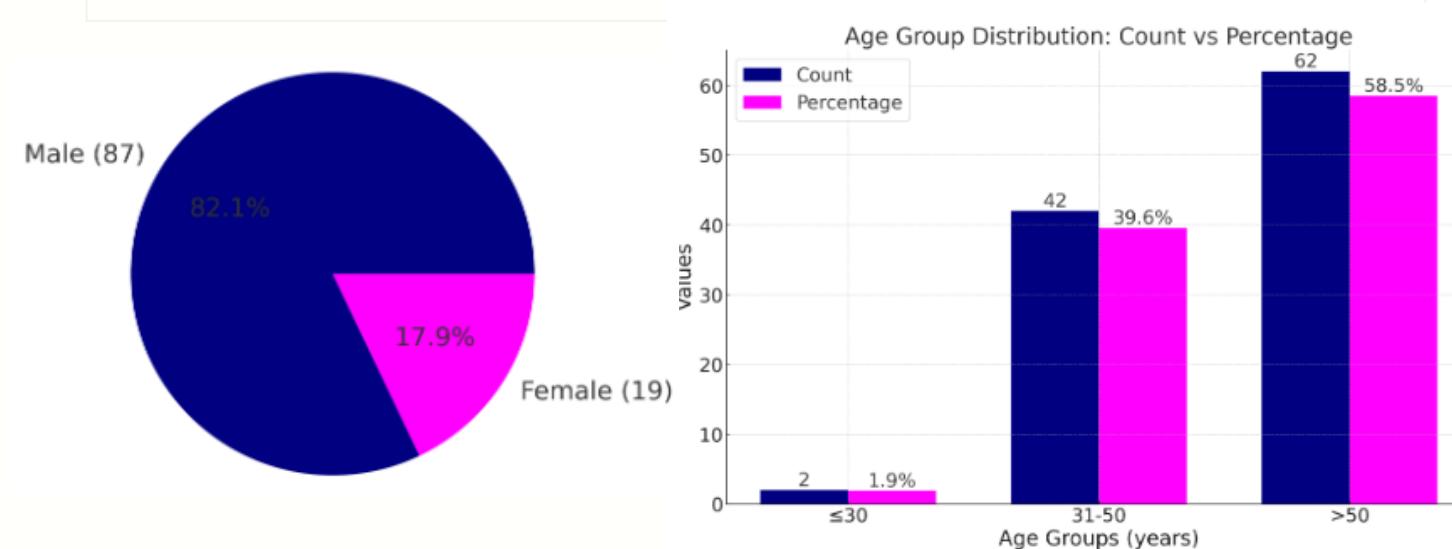
Conclusion

Pathological parameters are pivotal in determining independent prognostic factors for neck lymph node metastasis in OCSCC. These parameters are crucial in treatment decision making and may serve as an imperative tool determining adverse prognostic outcomes.

The future requisites a strong need of biomarkers for prognostic significance and targeted therapies to eliminate this disease and it's associated metastasis.

References

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