SURVIVAL DISPARITIES IN SMOKING STATUS AND HPV-ASSOCIATED OROPHARYNGEAL AND CERVICAL CANCERS: AN ANALYSIS OF POPULATION-BASED FLORIDA CANCER REGISTRY (1981-2009)

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INTRODUCTION

- Smoking and Human Papillomaviruses (HPV) have been implicated in various cancers.
- Both smoking and persistent oncogenic HPV infection can result in oropharyngeal and cervical cancers.
- We aim to identify survival disparities between smoking status and HPV-associated oropharyngeal and cervical cancers in Florida as well as gender differences in survival between smoking status and HPV-associated cancers.

METHODS

- The Florida Cancer Data System (1981-2009) and US census were linked to explore median survival, survival rates, and prevalence of HPV-associated oropharyngeal and cervical cancers by smoking status in Floridian adults (≥18yrs).
- Survival time as the primary clinical endpoint was calculated as elapsed time from date of cancer diagnosis to date of death or last contact for alive patients.
- Multivariable Cox regression models for overall survival were used to calculate adjusted hazard ratio (AHR) and 95% confidence interval (95%CI) for smoking status.

RESULTS

- Of 59,238 patients, 21.7% had tongue cancer, 12.0% tonsil, and 66.3% cervical. Most tonsil (42%) and tongue (37%) cancer patients were current smokers.
- Median survival time was 1.6yrs in current, 2.3yrs in former and 2.7yrs in non-smokers. Current (AHR=[1.5]) and former [1.1] smokers had worse survival than non-smokers.
- Among men, current [1.5] and former [1.1] smokers had worse survival than non-smokers.
- Among women, current [1.5] and former [1.2] smokers had worse survival than non-smokers.

Tonsil Cancer
- Median survival was the shortest in current-smokers (1.9yrs), followed by former (2.6yrs) and non-smokers (3.2yrs).
- Among men, current [1.5] and former [1.1] smokers had worse survival than non-smokers.
- Among women, current [1.7] and former [1.4] smokers had worse survival than non-smokers.

Cervical Cancer
- Current smokers had slightly longer median survival (3.8yrs); former (3.5yrs) and non-smokers (3.4yrs) had similar survival.
- Current [1.1] and former [1.1] smokers had worse survival than non-smokers after adjustment.

CONCLUSION

- Current and former male and female smokers had worse HPV-associated tongue, tonsil, and cervical cancer survival.
- Such survival disparities highlight importance of anti-smoking and HPV prevention campaigns.
- These results may provide a foundation for targeted culturally competent, gender specific cancer screening and prevention programs and smoking cessation and HPV vaccination efforts.