AHNS Prevention & Early Detection Committee
Position Statement on Early Detection of Pre-Malignant Oral Cancer

Approved by the AHNS Executive Council April 25, 2017

Potentially malignant disorders of the oral cavity as defined by the World Health Organization include lichen planus, leukoplakia, erythroplakia, erythroleukoplakia, erythroplakia with ulceration, proliferative verrucous leukoplakia and submucous fibrosis.[1] These are oral cavity disorders and lesions that have the potential for malignant transformation. Lesions with a diagnosis of high grade dysplasia or carcinoma *in situ* lesions have significant malignant potential that warrant excision.[2]

The current gold standard for detecting oral lesions with significant malignant potential includes history and physical examination with biopsy.[3] This is most commonly done by dental professionals, along with otolaryngologists, on oral lesions self-identified by patients and detected during routine examinations.[3-5] Head and Neck surgeons and Oral and Maxillofacial surgeons are generally understood to be the providers most familiar with features of oral lesions with significant malignant potential, and are generally more comfortable sampling oral lesions concerning for premalignant or malignant pathology.[6,7]

Barriers to successful detection of oral lesions with significant malignant potential include patient factors and provider factors. Patient awareness of potentially malignant oral cavity lesions is low.[8] Additionally the patients with the highest risk for these oral cancers – those with significant smoking and or alcohol history- tend to have low socioeconomic status and decreased access to physicians and dentists.[9,10] Provider factors that might hinder the prompt evaluation of oral cavity lesions with a significant malignant potential is a lower familiarity with these lesions among general medical and dental providers. Access to consultant otolaryngologists is widely variable across the United States,[11] potentially causing delay in definitive diagnosis.

Over the years, adjunctive tests including commercially-available brush tests, light-based devices that assess changes in autofluorescence, and vital dyes, among others, were developed in order to assist primary medical care and dental providers in the identification of lesions with significant malignant potential worthy of biopsy.[12-18] However, these tests have proven to have high false positive rates, lack the ability to differentiate between high-risk and low-risk potentially malignant lesions, require special training to use appropriately or any combination of these.[19] As a result, they have not yet become widely adopted as part of the existing standard of care. The development of tests that aim to identify high-risk oral lesions continues to be an active area of research to address this ongoing, unmet clinical need. There are recent studies evaluating salivary samples,[20-22] endogenous intravenous fluorescent-labeled targeting agents[23-26], and other spectroscopic imaging techniques[27] which have shown some promising results.

The last US Preventative Services Task Force review on screening for oral cancer in 2013 has determined that, based on the data available up until 2011, the committee "concludes that the evidence is insufficient to determine the balance of benefits and harms of screening for oral

cancer in asymptomatic adults by primary care providers."[28] Importantly, they also state that this "does not pertain to dental providers or otolaryngologists. Dental care providers and otolaryngologists may conduct a comprehensive examination of the oral cavity and pharynx during the clinical encounter".

In 2014, the AHNS Prevention and Early Detection Committee publicized a position statement that, in spite of the lack of strong evidence for screening for oral cancer, the committee advocated for the performance of a comprehensive oral head and neck exam, particularly in symptomatic or at risk individuals since this is the best known method of detecting oral cancer. There have been many publications on diagnostic tests to help identify high risk oral lesions worthy of biopsy[21, 29, 30] that show promise but examination of further validating studies are needed to determine if any of these merit clinical adoption.

In summary, we continue to advocate for a comprehensive oral head and neck exam, particularly in symptomatic or at risk individuals for potentially malignant oral lesions because it is still the best known method of detecting oral cancer. Additionally, these exams are an opportunity to educate patients about what to look for in their own mouths to screen for oral cancer. Adjuncts that accurately identify premalignant and early malignant disease may warrant additional consideration in the future.

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