



THYROID CANCER

Detecting thyroid cancer recurrence following lobectomy

BACKGROUND

The initial treatment for thyroid cancer is surgery. Many patients are treated with a total thyroidectomy and these patients are followed for cancer recurrence by measuring levels of the thyroid protein thyroglobulin as a cancer marker. More recently, patients who are low risk and with the cancer confined to one lobe are offered to be treated a lobectomy. Indeed, the number of lobectomies done for thyroid cancer has been increasing recently. However, in patients with a normal lobe after a lobectomy, the thyroglobulin level is much less reliable as a cancer marker.

In this study, the authors report on their experience from a single institution on measuring thyroglobulin levels after a lobectomy for thyroid cancer.

THE FULL ARTICLE TITLE

Ritter A et al 2020 Detecting recurrence following lobectomy for thyroid cancer: Role of thyroglobulin and thyroglobulin antibodies. *J Clin Endocrinol Metab* 105:1–7. PMID: 32219303.

SUMMARY OF THE STUDY

The authors looked at all their adult patients over a 15 period that had a thyroid lobectomy for thyroid cancer

and were monitored by serial serum thyroglobulin and thyroglobulin antibody for cancer recurrence. Most of the 167 patients were female and all were disease stage I (low risk for cancer recurrence). The average cancer size was 9.5 mm and only a small percentage had some aggressive features. Overall, the blood thyroglobulin levels did not correlate with cancer size or more aggressive cancer features and there was fairly equal distribution in patients whose thyroglobulin levels declined, increased, or remained stable over time. Of the group, 10% of patients had a completion thyroidectomy during the study period, and 12 of them had cancer and 6 had benign nodules. The trend in serum thyroglobulin was the same for those patients with cancer in the other thyroid lobe compared to those that had benign disease.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The authors conclude that serum thyroglobulin and thyroglobulin antibody levels after thyroid lobectomy are not sensitive to detect cancer recurrence. They therefore recommend ultrasound surveillance as well as more research to determine if there is a certain thyroglobulin level that would prompt suspicion for recurrence.

— Melanie Goldfarb, MD

ATA THYROID BROCHURE LINKS

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

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

ABBREVIATIONS & DEFINITIONS

Thyroglobulin antibodies: these are antibodies that attack the thyroid instead of bacteria and viruses, they are a marker for autoimmune thyroid disease, which is the main underlying cause for hypothyroidism and hyperthyroidism in the United States.

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.





THYROID CANCER, continued

Thyroidectomy: surgery to remove the entire thyroid gland. When the entire thyroid is removed it is termed a *total thyroidectomy*. When less is removed, such as in removal of a lobe, it is termed a *partial thyroidectomy*.

Lobectomy: surgery to remove one lobe of the thyroid

Papillary thyroid cancer: the most common type of thyroid cancer. There are 4 variants of papillary thyroid cancer: classic, follicular, tall-cell and noninvasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP).

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.

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