



THYROID CANCER

Ultrasound monitoring of indeterminate neck lesions is safe in some cases of thyroid cancer

BACKGROUND

The rates of thyroid cancer are steadily increasing, especially in women. The good news is that patients with thyroid cancer have excellent long-term survival. In fact, treatment is based on the risk of recurrence rather than the risk of death. At the time of surgery, up to 30% of patients have the cancer spread to the lymph nodes in the neck and this is the most likely place for the cancer to recur. Indeed, 1 out of 3 patients may experience recurrence of the cancer in the neck lymph nodes following surgery. Importantly, this does not change the otherwise excellent prognosis for most patients. Most thyroid cancer recurrences are slow-growing and may not pose fast-approaching threat to the patient's health. Further neck surgery after the initial thyroidectomy can be risky, so careful consideration is necessary to decide when a cancer recurrence needs surgery. Active monitoring is reasonable for many potential cancer recurrences that are in a lymph node smaller than 1 cm. Neck ultrasound is the most accurate imaging tool to detect recurrence in the thyroid bed or neck lymph nodes. This study examines the use of neck ultrasound as a monitoring tool for thyroid cancer recurrence.

THE FULL ARTICLE TITLES:

Lamartina L et al. Risk stratification of neck lesions detected sonographically during the follow-up of differentiated thyroid cancer. *J Clin Endocrinol Metab* 2016;1013036-44. Epub May 17, 2016.

SUMMARY OF THE STUDY

In this study, Lamartina et al. evaluated the European Thyroid Association ultrasound classification of neck lesions, which may be abnormal lymph nodes or masses in the thyroid bed, following thyroidectomy for predicting lesion growth during follow-up. This was a review of patients at a large teaching hospital in Italy between January 2005 and December 2014. Patients were included if they underwent surgery and had abnormal lesions detected on at least two ultrasounds. Lesions were retrospectively classified as suspicious or indeterminate. The main outcomes were lesion growth of >3 mm during follow-up or persistence of at least one abnormal lesion at last follow-up.

Of 637 patients, 58 had at least one abnormal lesion detected on ultrasound following surgery. The risk of recurrence according to American Thyroid Association guidelines was intermediate or high in 71% of cases. In total, there were 94 abnormal lesions (16 in the thyroid bed and 78 in lymph nodes of the neck). The average diameters of indeterminate and suspicious lesions were 8.2 mm and 9.8 mm respectively. Of the 49 suspicious lesions, 12% were in the thyroid bed, 10% were in the central neck lymph nodes, and the remainder were in the lateral lymph nodes of the neck.

Growth occurred in 36% of suspicious lesions as compared with only 8% of indeterminate lesions at an average follow-up of 3.7 years. Almost all suspicious lesions were still present at last follow-up, while half of indeterminate lesions resolved. All of the thyroid-bed lesions were still present during follow-up, while 17 of the abnormal lymph nodes had disappeared. The authors hypothesized that thyroid-bed lesions that did not represent tumor recurrence were frequently postoperative scarring or reaction to surgical suture material, which would be unlikely to resolve over time. Abnormal lymph nodes that were not cancer were likely reactive and could be expected to resolve with more time after surgery.

There were no local complications related to disease recurrence during the study period. A total of 8 of the 32 patients with persistent suspicious nodules were ultimately referred for additional surgery at the end of the study period on the basis of clinical factors including rising thyroglobulin levels and absence of distant spread as well as physician and patient preference, and each was confirmed to have recurrent thyroid cancer.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Ultrasound is a critical tool in the diagnosis, surgical treatment, and follow-up of patients with thyroid cancer. The ultrasound appearance of neck lesions following thyroidectomy for differentiated thyroid cancer can help predict growth and persistence during follow-up. The majority of patients with indeterminate lesions and approximately two-thirds of those with suspicious lesions



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had no change during the study period. The authors suggest postponing additional workup including biopsy for most lesions with indeterminate characteristics on ultrasound as this may reduce additional surgery that may be risky and is unlikely to improve control of the disease or long-term survival.

— Ronald B. Kuppersmith, MD, FACS

ATA THYROID BROCHURE

LINKS

Thyroid Nodules: <http://www.thyroid.org/thyroid-nodules/>

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

Thyroid Cancer: <http://www.thyroid.org/thyroid-cancer/>

ABBREVIATIONS & DEFINITIONS

Papillary thyroid cancer: the most common type of thyroid cancer. There are 3 variants of papillary thyroid cancer: classic, follicular and tall-cell.

Follicular thyroid cancer: the second most common type of thyroid cancer.

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.

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

Thyroglobulin: a protein made only by thyroid cells, both normal and cancerous. When all normal thyroid tissue is destroyed after radioactive iodine therapy in patients with thyroid cancer, thyroglobulin can be used as a thyroid cancer marker in patients that do not have thyroglobulin antibodies.



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