



THYROID CANCER

Lymph node evaluation with ultrasound prior to surgery is a valuable tool in surgical planning for thyroid cancer

BACKGROUND

Thyroid cancer is the fastest rising cancer in women. Though thyroid cancer has an excellent prognosis with survival rates of >95%, spread of the cancer to the lymph nodes in the neck are common. While spread of the cancer to the lymph nodes does not usually affect the risk of death, there is an increased risk for recurrence of the cancer. Overall, up to 20% of patients with thyroid cancer will require additional treatment for spread of the cancer to lymph nodes.

Methods to evaluate lymph node involvement before surgery have included physical examination, CT scanning and ultrasound. Physical examination is not accurate enough to discover most lymph nodes. CT scanning involves radiation and contrast that contains iodine, which takes time to leave the system to allow radioactive iodine treatment for thyroid cancer, when indicated. Ultrasound is widely available, performs well in experienced hands, is useful to identify abnormal lymph nodes that may contain cancer and is recommended by the guidelines of the American Thyroid Association.

This study was done to evaluate the use of ultrasound to examine lymph nodes in the neck in surgical planning for thyroid cancer surgery and to identify which patients are best served by this approach.

THE FULL ARTICLE TITLE

Kocharyan D et al. The relevance of preoperative ultrasound cervical mapping in patients with thyroid cancer. *Can J Surg* 2016;59:113-7.

SUMMARY OF THE STUDY

Medical records of 263 patients who had thyroid cancer surgeries performed at Centre hospitalier de l'Université de Montreal from 2009-2013 were reviewed. All patients had lymph node mapping ultrasounds prior to surgery. Only positive ultrasound results were included. These results were divided into two groups: 1 or 2 suspicious

lymph nodes vs 3 or more suspicious lymph nodes. Pathology results after surgery were divided into 3 groups: 0, 1 or 2, and 3 or more positive lymph nodes.

A total of 154 ultrasounds showed abnormalities and of these, 136 ultrasounds identifying abnormal lymph nodes were found in 120 patients. These patients had an average age of 49.9 years and 74.1% were women. A total of 110 of the 120 cancers were papillary thyroid cancers, 8 medullary cancer, 1 follicular cancer and 1 Hurthle cell cancer. The surgeries involved were the initial surgery in 87 patients and repeat surgery for recurrent disease in 49 patients. A total of 40 patients had 1 or 2 abnormal lymph nodes present on ultrasound and 96 had 3 or more abnormal lymph nodes. On pathology review, there were 22 cases with 0 positive lymph nodes, 41 patients had 1 or 2 positive nodes and 73 patients had 3 or more positive nodes. These results show that ultrasound was 80-85% accurate in identifying abnormal lymph nodes containing cancer. Of the 22 cases were the abnormal lymph nodes did not contain cancer 10 (45.4%) of these were in patients with underlying Hashimoto's thyroiditis.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study shows that ultrasound examination of lymph nodes in the neck is an accurate and valuable tool to plan the extent of lymph node surgery for thyroid cancer, both in the initial surgery and in surgeries for recurrent cancer. Patients with Hashimoto's thyroiditis may have abnormal lymph nodes present which may lead to a false positive ultrasound. These data show that the use of ultrasound for surgical planning is important and for patients with thyroid cancer.

— Julie E. Hallanger Johnson, MD

ATA THYROID BROCHURE LINKS

Thyroid Cancer (Papillary and Follicular): <http://www.thyroid.org/thyroid-cancer/>

Thyroid Surgery: <http://www.thyroid.org/thyroid-surgery/>



THYROID CANCER, continued

ABBREVIATIONS & DEFINITIONS

Lymph node: bean-shaped organ that plays a role in removing what the body considers harmful, such as infections and cancer cells.

Thyroid nodule: an abnormal growth of thyroid cells that forms a lump within the thyroid. While most thyroid nodules are non-cancerous (Benign), ~5% are cancerous.

Thyroid Ultrasound: a common imaging test used to evaluate the structure of the thyroid gland. Ultrasound uses soundwaves to create a picture of the structure of the thyroid gland and accurately identify and characterize nodules within the thyroid. Ultrasound is also frequently used to guide the needle into a nodule during a thyroid nodule biopsy.

