Refining Surveillance Through Risk Stratification: Clinicopathologic Variables Associated with Time to Distant Metastasis in HPV(+) Oropharyngeal SCC

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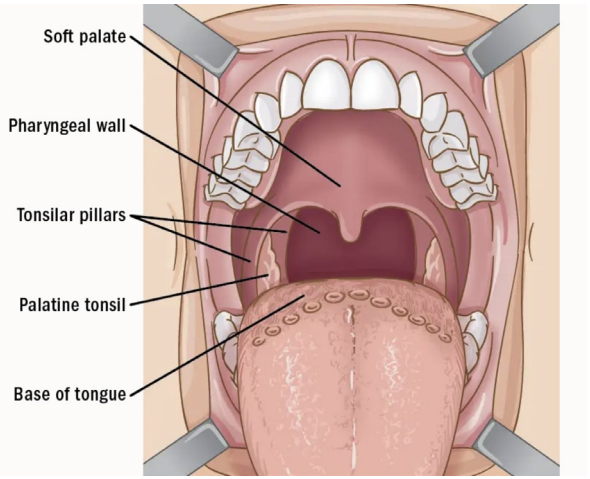
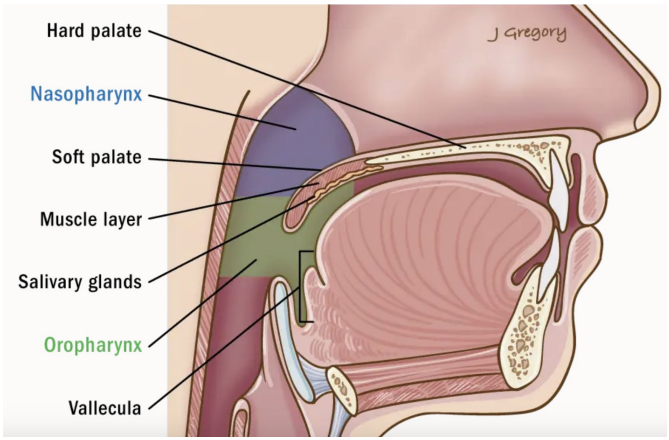
- No financial disclosures

Introduction



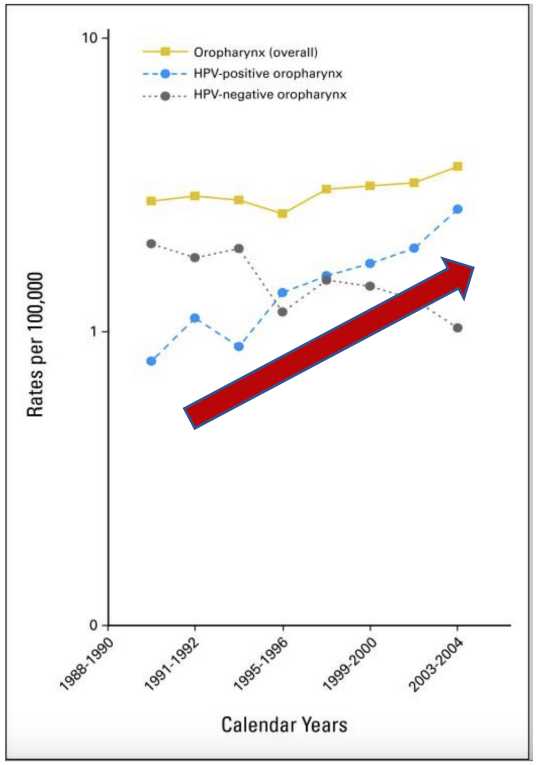


https://thancguide.org/cancer-types/throat/pharyngeal/oropharyngeal/anatomy/

Table 3. Survival Estimates, Causes of Death, and Patterns of Treatment Failure in Patients with Oropharyngeal Cancer, According to Tumor HPV Status.*

Variable	HPV-Positive (N=206)	HPV-Negative (N=117)	P Value†
Overall survival at 3 yr — % (95% CI)	82.4 (77.2–87.6)	57.1 (48.1–66.1)	<0.001

ANG, K et al. 2010



Chaturvedi, AK et al. 2011

Current state

National Comprehensive Cancer Network®

NCCN Guidelines Version 1.2024
Head and Neck Cancers

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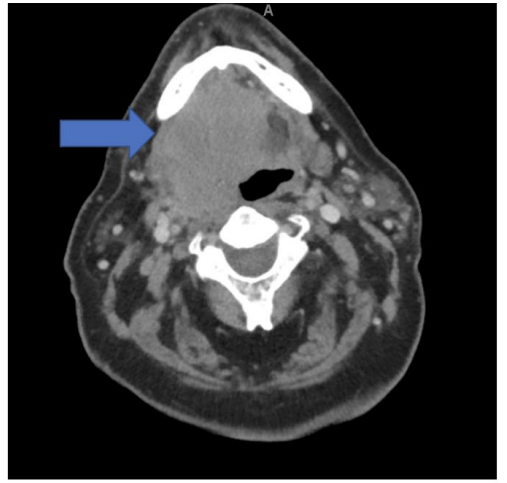
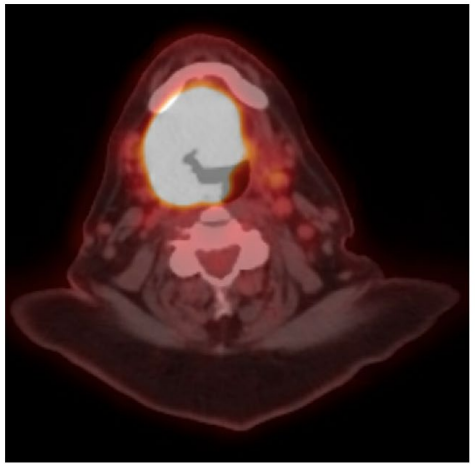
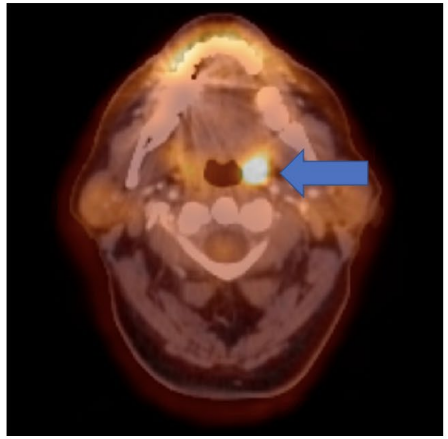
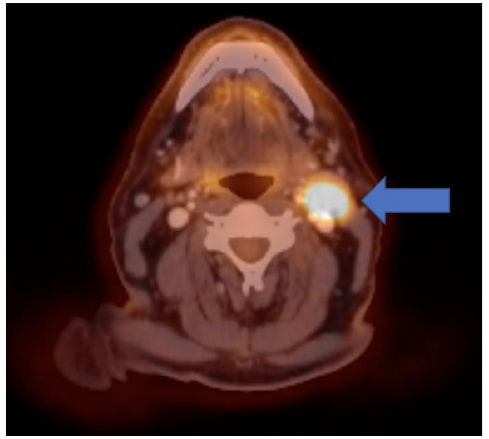
FOLLOW-UP RECOMMENDATIONS[a]
(based on risk of relapse, second primaries, treatment sequelae, and toxicities)

- H&P exam (including a complete head and neck exam; and mirror and fiberoptic examination):[b]
  - Year 1, every 1–3 mo
  - Year 2, every 2–6 mo
  - Years 3–5, every 4–8 mo
  - >5 years, every 12 mo
- AM cortisol, growth hormone (GH), free T4, prolactin, insulin-like growth factor 2 (IGF-2), luteinizing hormone (LH), follicle-stimulating hormone (FSH), serum adrenocorticotropic hormone (ACTH), TSH, and total and bioavailable testosterone levels annually to evaluate panhypopituitarism following RT to the skull base[c] (category 2B)
- Imaging (Principles of Imaging, IMG-A)
- Thyroid-stimulating hormone (TSH) every 6–12 mo if neck irradiated
- Dental evaluation[d] for oral cavity and sites exposed to significant intraoral radiation treatment
- Consider EBV DNA monitoring for nasopharyngeal cancer (category 2B)
- Supportive care and rehabilitation:
  - Speech/hearing and swallowing evaluation[e] and rehabilitation as clinically indicated
  - Nutritional evaluation and rehabilitation as clinically indicated until nutritional status is stabilized[e]
  - Ongoing surveillance for depression (NCCN Guidelines for Distress Management)
  - Smoking cessation[f] and alcohol counseling as clinically indicated
  - Lymphedema evaluation and rehabilitation, as clinically indicated (see SLYMPH-A in the NCCN Guidelines for Survivorship)
- Integration of survivorship care and care plan within 1 year, complementary to ongoing involvement from a head and neck oncologist (NCCN Guidelines for Survivorship)[g]









Clinical Question

What are the clinicopathologic features that may be associated with risk of distant metastases in patients with HPV (+) OPSCC?

Methods

- Retrospective chart review
- 375 adult patients without distant metastatic disease at baseline that received curative intent therapy
- Between January 1, 2010 – December 31, 2020
- Main outcome measures
  - Occurrence of distant metastases
  - Time to distant metastases
- Statistical methods
    - Logistical regression for distant metastasis
    - Cox proportional hazards regression models for time to distant metastasis

Results

Demographics	
Mean age [±SD]	59.8 [±9.3] years
Male sex	333 (90%)
Caucasian	351 (97%)
Mean follow-up duration	4.87 (±2.97) years

Recurrence	N (%)	Mean Interval (SD)
Any recurrence	53 (14%)	2.37 (±1.72) years
Distant recurrence	36 (10%)	2.16 (±1.30) years

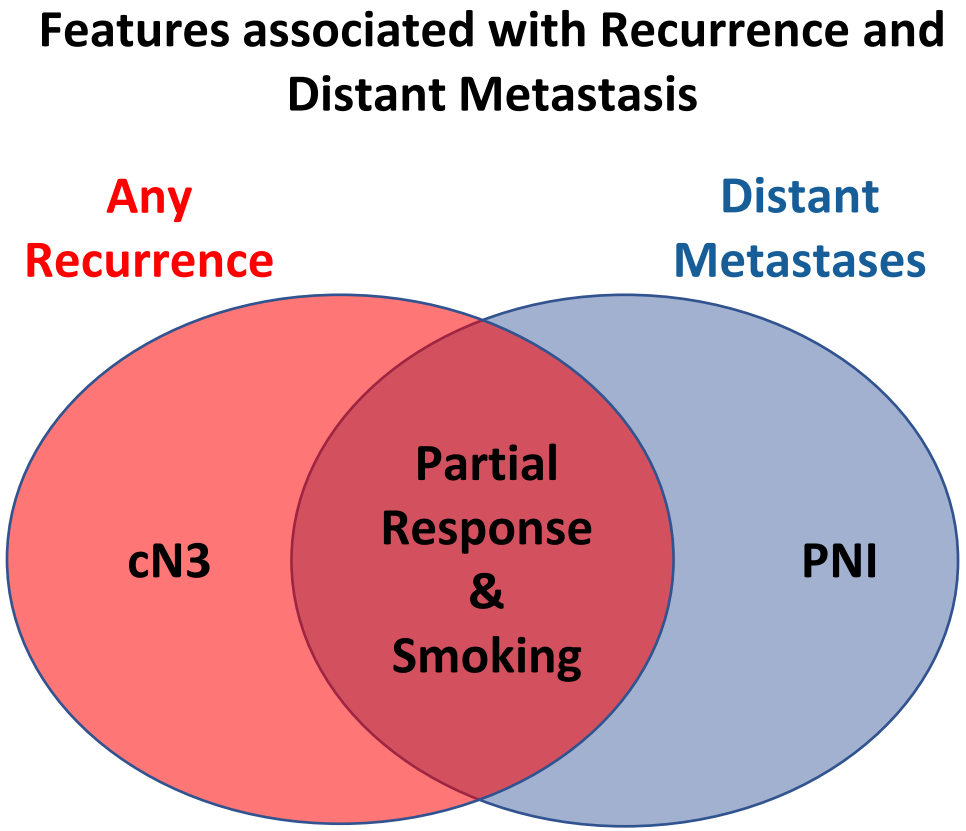
Associations for Increased Odds of Recurrence

Risk factor	Odds-Ratio	Confidence Interval (95%)
cN3 disease	6.75	1.10-41.61
Increasing pack year history of smoking	1.03	1.01-1.05
Partial response to therapy on first post-treatment imaging	3.01	1.41-6.45

Associations for Increased Hazard for Time to Distant Metastasis

Risk factor	Hazard-Ratio	Confidence interval
Increasing pack year history of smoking	1.02	1.0-1.04
Perineural invasion	5.82	1.12-30.16
Partial response to therapy on first post-treatment imaging	2.85	1.27-6.37

Discussion



- HPV (+) OPSCC
  - Increasing incidence
  - Survival advantage
- Identification of at-risk patients
- Individualized risk assessment and post-treatment surveillance
- Future directions: therapy intensification trials

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Thank you!