

Peer Review

Review of: "Computationally Optimized ctDNA Surveillance for Recurrence Detection in HPV-Positive Head and Neck Squamous Cell Carcinoma"

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This excellent manuscript effectively demonstrates the importance of integrating circulating tumor DNA (ctDNA) testing into existing follow-up strategies for HPV-positive head and neck squamous cell carcinoma (HNSCC). The study's microsimulation model provides a well-structured approach to optimising surveillance schedules based on cancer stage and smoking status, leading to significant cost reductions while maintaining early recurrence detection efficiency. The research convincingly supports the economic and clinical benefits of ctDNA-based monitoring, including a substantial reduction in false-positive rates and treatment delays.

The methodology is well-designed and robust, employing external validation and a comparative analysis against current clinical guidelines (NCCN and eviCore). However, while the study mentions performing a sensitivity analysis based on never-smoking vs. ever-smoking status, the specific results of this analysis are not clearly presented. Including these findings would further enhance the manuscript's comprehensiveness.

Overall, the methodology and presentation of results are excellent. The study provides a highly relevant contribution to head and neck oncologists, offering a cost-effective, patient-friendly strategy for post-treatment surveillance that could potentially reshape current clinical practice. Future research should focus on long-term outcomes, the applicability of ctDNA testing in HPV-negative patients, and the integration of non-invasive assays to expand its clinical utility further.

Declarations

Potential competing interests: No potential competing interests to declare.