The Use of Circulating Tumor HPV DNA by Practicing Head and Neck Otolaryngologists: A Survey of AHNS Physicians

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Abstract:

Objectives: In recent years, there has been increasing interest in the use of circulating tumor HPV DNA (ctHPVDNA) in the diagnosis, management, and surveillance of HPV-associated oropharyngeal squamous cell carcinoma (HPV-OPSCC). While ctHPVDNA testing is now integrated into HPV-OPSCC treatment protocols at many institutions, significant debate remains regarding its efficacy and ability to safely influence clinical decision making. This study aimed to evaluate the clinician sentiment regarding ctHPVDNA use among practicing head and neck surgeons.

Methods: This was a cross-sectional study in which a 25 question survey was distributed to all AHNS members between June 17, 2024 and August 1, 2024. Variables assessed included demographics, knowledge and use of ctHPVDNA in the management of HPV-OPSCC, types of assays used, and current barriers to use among practicing otolaryngologists.

Results: Adequate survey responses were collected from 73 practicing head and neck surgeons. A plurality of respondents were from the Northeast and Midwest (27% each), with the majority practicing in large cities (67%) at academic institutions (79%). Only 1 respondent was not aware of ctHPVDNA, and 54 (75%) personally used the test in the management of HPV-OPSCC. Among the 25% of surgeons not currently using ctHPVDNA, 83% were interested in implementing it into their practice, but cited barriers including lack of data (72%), cost (44%), and resistance from other physicians at their institution (17%). Among those who did utilize ctHPVDNA in their practice, 96% cited its use for surveillance, 94% for pre-treatment, and 92% for post-treatment testing of patients with confirmed HPV-OPSCC. Established institutional protocols for the utilization of ctHPVDNA in the diagnosis of HPV-OPSCC were cited by 33% of respondents, while 31% had institutional protocols for utilization in surveillance. A majority of those using a ctHPVDNA assay reported making management decisions based solely on its results during the surveillance period (73%). Digital droplet PCR was the most common method used (100%) while 17% also incorporated next generation sequencing. All respondents incorporating ctHPVDNA into their practice used a commercial assay with 6% also using institutional assays. A total of 66% of all respondents were somewhat or very comfortable with the current data supporting ctHPVDNA. On the other hand, 16% felt very uncomfortable with its use, with the most commonly cited methods to increase comfort including further prospective trials (85%) and its adoption into National Comprehensive Cancer Network guidelines (71%).

Conclusions: The majority of practicing head and neck surgeons surveyed use ctHPVDNA in the management of HPV-OPSCC. Those not currently using the test demonstrated interest in incorporating it into their practice, but cited hesitancy due to lack of data, cost, and lack of institutional consensus. These assays are most commonly used for surveillance and pre- and post-operative assessment of patients with HPV-OPSCC confirmed through other methods. Overall, while the majority of surveyed head and neck surgeons are comfortable with the use of ctHPVDNA, the most commonly cited methods to increase comfort with the efficacy of the test are further prospective trials and concrete guidelines outlining its safe use in the management of HPV-OPSCC.