

Background

Oropharyngeal squamous cell carcinoma caused by human papillomavirus (HPV) has rapidly increased in incidence, and now represents the most common type of oropharyngeal cancer treated in the United States. HPV-associated cancer carries a much better prognosis than traditional head and neck squamous cell carcinoma (HNSCC), which is largely caused by tobacco and alcohol exposure. Because HPV-positive disease behaves differently than traditional HNSCC, many clinicians are using new or altered treatment strategies for HPV-positive oropharyngeal patients.

The development and refinement of minimally invasive surgery such as transoral robotic surgery has allowed for better surgical options in the management of oropharyngeal primary tumors for some patients, but management of the neck varies among different treatment centers.

Presentation of OPSCC in the Neck

Many HPV-positive patients present initially with painless neck mass and an asymptomatic primary tumor.¹

HPV-positive oropharyngeal cancer often presents in the neck with large, cystic, PET-avid lymph nodes.²⁻⁴

Elective Neck Dissection

Highest risk nodal levels in oropharyngeal cancer are levels 2, 3, and 4, and selective neck dissection, when performed, most commonly addresses these levels.⁵⁻⁶

The contralateral neck is often affected in tongue base primary tumors, and with increasing N stage in the ipsilateral neck.

Retropharyngeal lymph nodes are positive in approximately 10% of HPV-positive patients; the survival impact of positive RPLNs is not clear.⁷

There is a lack of consensus on whether level 2b can be spared in the elective setting; prospective trials have not been conducted to determine 2b dissection's impact on oncologic or functional outcomes.

Therapeutic Neck Dissection

Therapeutic neck dissection involves at least levels 2-4 and any involved nodal levels; some clinicians prefer modified radical neck dissection in the therapeutic setting.⁸

Upfront neck dissection may safely spare adjuvant chemotherapy or radiation for select patients.

Planned neck dissection does not appear to provide survival benefit among complete responders to initial therapy.⁸

N3 disease carries a worse prognosis, even among HPV-positive patients.

Pathologic Markers in HPV Disease

Minimal or even moderate extracapsular extension may not indicate more aggressive disease in HPV-positive oropharyngeal cancer; some centers do not recommend the addition of adjuvant chemotherapy on the basis of limited extracapsular extension alone.⁹

Number of positive nodes, and not traditional N staging, may predict disease recurrence and progression.

Summary

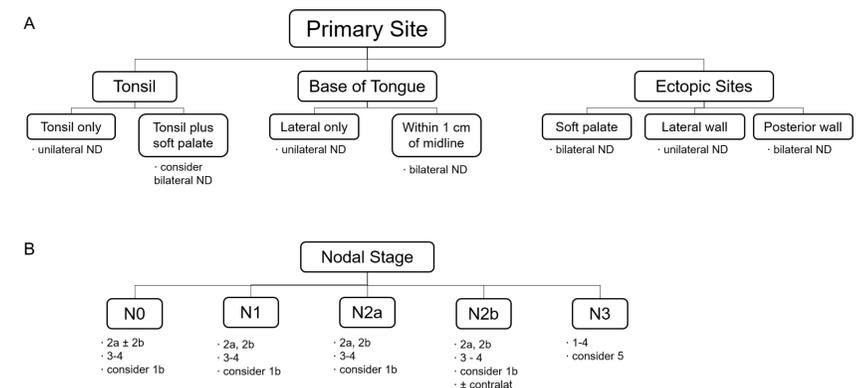


Figure 1. Management schema for neck dissection in HPV-associated oropharyngeal cancer based on (A) primary site influence on unilateral vs. bilateral dissection and (B) dissection levels based on nodal stage.

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