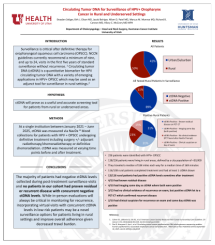
Head and Neck Surgery



(A523) Circulating Tumor DNA for Surveillance of HPV+ Oropharynx Cancer in Rural and Underserved Settings

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Presenting Author(s)



Brayden J. Seliger, BS

Medical Student
Univeristy of Toledo College of Medicine and Life Sciences
PERRYSBURG, OH, United States

Co-Author(s)

BO

Birk Olson, MD

Resident
University of Utah - Department of Otolaryngology - Head and Neck Surgery
Salt Lake City, Utah, United States

Co-Author(s)

NP

Nilam Patel, MD

University of Utah - Department of Otolaryngology - Head and Neck Surgery, United States

MM

Marcus M. Monroe, MD

Associate Professor
University of Utah
Salt Lake City, UT, United States



Richard B. Cannon, MD

Assistant Professor
University of Utah - Department of Otolaryngology - Head and Neck Surgery
Salt Lake City, Utah, United States

Co-Author(s)

JB

Jacob Beiriger, BS

Head and Neck Research Fellow
University of Utah
PITTSBURGH, Pennsylvania, United States

Senior Author(s)

HM

Hilary C. McCrary, MD, MPH

Assistant Professor of Otolaryngology-Head and Neck Surgery
University of Utah - Department of Otolaryngology - Head and Neck Surgery
Salt Lake City, Utah, United States

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Introduction: Surveillance is critical after definitive therapy for oropharyngeal squamous cell carcinoma (OPSCC). NCCN guidelines currently recommend a minimum of nine, and up to 24, visits in the first five years of standard surveillance without recurrence. Circulating tumor DNA (ctDNA) is a quantitative biomarker for HPV circulating tumor DNA with a variety of emerging applications in HPV+ OPSCC which may be used as an adjunct tool for surveillance in rural settings.

Methods: At a single institution between January 2021 – November 2023, ctDNA was measured via NavDx ® blood collections for patients with HPV + OPSCC undergoing definitive treatment including surgery +/- adjuvant radiotherapy/chemoradiotherapy or definitive chemoradiation. ctDNA was measured at varying time points before and after treatment.

Results: 168 patients were identified with HPV+ OPSCC 95/168 (56.5%) patients living in rural communities, defined by a living in a city with a population of less than 50,000. They traveled a median of 142 miles each way for a median time of 150 minutes. 91/95 (96%) patients had at least one ctDNA test collected post treatment, and 9/91 (9.9%) of these had positive ctDNA levels after treatment, thus initiating investigation for residual disease or recurrence. 4/9 patients had known residual disease on PET-CT, and two had ctDNA levels measured prior to initiating adjuvant radiotherapy. One patient had no clinical evidence of recurrence on exam, but a positive ctDNA leading to a PET-CT, which revealed recurrent disease. 2/9 patients had clinical suspicion for recurrence on exam and same-day ctDNA was positive.

Conclusions: The majority of patients had negative ctDNA levels collected during post-treatment surveillance visits and no patients in our cohort had proven residual or recurrent disease with concurrent negative ctDNA levels. While in-person evaluations will always be critical in monitoring for recurrence, incorporating virtual visits with concurrent ctDNA levels in low risk patients may be a novel surveillance options for patients living in rural settings and improve overall adherence given decreased travel burden.