

Complete Cervical Sonography Is Essential for Operative Planning in Differentiated Thyroid Cancer

Cord Sturgeon

longitudinal care algorithms, both the ATA and NCCN guidelines recommend periodic ultrasound (1,2). Physical examination is not sensitive for the presence of cervical-node metastases, and postoperative patients will be subjected to rigorous surveillance, including cervical ultrasound. Therefore, it behooves the surgeon to have knowledge of sonographically detectable metastases prior to the index operation for thyroid cancer, so that a complete resection, including appropriate lymph-node clearance, can be performed. Theoretically, this should lead to better locoregional control of disease, and may decrease recurrence (3), and possibly the need for radioiodine or reoperation.

In a prior study, a group from MD Anderson Cancer Center found that cervical ultrasound detected additional sites of metastatic disease not found on physical exam in 20% of patients undergoing an index operation for thyroid cancer, in 32% undergoing reoperation for persistent disease, and in 68% undergoing reoperation for recurrent disease (4). The operation performed was altered by the sonographic data in 39% of these patients. In a study from the University of Miami, surgeon-performed preoperative

ultrasound identified nonpalpable metastatic lymph nodes in 24% of patients (5). In a study from the Mayo Clinic of over 700 patients with PTC, preoperative ultrasound detected nonpalpable nodal metastases in 32.9% (6). Preoperative ultrasound findings altered the operation in 40.5% of index cases and in 42.9% of reoperative cases.

In this contribution by O'Connell et al., 23% of the total group had findings from the preoperative ultrasound that changed the operative management. These findings are similar to those of other researchers who have studied the subject and underscore the importance of preoperative high-resolution sonographic imaging for patients with thyroid cancer. Taken together, these studies indicate that preoperative ultrasound has a high sensitivity for nodal disease and will detect nonpalpable nodal metastases in roughly 20% to 40% of patients with DTC and will alter the index operation in a similar percentage of patients. For these reasons, complete cervical sonography is an essential component of the preoperative workup and operative planning for patients with thyroid cancer.

References

1. Cooper DS, Doherty GM, Haugen BR, et al. Revised American Thyroid Association management guidelines for patients with thyroid nodules and differentiated thyroid cancer. *Thyroid* 2009;19:1167-214.
2. National Comprehensive Cancer Network Clinical Practice Guidelines in Oncology: Thyroid Carcinoma Version 2.2013, 2013 (http://www.nccn.org/professionals/physician_gls/pdf/thyroid.pdf).
3. Marshall CL, Lee JE, Xing Y, et al. Routine preoperative ultrasonography for papillary thyroid cancer: effects on cervical recurrence. *Surgery* 2009;146:1063-72.
4. Kouvaraki MA, Shapiro SE, Fornage BD, et al. Role of preoperative ultrasonography in the surgical management of patients with thyroid cancer. *Surgery* 2003;134:946-55.
5. Solorzano CC, Carneiro DM, Ramirez M, et al: Surgeon-performed ultrasound in the management of thyroid malignancy. *Am Surg* 2004;70:576-82.
6. Stulak JM, Grant CS, Farley DR, et al. Value of preoperative ultrasonography in the surgical management of initial and reoperative papillary thyroid cancer. *Arch Surg* 2006;141:489-96.