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Presentation Abstracts
Poster Abstracts

Proof of Concept: The Use of Circulating Viral DNA Blood Testing in the Management of HPV-Driven Sinonasal Malignancy

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Congress Abstract | Full Text (/products/ejournals/html/10.1055/s-0043-1762376)

Introduction: Human papillomavirus is increasingly being identified as a driving force behind the development of various aerodigestive malignancies. In HPV-driven oropharyngeal squamous cell carcinoma, there is convincing data to suggest that the presence of circulating serum viral DNA particles has prognostic value to infer treatment response. We speculate that viral DNA blood testing in certain HPV-driven sinonasal malignancy can have similar oncologic value and may have utility in disease surveillance.

Case Description: A 50-year-old male was seen at a tertiary-care facility for evaluation of a nasal septal mass. This was biopsy proven as squamous cell carcinoma with robust activity for p16 on immunohistochemistry. During preoperative evaluation, a NavDx (Trademark Naveris, Inc.) study was performed and noted to have a robust circulating viral DNA burden for HPV 35. The patient underwent a margin-negative surgical extirpation, to include a partial rhinectomy, septal resection, and sentinel lymph node biopsy. He was staged pT3N0M0 and underwent adjuvant radiation to 66 Gy in 33 fractions to the nasal cavity. The patient was disease free at 3-month posttreatment imaging. A repeat NavDx (Trademark Naveris, Inc.) study was performed and notable for complete resolution of circulating HPV 35 viral DNA within the blood sample.

Conclusion: Although this represents an individual encounter, this case highlights complete resolution of circulating viral DNA antigens mirroring clinical oncologic clearance of disease. We speculate this viral DNA clearance may mirror other circulating oncogenic virus biomarker patters such as EBV in nasopharynx cancer and more recent data on HPV in oropharynx cancer. We speculate the utilization of serum viral DNA testing can be used as a biomarker for treatment response for HPV-mediated sinonasal malignancies. Further research is necessary to validate this hypothesis but our report functions as a proof of concept for this study in HPV-driven sinonasal malignancy.

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