

## **THE EFFECT OF SURGEON EXPERIENCE ON THE DETECTION OF METASTATIC LYMPH NODES IN THE CENTRAL COMPARTMENT AND THE PATHOLOGIC FEATURES OF CLINICALLY UNAPPARENT METASTATIC LYMPH NODES**

Urken, Mark<sup>1</sup>; Clain, Jason<sup>2</sup>; Dos Reis, Laura<sup>2</sup>; Mehra, Saral<sup>1</sup>; Perksy, Mark<sup>1</sup>; Turk, Andrew<sup>3</sup>; Wenig, Bruce<sup>3</sup>; Husaini, Hasan<sup>2</sup>; Scherl, Sophie<sup>2</sup>

<sup>1</sup>Department of Otolaryngology, Beth Israel Medical Center, New York, NY, USA; <sup>2</sup>Thyroid, Head & Neck Cancer Foundation, New York, NY, USA; <sup>3</sup>Department of Pathology, Beth Israel Medical Center, New York, NY, USA

**Background/Purpose:** Prophylactic central neck dissection (pCND) for papillary thyroid cancer (PTC) is controversial. Up to 70% of central compartment metastatic nodes are reported to go undetected. Recent publications suggest that the number, size and presence of extranodal extension (ENE) are important features for lymph node staging. We analyzed these features in clinically unapparent nodes that would not otherwise be removed. We also investigated the impact of surgeon experience on the ability to detect metastatic lymph nodes intraoperatively.

**Methods:** Forty patients undergoing total or completion thyroidectomy with pCND for PTC qualified for review. Patients with clinically apparent central compartment disease on imaging were excluded. Intraoperatively, clinically apparent disease was determined by inspection and palpation by the senior surgeon, fellow, and/or resident. Blinded opinions were recorded.

**Results:** The size of the largest undetected node(s) ranged from 0.1 to 1.3cm. Forty percent of false-negative central compartment evaluations demonstrated 5 or greater positive nodes and 32% demonstrated positive nodes with ENE. No nerve injury was observed. One patient continues to be treated for hypoparathyroidism at 6 months. The senior surgeons, fellow and residents had false-negative/false-positive rates of 27.5%/12.5%, 13.6%/13.6%, and 37.0%/7.4%, respectively. The level of agreement between the senior surgeon/fellow and between senior surgeon/resident was fair to good as defined by the kappa test ( $p=.041$ ,  $p=.016$ ).

**Discussion & Conclusion:** This study demonstrated significant agreement among surgeons of different experience levels when evaluating the clinically N0 neck. However, inspection and palpation can miss significant nodal metastases that may impact disease staging and the decision to administer remnant ablation.