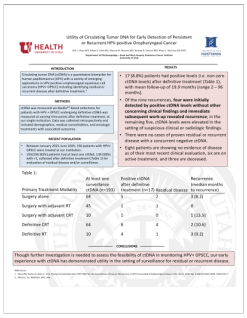
Head and Neck Surgery



(A654) Utility of Circulating Tumor DNA for Early Detection of Persistent or Recurrent HPV+ Oropharynx Cancer

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Introduction: Circulating tumor DNA (ctDNA) is a quantitative biomarker for human papillomavirus (HPV) circulating tumor DNA with a variety of emerging applications in HPV-positive oropharyngeal squamous cell carcinoma (HPV+ OPSCC) including identifying residual or recurrent disease after definitive treatment.

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 or adjuvant chemoradiotherapy or definitive chemoradiation. ctDNA was measured at varying time points ranging after definitive treatment. Data was collected retrospectively and included demographics, medical comorbidities, and oncologic treatments with associated outcomes.

Results: Between January 2021-November 2023, there were 168 patients with HPV+ OPSCC. 125/168 (74%) patients had at least one ctDNA collected after definitive treatment for evaluation of residual disease and/or surveillance, and 60 (48%) have >1 post-treatment ctDNA collections. Five (4%) patients had positive levels (i.e. non-zero ctDNA levels) after definitive treatment, with an average time to diagnosis of clinical recurrence of 6.6 months and mean follow-up of 12.2 months (range 6 – 24 months). Two of these patients had no clinical evidence of residual or recurrent disease and were subsequently diagnosed with metastatic disease after further investigation undertaken due to positive ctDNA levels. Two had clinical evidence of recurrence and a positive ctDNA was collected concurrently. One patient had a positive ctDNA in surveillance, which was communicated to their treatment team in another state, but the patient was lost to follow-up. There were no cases of proven residual or recurrent disease with a concurrent negative ctDNA.

Conclusions: Though further investigation is needed to assess the feasibility of ctDNA in monitoring HPV+ OPSCC, our early experience with ctDNA has demonstrated utility in the setting of surveillance for persistent or recurrent disease.