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Racial Disparities in Head and Neck Cancers in an Urban Hospital

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Introduction: Head and neck cancer incidence rates are higher for white residents in Philadelphia, while related mortality rates are highest for black residents. It is unclear how risk factors like HPV and smoking contribute to these disparities. The goal of this study is to determine which factors are associated with head and neck cancers in a diverse patient population from a Philadelphia hospital.

Methods: Cancer registry data from Thomas Jefferson University was used to obtain records from 922 head and neck cancer patients. One patient of other race was excluded. Twenty in-situ cancer cases were excluded. Chi-square tests were used to examine categorical variables. Logistic and Cox regression models were designed to examine associations with advanced disease and time to mortality.

Results: Our sample included 901 patients (769 white, 96 black, 36 Asian). Positive HPV status was most prevalent for white patients ($p < 0.0001$). Oral cancers were most common among Asians ($p < .0001$). In univariate analysis, black patients were most likely to die from their cancer. In multivariate analysis, time to death was shorter for current smokers (HR=1.95, CI=1.311-2.901) and former smokers (HR=2.94, CI=1.949-4.387). Positive HPV status was protective (HR=0.34, CI=.244-.481). No significant race effects were observed in multivariate analysis.

Conclusions: Results suggest that race is not independently associated with head and neck cancer associated mortality. These results also suggest that some risk factors for head and neck cancer and outcomes may be modified by educational and behavioral interventions.