



AHNS Prevention & Early Detection Committee
Position Statement on Marijuana Use and HPV and Related Oropharyngeal Cancers

Approved by the AHNS Executive Council July 2016

Marijuana use in the United States is rapidly changing. In 2013, 19.8 million (7.5%) Americans reported marijuana use in the past month, which is increased compared to 5.8% in 2001.[1] Marijuana was the most commonly used illicit drug in the United States in 2013.[1] The proportion of American adults who report current marijuana smoking is at least half (~60%) that of current daily cigarette smokers[1], and in the past decade regular daily use of marijuana has steadily risen in the United States (U.S.). Recent U.S. data reported 7,800 new marijuana users a day.[1] These trends are in the context of the legalization of medical marijuana in a growing number of states.

As part of the evolving understanding of risk factors for head and neck malignancy, increased consideration has been given to understanding the contribution of marijuana use to head and neck cancer. This has become even more important with the declines in tobacco use and increase in marijuana use.

At present, the data are somewhat conflicting and limited. While some studies do suggest an impact of marijuana in a subset of head and neck cancer [2, 3], specifically increasing risk for oropharyngeal cancer, others have not found any associations[4-8]. Studies that did not observe an association might be explained by small sample size, heterogeneity in sites and recall bias. Alternatively, studies that found an association between marijuana use and oropharyngeal cancer may have residual confounding effects from other risk factors associated with oropharyngeal cancer (ie sexual behaviors, alcohol use and tobacco use).

In studies that have carefully accounted for anatomic sites and HPV tumor status, an association between marijuana use and the diagnosis of HPV-head and neck cancer has been found. This association appears to be stronger when human papillomavirus is accounted for, such that with increasing use of marijuana risk for HPV-positive head and neck cancers increases.[9] When analyses are restricted to the oropharynx only, risk for malignancy also appears to increase with increasing marijuana exposure. Indeed, among individuals without a history of alcohol or tobacco use, the risk of malignancy rises with increasing exposure to marijuana.[3] Finally, oral HPV prevalence increases with increased marijuana use.[10] These associations could also be explained by confounding of risky sexual behaviors being associated with both marijuana use and HPV infection and smoking.

Given the nature of the literature to date and the lack of prospective study designed to evaluate the etiologic association between marijuana use and oropharyngeal cancer, the role of marijuana use as an etiologic risk factor for oropharyngeal (and head and neck cancers in general) cannot be described with certainty. Further investigation is warranted with attention to the biomarkers of cannabis use, detailed behavioral data and HPV tumor status.

Based upon the present literature which suggests an association with marijuana use and head and neck cancers, the American Head and Neck Society does not endorse the use of marijuana for non-medicinal purpose, and expresses concern that marijuana may potentially interact with high risk HPV as a contributing factor for HPV related oropharyngeal cancers.

References

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