Session: Scientific Oral Presentations 1 - Head and Neck Surgery

Association of Circulating Tumor HPV DNA Score and Clinicopathologic Characteristics in HPV-Associated Oropharyngeal Cancer

Saturday, September 28, 2024 9:54 AM – 10:00 AM EDT Location: MBCC, 208

Disclosure(s):

Shimrit Sharav, MD:
faculty for this accredited education activity has no relationship(s) with ineligible companies to disclose.

Introduction: Circulating tumor HPV DNA (ctHPVDNA) is an emerging blood test for monitoring patients for HPV-associated oropharyngeal squamous cell carcinoma (HPV+ OPSCC). One of the challenges is the wide interpatient variability of the quantitative ctHPVDNA score. The aim of this study is to correlate the ctHPVDNA score with clinicopathological factors.

Methods: This retrospective study was performed at a tertiary care head and neck cancer center in patients diagnosed with HPV+ OPSCC between January 2022 and October 2023. Clinicopathologic characteristics and imaging findings were collected from electronic medical records. CtHPVDNA was assessed using a commercially available assay, with results present as a continuous score (fragments/mL). The study population was divided according to the ctHPVDNA median score. Group 1 consisted of patients with lower scores than the median, and group 2 included higher scores. Univariate and multivariate analysis was performed.

Results: 56 patients met inclusion criteria; 86% were men, with a mean age of 65 years. The median ctHPVDNA score was 330.5 fragments/ml, dividing the study population into low and high groups. Each group had 28 patients without a demographic difference. Differences regarding the regional nodal disease were noted. N0 stage was 28% vs. 3.5% in the low and high score groups, respectively (p=.02). The mean size of the largest metastatic lymph node was 17.4 vs. 36.2 mm in the low and high score groups, respectively (p=.002). The metabolic activity of the nodal disease estimated by positron emission tomography (PET SUVmax) was 5 vs. 12.8 in the low and high score groups, respectively (p=.0002). However, no difference was observed regarding the primary tumor subsite, size, or pathologic factors.

Conclusions: Our results show a correlation between the nodal disease burden represented by the regional metastatic disease, the size of the largest cervical metastasis, and the nodal PET SUVmax with the ctHPVDNA score. Future studies will be necessary to determine if these findings result in modifications in the utility of this test in certain populations of HPV+ OPSCC patients.

Presenting Author(s)



Shimrit Sharav, MD
Fellow, Head and Neck Oncologic and Reconstruction Surgery
Head and Neck Specialists, Sarah Cannon Cancer Institute, SC
Mount Pleasant, South Carolina, United States
Disclosure(s):
faculty for this accredited education activity has no relationship(s) with ineligible companies to disclose.

Co-Author(s)

NK
Nick Kerl, BS
Clinical assistant
Head and Neck Specialists, Sarah Cannon Cancer Institute, SC, United States
Disclosure information not submitted.

JT
John Turner, MD
South Atlantic Division Medical Director, Forward Pathology Solutions
Department of Pathology, Trident Medical Center, Charleston, SC, United States
Disclosure information not submitted.

SJ
Sara Jasper, ACNP
Nurse practitioner
Head and Neck Specialists, Sarah Cannon Cancer Institute, SC, United States

Disclosure information not submitted.

JH

Jeffrey Houlton, MD

Director, Head & Neck Quality and Patient Outcomes
Head and Neck Specialists, Sarah Cannon Cancer Institute, SC, United States

Disclosure information not submitted.

DN

David Neskey, MD, MSCR

Director, Head and Neck Research
Head and Neck Specialists, Sarah Cannon Cancer Institute, SC
Charleston, SC, United States

Disclosure information not submitted.

Senior Author(s)

TD

Terry Day, MD

Director, Head and Neck Oncology
Head and Neck Specialists, Sarah Cannon Cancer Institute, SC, United States

Disclosure information not submitted.