Volume 19 | Issue 4 | April 2026

Clinical Thyroidology® for the Public

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Editor's Comments

Welcome to another issue of *Clinical Thyroidology for the Public*! In this journal, we will bring to you the most up-to-date, cutting edge thyroid research. We also provide even faster updates of late-breaking thyroid news through X (previously known as Twitter) at @thyroidfriends and on Facebook. Our goal is to provide patients with the tools to be the most informed thyroid patient in the waiting room. Also check out our friends in the **Alliance for Thyroid Patient Education**. The **Alliance** member groups consist of: the *American Thyroid Association®, Bite Me Cancer, the Graves' Disease and Thyroid Foundation, the Light of Life Foundation, MCT8 – AHDS Foundation, ThyCa: Thyroid Cancer Survivors' Association,* and *Thyroid Federation International.*

We invite all of you to join our **Friends of the ATA** community. It is for you that the American Thyroid Association® (ATA®) is dedicated to carrying out our mission of providing reliable thyroid information and resources, clinical practice guidelines for thyroid detection and treatments, resources for connecting you with other patients affected by thyroid conditions, and cutting edge thyroid research as we search for better diagnoses and treatment outcomes for thyroid disease and thyroid cancer. We thank all of the *Friends of the ATA* who support our mission and work throughout the year to support us. We invite you to help keep the ATA® mission strong by choosing to make a donation that suits you — it takes just one moment to give online at: www.thyroid.org/donate and all donations are put to good work. The ATA® is a 501(c)3 nonprofit organization and your gift is tax deductible.

April is Hashimotos Disease Awareness Month.

In this issue, the studies ask the following questions:

- Can you undergo bariatric surgery if you are hypothyroid?
- Is active surveillance right for my cancer?
- Can patient decision aids help patients choose the best option for their cancer treatment?
- Can my biopsy results predict the likelihood of my thyroid cancer coming back?
- How often are TSH levels in the recommended range in thyroid cancer patients?
- How many lymph nodes with cancer mean medullary thyroid cancer is worse?

We welcome your feedback and suggestions. Let us know what you want to see in this publication. I hope you find these summaries interesting and informative.

— Alan P. Farwell, MD

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HYPOTHYROIDISM

Hypothyroidism and risks of bariatric surgery

BACKGROUND

Bariatric surgery (weight-loss surgery) is a successful treatment for obesity. Bariatric surgery is an operation to change the digestive system to limit food intake and decrease hunger. This can be done by removing part of the stomach to make it smaller (sleeve gastrectomy) or by bypassing the stomach completely (gastric bypass). Bariatric surgery is generally safe, but problems after the procedure can occur. The most common complications seen after this type of surgery are bleeding, infections, hernias and blood clots.

It is not clear if patients with hypothyroidism have higher chances of complications after bariatric surgery. Studies on hypothyroid patients undergoing any surgery showed that they have a higher chance of infection and heart problems after surgery, especially if the thyroid levels were not in the normal range before the surgery. But those studies did not specifically look at patients who got bariatric surgery. This study was done to find out the risks of bariatric surgery in patients with hypothyroidism.

THE FULL ARTICLE TITLE

Meneghini V et al. Adverse outcomes in patients with hypothyroidism undergoing bariatric surgery: a retrospective study using TriNetX. J Clin Endocrinol Metab 2025;16:dgaf519; doi: 10.1210/clinem/dgaf519. PMID: 40971953.

SUMMARY OF THE STUDY

This authors of this study looked at medical records of adults with obesity who underwent sleeve gastrectomy or gastric bypass between 2005 and 2024 in 141 health care organizations. They divided the surgical patients in two groups: Group 1: patients with hypothyroidism diagnosed before the surgery, and all were prescribed thyroid hormone replacement; Group 2 (control): patients who were NOT hypothyroid before or after surgery and were not taking thyroid hormone replacement. There were 5,700 patients in each group. Most of the patients were women and the average age was 46 years old. They also looked at a third group of patients with hypothyroidism and obesity who did NOT get bariatric surgery.

Right after bariatric surgery, hypothyroid patients had a higher chance of being readmitted (25% higher), having a hernia (56% higher), and biliary disease (39% higher). In addition, this group of patients had more medical problems later, for example strokes (25% higher), diabetes (39% higher), high lipids, osteoporosis and nutritional deficiencies. These complications were seen even if thyroid levels were normal before the surgery. The chances of complications were generally higher in patients who got gastric bypass as compared to sleeve gastrectomy. On the other hand, when compared to the third group of patients who did NOT get surgery, those who had bariatric surgery had lower chances of death, diabetes, high blood pressure, high lipids and cardiovascular problems.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study shows that adults with obesity and hypothyroidism who get bariatric surgery have higher chances of problems after the surgery. Many of these complications happened more often in people who had gastric bypass than in people who had sleeve gastrectomy. The good news is that people who had bariatric surgery were less likely to die or have heart problems than similar people who did not have the surgery. Even though complications happened in patients with normal thyroid levels, it is still good practice to check that patients' thyroid levels are normal before any surgery.

— Susana Ebner MD

HYPOTHYROIDISM, continued

ATA THYROID BROCHURE LINKS

Thyroid Hormone Treatment: https://www.thyroid.org/thyroid-hormone-treatment/

Hypothyroidism (Underactive): https://www.thyroid.org/hypothyroidism/

ABBREVIATIONS & DEFINITIONS

Hypothyroidism: a condition where the thyroid gland is underactive and doesn't produce enough thyroid hormone. Treatment requires taking thyroid hormone pills.

Thyroid hormone therapy: patients with hypothyroidism are most often treated with Levothyroxine in order to return their thyroid hormone levels to normal. *Replacement therapy* means the goal is a TSH in the normal range and is the usual therapy. *Suppressive therapy* means that the goal is a TSH below the normal range and is used in thyroid cancer patients to prevent growth of any remaining cancer cells.

Bariatric surgery: weight-loss surgery that changed the digestive system to limit food intake and decrease hunger. This can be done by removing part of the stomach to make it smaller (sleeve gastrectomy) or by bypassing the stomach completely (gastric bypass).

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THYROID CANCER

Active surveillance is a safe strategy for low-risk papillary thyroid cancer in older patients

BACKGROUND

Thyroid cancer has increased over the last several decades in part due to increased detection of small thyroid cancers that are not aggressive. Most of these small cancers are papillary thyroid cancer. There has also been recognition that treatment of these low-risk cancers with immediate surgery may not always be necessary and exposes the patient to risks associated with surgery. Many of these small thyroid cancers never grow significantly in size or spread outside of the neck. This has led to following a small, low-risk thyroid cancer with ultrasound and deferring surgery until the cancer shows evidence of significant growth or the cancer changes. This is called active surveillance and is an alternative option for the management of low-risk papillary thyroid cancer. Various factors will be taken into consideration to determine if active surveillance is an appropriate management option for a particular patient, including the patient's age.

This study evaluates the durability of active surveillance in patients with small, low-risk papillary thyroid cancer.

THE FULL ARTICLE TITLE

Sawka AM, et al. Long-term durability of active surveillance of small, low-risk papillary thyroid cancer. JAMA Surg 2025;160(10):1117–1124; doi: 10.1001/jamasurg.2025.2957. PMID: 40833769.

SUMMARY OF THE STUDY

This study was conducted at an acute care hospital in Toronto, Canada and recruited adult patients with known or suspected papillary thyroid cancer that measured less than 2 cm and did not have any high-risk features on ultrasound. Patients were excluded from the study if there was spread of cancer to the lymph nodes in the neck or elsewhere in the body, evidence of direct extension of the cancer beyond the thyroid gland or if there was a high risk for invasion of important structures surrounding the thyroid gland (trachea and recurrent laryngeal nerve). Patients were offered a choice between active surveillance and surgery.

Out of the 200 patients enrolled, 155 (78%) selected active surveillance and 45 (22%) selected to undergo immediate surgery. Older patients were more likely to select active surveillance over the option of surgery. During an average follow up period of 71 months, there were no thyroid cancer-related deaths or spread of the cancer outside of the neck in either group.

Among patients who initially chose active surveillance, the cross over rate (patients who initially chose active surveillance and later underwent surgery or were recommended an intervention) was 23.9% - in 57% the reason was progression of disease and in 41% it was due to patient preference. The five-year cumulative crossover rates were 41.5% in patients younger than age 45, 20.9% in patients aged 45 to 64%, and 5.1%, in patients aged 65 or older, respectively.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The decision between active surveillance and surgery for patients with low-risk papillary thyroid cancer needs to be individualized. This study is consistent with prior research that suggests the long-term outcome for active surveillance is favorable in appropriately selected patients. In older patients, active surveillance can be considered as part of the management strategy, particularly when co-existing health conditions may make surgery a less preferred option.

— Poorani Goundan, MD

THYROID CANCER, continued

ATA THYROID BROCHURE LINKS

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

ABBREVIATIONS & DEFINITIONS

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

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.

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*.

Active Surveillance: following a small, low-risk thyroid cancer with ultrasound and deferring surgery until the cancer grows significantly.

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THYROID CANCER

Bridging evidence gaps in thyroid cancer treatment with patient decision aids

BACKGROUND

Thyroid cancer is common. Fortunately, thyroid cancer has an excellent prognosis as we have very effective treatments. The initial treatment for thyroid cancer is usually surgery, and often this is the only treatment needed. For patients with more advanced cancer, radioactive iodine therapy serves as a "magic bullet" to seek out and destroy thyroid cancer cells. Doctors know that radioactive iodine therapy helps people with high-risk thyroid cancer, and that it is usually not needed for low-risk cancer. But for people with intermediate-risk thyroid cancer, it is still unclear if radioactive iodine therapy is helpful. Because of this uncertainty, doctors are encouraged to make decisions together with patients.

This study developed a decision aid to help patients to determine the need for radioactive iodine therapy after surgery for intermediate-risk thyroid cancer. The investigators asked patients to complete surveys and join group discussions about how they made their treatment decisions.

THE FULL ARTICLE TITLE

Carr AL et al. Patient perspectives toward a decision aid for radioactive iodine treatment for intermediate risk thyroid cancer. Int J Behav Med. Epub 2025 Dec 18; doi: 10.1007/s12529-025-10408-4. PMID: 41413365.

SUMMARY OF THE STUDY

This study involved 23 adults with thyroid cancer who were offered radioactive iodine therapy. Patients completed surveys and participated in focus groups exploring decision-making experiences, informational needs, and recommendations for a web-based patient decision aid.

The results of these surveys highlighted three broad areas: (1) the range of patient involvement in the decision-making process for radioactive iodine therapy, with some patients unaware that declining radioactive iodine therapy was an option; (2) personal values–based decision outcomes; and (3) recommendations for decision-aid content based on patients' knowledge gaps about radioactive iodine therapy. Recommendations from patients included the need for more information about the radioactive iodine dose, common side effects of radioactive iodine therapy, safety precautions for radioactivity,

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study showed that many patients with intermediate-risk thyroid cancer feel uncertain about whether to get radioactive iodine therapy and may not receive enough information to make a confident decision. A decision aid tool is helpful in explaining the risks and benefits of radioactive iodine therapy, what the treatment involves and how it may affect daily life. This could help patients choose the option that fits their goals and values and help patients understand their options can lead to better decisions and fewer unnecessary treatments.

— Joanna Miragaya, MD

ATA THYROID BROCHURE LINKS

Radioactive Iodine Therapy: https://www.thyroid.org/radioactive-iodine/

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

THYROID CANCER, continued

ABBREVIATIONS & DEFINITIONS

Thyroid cancer: the most common type of thyroid cancer, includes papillary, follicular and oncocytic thyroid cancer.

Radioactive iodine (RAI): this plays a valuable role in diagnosing and treating thyroid problems since it is taken up only by the thyroid gland. I-131 is the destructive form used to destroy thyroid tissue in the treatment of thyroid cancer and with an overactive thyroid. I-123 is the non-destructive form that does not damage the thyroid and is used in scans to take pictures of the thyroid (*Thyroid Scan*) or to take pictures of the whole body to look for thyroid cancer (*Whole Body Scan*).

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THYROID CANCER

Can my biopsy results predict the likelihood of my thyroid cancer coming back?

BACKGROUND

Although most thyroid cancers are low-risk and have an excellent prognosis, there can be very different types of thyroid cancers that may be more aggressive and harder to treat. The initial treatment for thyroid cancer is usually surgery, and often this is the only treatment needed. For patients with more advanced cancer, radioactive iodine therapy serves as a "magic bullet" to seek out and destroy thyroid cancer cells. The treatment plan for thyroid cancer is usually based on cancer staging systems. While some cancer staging systems focus on risk of dying, the American Thyroid Association focuses more on risk of recurrence of the cancer, since most thyroid cancer patients do not die of the cancer. Most cancer staging systems require information that can only be obtained while the surgery is being performed or after the surgical specimen is analyzed. However, even these systems have limitations. For example, a thyroid cancer that is contained within one thyroid lobe and not involving any other neck structures is considered low-risk of recurrence but can still recur in 5-20% of cases.

The management of thyroid cancer is becoming more conservative, with more frequent recommendations of removing only the thyroid lobe containing the cancer or even following the cancer with ultrasound without an operation (active surveillance). Until now, the molecular marker information that is obtained from the biopsy mainly helped us know the likelihood cancer was present and what type of cancer it was. Ideally, we could use the molecular marker information to know the risk of recurrence of cancer to determine the ideal extent of surgery, usefulness of radioactive iodine therapy, and appropriate frequency of follow up of the cancer. This information might help the patient know whether to pursue active surveillance, lobectomy, or total thyroidectomy.

The goal of this study is to see if the molecular marker analysis obtained through a biopsy of the nodule before the surgery helped predict the risk of thyroid cancer recurrence and guide the care team for the extent of surgery.

THE FULL ARTICLE TITLE

Bauzon J et al. Validation of molecular profiling to preoperatively predict aggressive pathologic features in differentiated thyroid cancer. Surgery 2026;189:109698

SUMMARY OF THE STUDY

This study looked at the results from 2,652 patients at a single hospital. In this group, there were 2,980 nodules biopsied. A total of 445 thyroid nodules resulted in biopsy results that were indeterminate or cancer. In these cases, molecular analysis was performed using the Genomic Sequencing Classifier (GSC) molecular test by Afirma™ and analyzed using the Veracyte Genomic Resource for Intelligent Discovery (GRID) tool. These 445 nodules were analyzed with Afirma for molecular genetics, and a risk of recurrence of the thyroid cancer was determined after the surgery was performed. The thyroid cancer cell expression of a sodium iodine (NIS) transporter is an important sign that the cancer will likely respond better to radioactive iodine treatment. The cancer invasiveness and the presence or absence of lymph node involvement were determined from the surgical pathology.

Of the 445 nodules, 366 (82%) were classified as low risk, 57 (13%) were intermediate risk, and 22 (5%) were high risk of recurrence. The expression of the sodium-iodine transporter decreased risk of recurrence, and the degree of invasiveness of the cancer increased risk of recurrence. The molecular genetics Afirma testing was effective at predicting whether a cancer would be low or intermediate/high risk of recurrence.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study shows that molecular markers that are identified on thyroid nodule biopsy specimens performed

THYROID CANCER, continued

prior to surgery can help tailor the treatment for the patient's thyroid cancer. The biopsy molecular marker analysis helped predict the risk of thyroid cancer recurrence and, thus, guide the care team for extent of surgery. While further studies are needed to confirm these results, this study provides more information to help the patient and doctor to determine the best treatment options for the patients' thyroid cancer.

— Pinar Smith, MD

ATA THYROID BROCHURE LINKS

Thyroid Nodules: https://www.thyroid.org/thyroid-nodules/

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

ABBREVIATIONS & DEFINITIONS

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 biopsy: a simple procedure that is done in the doctor's office to determine if a thyroid nodule is benign (non-cancerous) or cancer. The doctor uses a very thin needle to withdraw cells from the thyroid nodule. Patients usually return home or to work after the biopsy without any ill effects.

Indeterminate thyroid biopsy: this happens a few atypical cells are seen but not enough to be abnormal (atypia of unknown significance (AUS) or follicular lesion of unknown significance (FLUS)) or when the diagnosis is a follicular or hurthle cell lesion. Follicular and hurthle cells are normal cells found in the thyroid. Current analysis of thyroid biopsy results cannot differentiate between follicular or hurthle cell cancer from noncancerous adenomas. This occurs in 15-20% of biopsies and often results in the need for surgery to remove the nodule.

Thyroid cancer: the most common type of thyroid cancer, includes papillary, follicular and oncocytic thyroid cancer.

Cancer recurrence: this occurs when the cancer comes back after an initial treatment that was successful in destroying all detectable cancer at some point.

Genes: a molecular unit of heredity of a living organism. Living beings depend on genes, as they code for all proteins and RNA chains that have functions in a cell. Genes hold the information to build and maintain an organism's cells and pass genetic traits to offspring.

Cancer-associated genes: these are genes that are normally expressed in cells. Cancer cells frequently have mutations in these genes. It is unclear whether mutations in these genes cause the cancer or are just associated with the cancer cells. The cancer-associated genes important in thyroid cancer are BRAF, RET/PTC, TERT and RAS.

Molecular markers: genes and microRNAs that are expressed in benign or cancerous cells. Molecular markers can be used in thyroid biopsy specimens to either to diagnose cancer or to determine that the nodule is benign. The two most common molecular marker tests are the Afirma™ Gene Expression Classifier and Thyroseq™

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 or lobectomy*.

Radioactive iodine (RAI): this plays a valuable role in diagnosing and treating thyroid problems since it is taken up only by the thyroid gland. I-131 is the destructive form used to destroy thyroid tissue in the treatment of thyroid cancer and with an overactive thyroid. I-123 is the non-destructive form that does not damage the thyroid and is used in scans to take pictures of the thyroid (Thyroid Scan) or to take pictures of the whole body to look for thyroid cancer (Whole Body Scan).

Active Surveillance: following a small, low-risk thyroid cancer with ultrasound and deferring surgery until the cancer grows significantly

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THYROID CANCER

Difficulty in achieving recommended TSH levels in patients with low-risk thyroid cancer

BACKGROUND

Thyroid cancer is common. Fortunately, most types of thyroid cancer have an excellent prognosis, mainly because we have effective treatments. Patients with thyroid cancer are usually treated with surgery and those with advanced thyroid cancer may be treated with radioactive iodine therapy. Finally, most patients will also need to be on thyroid hormone replacement therapy, usually levothyroxine, because the treatment of thyroid cancer causes the patient to be hypothyroid.

Levothyroxine treatment is monitored by following TSH (thyroid-stimulating hormone) levels. In patients with hypothyroidism not due to thyroid cancer, the TSH goal is in the normal range. Doctors use guidelines from the American Thyroid Association (ATA) to decide what TSH level should be in patients with thyroid cancer. The TSH goal depends on how serious the cancer was at the start and how well the patient responds to treatment over time. The TSH goal for patients with low-risk thyroid cancer is usually in the normal range, like any patient with hypothyroidism. However, the TSH goal in patients with advanced or high-risk thyroid cancer is usually in the low range, meaning the levothyroxine dose is a bit higher than the body needs. This is to suppress the growth of any remaining thyroid cancer cells. Overtreatment increases the risk for irregular heart rhythms and osteoporosis due to the higher thyroid hormone levels needed for a low TSH. Undertreatment may increase the risk of cancer growth as well as symptoms of hypothyroidism. The goal is to avoid these complications.

This study looked at how well levothyroxine treatment was managed in patients with low-risk thyroid cancer. Doctors checked patients 12 months after treatment and again at their last follow-up visit to see if their TSH levels were in the recommended range.

THE FULL ARTICLE TITLE

Díez JJ, et al. Assessment of levothyroxine therapy adequacy in low-risk differentiated thyroid carcinoma: a multicenter cohort study. Front Endocrinol (Lausanne). Epub 2025 Dec 12:16:1652862

SUMMARY OF THE STUDY

This was a study of 1016 patients with low-risk thyroid cancer (average age, 48 years; 80.7% women; 91.4% papillary cancer) from 15 hospital centers in Spain. Surgical treatment included lobectomy in 8%, total thyroidectomy in 60%, and total thyroidectomy with lymph node dissection in 32%. Radioactive iodine therapy was administered to 65.6% of patients. Average follow-up time was 79 months (42-142) at which time 978 patients were included.

At 12 months 26% of patients were on the right dose, almost 48% were taking too much, about 26% were taking too little. At the last follow-up visit about 40% were on the right dose, 27% were taking too much and 33% were taking too little. This means many patients were either overtreated or undertreated. Overtreatment was most frequent in patients with excellent response (30.5%), while undertreatment was most common in patients with evidence of persistent or recurrent thyroid cancer.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study confirms that most patients do well after initial treatment for thyroid cancer. However, it confirms that there is substantial work to be done to avoid potential complications from under and over treatment with levothyroxine. This study shows that most patients do not achieve TSH levels within the target ranges recommended by ATA guidelines. Recent changes in ATA guidelines reducing the need for TSH suppression in low-risk

THYROID CANCER, continued

patients with excellent response to therapy should simplify thyroid hormone management in close to 80% of patients. In addition, the increased use of thyroid lobectomy vs total thyroidectomy can make post-surgical thyroid hormone replacement easier or even unnecessary.

Patients are encouraged to discuss with their physicians the goals of thyroid hormone replacement after treatment for low risk differentiated thyroid cancer to avoid risks of both under and over treatment.

— Marjorie Safran, MD

ATA THYROID BROCHURE LINKS

Thyroid Cancer (Papillary and Follicular): https://www.thyroid.org/thyroid-cancer/
Thyroid Hormone Treatment: https://www.thyroid.org/thyroid-hormone-treatment/
Thyroid Function Tests: https://www.thyroid.org/thyroid-function-tests/
Thyroid Surgery: https://www.thyroid.org/thyroid-surgery/

ABBREVIATIONS & DEFINITIONS

Thyroid cancer: the most common type of thyroid cancer, includes papillary, follicular and oncocytic thyroid cancer.

Thyroid hormone therapy: patients with hypothyroidism are most often treated with Levothyroxine in order to return their thyroid hormone levels to normal. *Replacement therapy* means the goal is a TSH in the normal range and is the usual therapy. *Suppressive therapy* means that the goal is a TSH below the normal range and is used in thyroid cancer patients to prevent growth of any remaining cancer cells.

TSH: thyroid stimulating hormone — produced by the pituitary gland that regulates thyroid function; also the best screening test to determine if the thyroid is functioning normally.

Levothyroxine (T4): the major hormone produced by the thyroid gland and available in pill form as Synthroid™, Levoxyl™, Tyrosint™ and generic preparations.

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.

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THYROID CANCER

How many lymph nodes with cancer mean medullary thyroid cancer is worse?

BACKGROUND

Medullary thyroid cancer (MTC) is a rare type of thyroid cancer that starts in special cells called C-cells. These cells make a hormone called calcitonin. Surgery is the main treatment for MTC. MTC can spread outside of the thyroid to nearby lymph nodes in the neck early in the disease. Doctors know that when MTC spreads to more lymph nodes, the cancer can be harder to treat. However, they have not been sure how many lymph nodes involved would place a patient at higher risk.

This study was done to find clear cutoff numbers—"thresholds"—that can help doctors understand how the number of cancer-containing lymph nodes relates to a patient's chances of the cancer coming back or affecting survival. The goal of this study was to identify specific numbers of lymph nodes that help predict patient outcomes in MTC.

FULL ARTICLE TITLE:

Lindsay CV, et al. Prognostic thresholds for lymph node metastasis in medullary thyroid cancer: a restricted cubic splines analysis. Thyroid 2025;35(11):1297–1310.

SUMMARY OF THE STUDY

This study looked at over 2,000 people with MTC from a large national database (SEER Database). All patients had surgery to remove the thyroid and evaluate lymph nodes. The researchers checked how many lymph nodes contained cancer and calculated a "lymph node ratio," which compares the number of cancer-containing lymph nodes to the total number removed. They found that patients with 8 or more cancer-positive lymph nodes or a lymph node ratio of 14% or higher had worse outcomes. These findings were then double-checked using information from another group of 149 patients, and the same patterns were seen.

Of note, patients who had spread of MTC to the lymph nodes were more often male, had larger cancer size and higher likelihood of cancer extension and spread to other areas of the body. Patients with MTC that stayed in the thyroid lived longer than patients where the MTC had spread to the lymph nodes.

IMPLICATIONS

The study showed that certain numbers of cancer-containing lymph nodes—8 or more—and a lymph node ratio of at least 14% can help predict which MTC patients are more likely to have the cancer return or have worse long-term outcomes. This allows doctors to plan more aggressive surgery and closer follow up in these patients. For patients, this means doctors may be able to give clearer information about risk after surgery. These thresholds may also help guide follow-up care, such as how often to check calcitonin levels, get imaging tests, or decide on additional treatment.

— Maria Brito, MD, ECNU

ATA THYROID BROCHURE LINKS

Thyroid Cancer (Medullary): https://www.thyroid.org/medullary-thyroid-cancer/

Thyroid Nodules: https://www.thyroid.org/thyroid-nodules/

THYROID CANCER, continued

ABBREVIATIONS & DEFINITIONS

Medullary thyroid cancer (MTC): A rare type of thyroid cancer that starts in C-cells of the thyroid.

SEER database: A large U.S. database that collects information about cancer cases.

Calcitonin: A hormone made by thyroid C-cells; often high in patients with MTC.

Lymph node: A small bean-shaped organ that helps the body filter out infections and cancer cells.

Cancer recurrence: When cancer comes back after treatment.

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ATA® Alliance for Thyroid Patient Education

GOAL The goal of our organizations is to provide accurate and reliable information for patients about the diagnosis, evaluation and treatment of thyroid diseases. We look forward to future collaborations and continuing to work together toward the improvement of thyroid education and resources for patients.

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Graves' Disease & Thyroid Foundation

ThyCa: Thyroid Cancer Survivors' Association, Inc.
www.thyca.org

Light of Life Foundation
checkyourneck.com

MCT8 - AHDS Foundation

BITE ME CANCER!

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American Thyroid Association®
www.thyroid.org
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(Toll-free): 1-800-THYROID
thyroid@thyroid.org

Bite Me Cancer
www.bitemecancer.org
info@bitemecancer.org

Graves' Disease and Thyroid Foundation
www.gdatf.org
(Toll-free): 877-643-3123
info@ngdf.org

Light of Life Foundation
www.checkyourneck.com
info@checkyourneck.com

MCT8 – AHDS Foundation
mct8.info
Contact@mct8.info

Thyca: Thyroid Cancer Survivors' Association, Inc.
www.thyca.org
(Toll-free): 877-588-7904
thyca@thyca.org

Thyroid Federation International
www.thyroid-federation.org
tfi@thyroid-federation.org

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www.thyroid.org