

MATTED NODES ARE A POOR PROGNOSTIC FACTOR IN OROPHARYNGEAL SQUAMOUS CELL CARCINOMA INDEPENDENT OF HPV AND EGFR STATUS

Objective: To determine if patients with matted nodes from oropharyngeal squamous cell carcinoma have a poor prognosis independent of HPV and EGFR status.

Patients and Methods: 78 previously untreated patients, M:F 70:8, who underwent weekly carboplatin, taxol and concomitant intensity modulated radiation therapy for advanced stage (III, IV) oropharyngeal squamous cell carcinoma between 2003 and 2007. CT scans were reviewed regarding node characteristics. For the purpose of this study, matted nodes were defined as three continuous nodes with loss of intervening fat plane that is replaced with extracapsular spread. Marker status was determined by pathologic review from a tissue microarray in 73 of the 78 patients. The major variables under study were: nodal stage, matted node status, HPV status, EGFR intensity, tobacco exposure (never, ever, current), pattern of recurrence, and cause of death.

Results: Overall survival for the entire cohort was 74.4% (58/78). The overall survival of patients who initially presented with matted nodes was 37.5% (6/16); this was poorer than the overall survival of patients with non-matted nodes which was 83.9% (52/62), $p < 0.0005$. Matted nodes were a poor prognostic factor independent of HPV, EGFR, and smoking status. The most common cause of death in patients with matted nodes was lung metastasis in 8/10 patients. Of the patients who developed lung metastasis, 87.5% (7/8) did so within two years. Patients who did not have matted nodes were more likely to develop a local recurrence (50% [5/10]) and only one died from distant disease. 71.2% (52/73) of the cohort was HPV positive. Matted nodes were less likely to occur in HPV positive patients (15.4%, 8/52) than HPV negative patients (38.1%, 8/21). In the HPV positive group, 9/52 patients died of disease. 6 of these 9 patients died of distant metastasis and 5 of the 6 patients that died of distant metastasis had matted nodes.

Conclusion: Matted nodes are a poor prognostic factor independent of HPV and EGFR status. In addition, matted nodes accounted for the majority of disease specific deaths in the HPV positive cohort, identifying a group of patients who develop distant metastasis that would benefit from systemic therapy.