Volume 19 | Issue 9 | September 2026

Clinical Thyroidology® for the Public

AMERICAN THYROID ASSOCIATION
Optimal Thyroid Health for All

AMERICAN THYROID ASSOCIATION
Optimal Thyroid Health for All

Volume 19 | Issue 9 | September 2026

Clinical Thyroidology® for the Public

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.

September is Thyroid Cancer Awareness Month.

In this issue, the studies ask the following questions:

- Can active surveillance work for large cancers?
- Could my toxic nodule be cancer?
- Which cancer risk assessment method is the best?
- Should I take extra thyroid hormone for my thyroid cancer?
- Will I need calcium pills after my thyroidectomy?
- Can hypothyroidism cause liver disease?

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

AMERICAN THYROID ASSOCIATION
Optimal Thyroid Health for All

Volume 19 | Issue 9 | September 2026

Clinical Thyroidology® for the Public

THYROID CANCER

Active surveillance may work for some larger thyroid cancers too

BACKGROUND

Thyroid cancer is common. Fortunately, the prognosis is excellent, and most patients do very well. Because of this, the management of thyroid cancer has changed significantly in recent years. Traditionally the thyroid gland was removed with surgery (total thyroidectomy) and then radioactive iodine treatment was used to destroy any remaining thyroid cancer cells. This approach often removed all the cancer but could cause side effects that were not necessary for every patient. There are several factors that are considered when thyroid cancer is diagnosed, such as size, location, presence of spread outside of the thyroid, or the cell type that makes the cancer. Based on these factors, some cancers are considered low risk. Studies showed that a significant number of low-risk papillary thyroid cancers grow slowly. Because of this, they may never cause health problems or shorten a person's life. As an alternative to surgery, some patients with low risk thyroid cancers can be followed with ultrasound and blood tests if there are no other concerning factors. Surgery can be done later if cancer grows or spreads. This is called active surveillance, and it became accepted management, initially for cancers less than 1 cm and more recently for some cancers measuring less than 1.5 cm. The patients did well over time and many never needed surgery.

The cancer size has been one of the main factors used to decide whether active surveillance is appropriate. It was assumed that larger cancers would be more likely to grow or spread, but this assumption has not been studied in detail. In this study, the researchers evaluated the safety and clinical outcomes of active surveillance in patients with papillary thyroid cancers measuring more than 1.5 cm.

THE FULL ARTICLE TITLE

Sanchez LP, et al. Active surveillance in papillary thyroid cancer with primary tumors greater than 1.5 cm. Head Neck. Epub 2026 Apr 16; doi: 10.1002/hed.70279. PMID: 41992678.

SUMMARY OF THE STUDY

Researchers at Memorial Sloan Kettering Cancer Center reviewed the records of 45 patients who had thyroid cancer completely inside the thyroid, between 1.6 and 2.9 cm, and were managed with active surveillance. The patients had a neck ultrasound every 6-12 months. The average follow-up was 50 months. Progression of the cancer was defined as a 3 mm or more increase in the longest measurement, more than 70% increase in volume, or newly found lymph nodes in the neck. They also looked at outcomes of patients who later had surgery due to progression.

Only 6 patients (13%) had significant increase in cancer volume, 5 (11%) had an increase in the longest diameter, and 5 (11%) had newly detected cancer spread to neck lymph nodes. Among these patients, 9 (20%) eventually had surgery. Patients who had delayed surgery had excellent outcomes — no cancer was left, cancer did not return and none of them died due to cancer. Cancers measuring 2 cm or more behaved very similarly to the cancers between 1.6-1.9 cm; there was no difference in how fast they grew, whether cancer appeared in lymph nodes, or whether they needed surgery.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study suggests that active surveillance can be a safe alternative to surgery in some carefully selected patients with thyroid cancers larger than 1.5 cm. Some cancers grew or spread to lymph nodes; however, this did not appear to be linked to the cancer size. Patients had similar outcomes whether they had larger or smaller cancers and patients who needed surgery later had excellent results. As a caution, this was a small study from a single, specialized cancer center, so larger studies with longer follow up

THYROID CANCER, continued

are needed before these findings can be applied widely. However, the results suggest that cancer size alone doesn't predict how a cancer will behave, and careful monitoring doesn't seem to lower the chance of a cure if surgery is needed later. Cancer size may still matter, but it shouldn't be the deciding factor when choosing between surgery and active surveillance.

— Ebru Sulanc, MD

ATA THYROID BROCHURE LINKS

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

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

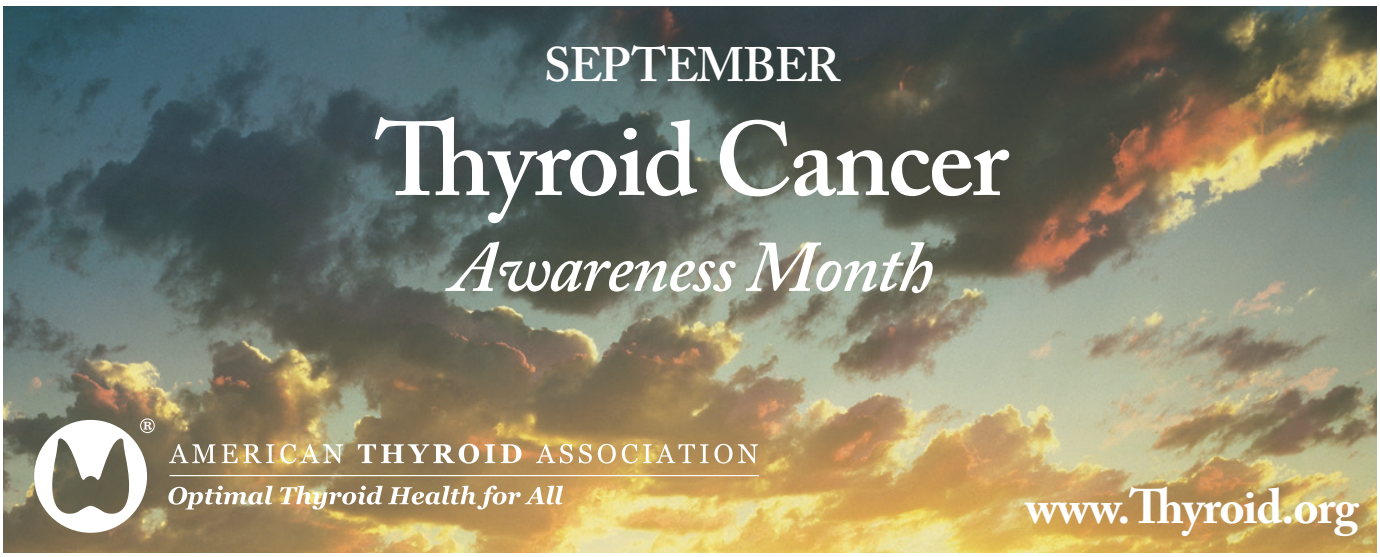
Radioactive Iodine Therapy: https://www.thyroid.org/radioactive-iodine/

ABBREVIATIONS & DEFINITIONS

Papillary thyroid cancer: the most common type of differentiated 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.

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



AMERICAN THYROID ASSOCIATION
Optimal Thyroid Health for All

Volume 19 | Issue 9 | September 2026

Clinical Thyroidology® for the Public

THYROID NODULES

Could my toxic nodule be cancer?

BACKGROUND

Thyroid nodules are common, occurring in up to 50% of individuals. The concern about any thyroid nodule is whether it is cancer. Overall, only ~5% of nodules are cancerous. An essential step in evaluating nodules is performing a thyroid ultrasound. The American College of Radiology Thyroid Imaging Reporting and Data System (ACR TI-RADS) classifies nodules on the basis of thyroid ultrasound. A thyroid biopsy is then recommended based on the ACR TI-RADS classification.

One exception to this is if the nodule(s) is/are active in producing thyroid hormone at high levels. This is known as a toxic nodule if there is a single nodule and a toxic multinodular goiter if there are multiple toxic nodules. A toxic nodule is usually diagnosed by a thyroid scan. The likelihood that a toxic nodule was also a cancer has been assumed to be extremely low. Indeed, current guidelines suggest that a biopsy to determine if a cancer is present is not needed if a nodule is overactive.

One concern about toxic nodules is that the ACR TI-RADS classification system to determine which nodules should be biopsied has not been extensively validated in toxic nodules. The present study aimed to evaluate the ACR TI-RADS classification system in toxic nodules and to determine how often cancer does occur in toxic nodules.

THE FULL ARTICLE TITLE

Koelliker E, et al. Sonographic and pathologic features of malignant hot thyroid nodules: a multi-institutional study. Surgery 2026;189:109710.

SUMMARY OF THE STUDY

This was a study conducted at five academic hospitals. Patients who underwent thyroid surgery between January 2017 and March 2024 with a diagnosis of hyperthyroidism due to toxic nodules were included. Toxic nodules were identified by thyroid scans. Nodules smaller than 1 cm and those without both an ultrasound and thyroid scan prior to surgery were excluded. Ultrasound features were recorded from radiology reports or by consensus review of images by two investigators and the nodules were characterized by ACR TI-RADS. Final diagnoses were based on surgical pathology.

A total of 257 patients with 323 toxic nodules were included. Overall, 11 nodules (3.4%) were cancer. Cancer was significantly more common in single toxic nodules than in toxic multinodular goiters (7.3% vs. 1.0%). Compared to benign hot nodules, cancerous hot nodules were more often solid (90.9% vs. 51.6%) and isoechoic or hyperechoic (81.8% vs. 48.4%) and had lobulated or irregular margins (27.3% vs. 2.9%). Although ACR TI-RADS classification did not differ significantly between groups, all cancerous toxic nodules met ACR TI-RADS criteria for biopsy. At least one high-risk pathology feature was present in all cancerous nodules.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study confirms that cancer occurring within a toxic nodule is rare and almost all of the cancers were in single toxic nodules. The cancers in toxic nodules were found to commonly exhibit aggressive, high-risk features. All of the toxic nodules containing cancer had ultrasound characteristics that were high risk by ACR TI-RADS criteria. These data suggest that toxic nodules with high risk ACR TI-RADS criteria should be biopsied prior to planned treatment.

— Alan P. Farwell, MD

THYROID NODULES, continued

ATA THYROID BROCHURE LINKS

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

Hyperthyroidism (Overactive): https://www.thyroid.org/hyperthyroidism/

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.

Toxic nodule: characterized by one overactive nodule or lump in the thyroid that may gradually grow and increase their activity so that the total output of thyroid hormone in the blood is greater than normal.

Toxic multinodular goiter: characterized by two or more overactive nodules or lumps in the hormone in the blood is greater than normal.

Hyperthyroidism: a condition where the thyroid gland is overactive and produces too much thyroid hormone. Hyperthyroidism may be treated with antithyroid meds (Methimazole, Propylthiouracil), radioactive iodine or surgery.

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.

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.

Thyroid scan: this imaging test uses a small amount of a radioactive substance, usually radioactive iodine, to obtain a picture of the thyroid gland. A "cold" nodule means that the nodule is not functioning normally. A patient with a "cold" nodule should have a fine needle aspiration biopsy of the nodule. A "functioning", or "hot", nodule means that the nodule is taking up radioactive iodine to a degree that is either similar to or greater than the uptake of normal cells. The likelihood of cancer in these nodules is very low and a biopsy is often not needed.

AMERICAN THYROID ASSOCIATION
Optimal Thyroid Health for All

Volume 19 | Issue 9 | September 2026

Clinical Thyroidology® for the Public

THYROID NODULES

Comparison of ultrasound risk stratification systems for cancer by thyroid nodule size

BACKGROUND

Thyroid nodules are very common. The concern about any thyroid nodules is whether it is a cancer. Fortunately, only ~5% are cancerous. Ultrasound is the best initial imaging test to evaluate thyroid nodules. An ultrasound-guided thyroid biopsy can then be performed to determine it the nodule is cancer or benogn (non-cancerous). In the last 10 years, several professional societies have developed cancer risk stratification systems (RSSs) for thyroid nodules based on their ultrasound appearance. These RSSs then can be used to guide the selection of nodules with a higher risk of cancer that then require biopsy. The currently used systems include the American Thyroid Association (ATA) system and the Thyroid Imaging Reporting and Data Systems (TIRADS): European (EU-TIRADS), Korean (K-TIRADS), American College of Radiology (ACR-TIRADS), and Chinese (C-TIRADS).

The multiple RSSs for thyroid nodules has created confusion and limited their consistent clinical application. To simplify this process, based on an international expert consensus, the International Thyroid Nodule Ultrasound Working Group recently published a standardized ultrasound vocabulary to be used when assessing the cancer risk of thyroid nodules. The aim of this study was to use the recent standardized ultrasound vocabulary proposed by the international expert consensus to compare the diagnostic performance of the 5 currently used RSSs for thyroid nodules.

THE FULL ARTICLE TITLE

Na DG et al et al. Diagnostic performance of five societies' ultrasound risk stratification systems for thyroid malignancy according to nodule size: a comparison using a standardized ultrasound lexicon. Thyroid 2026;36(4):408–419; doi: 10.1177/10507256261429117. PMID: 41789443.

SUMMARY OF THE STUDY

The study evaluated 3143 consecutive patients with 3774 thyroid nodules >1 cm who underwent US-guided biopsy at GangNeung Asan Hospital, Korea between March 2017 and October 2024. Most patients were women with an average age of 58. The ultrasound features of thyroid nodules were described using the new standardized ultrasound vocabulary. The cancer risk of the nodules was then calculated based on their ultrasound features and size for each system. The thyroid nodules were grouped into the same 4 categories for each system: high-suspicion, intermediate-suspicion, low-suspicion for cancer, and no-biopsy-indicated. The diagnostic performance was compared between the five RSSs according to nodule size (≤2 cm versus >2 cm).

Significant differences were found among the five RSSs regarding the thyroid nodule classification into the four risk categories, cancer risk prediction, and correct cancer diagnosis across categories. The agreement across these systems for the ultrasound classification of nodules varied significantly. The highest agreement was noted between the K-TIRADS and ATA system for the high-suspicion (41%), intermediate-suspicion (45%), and low-suspicion (49%) categories. The proportion of nodules classified as being highly suspicious for cancer was highest in the EU-TIRADS (46%) with the highest risk of cancer noted in the K-TIRADS (71%) for this category. The proportion of low-suspicion nodules was highest in the ATA system (46%) with the highest risk of malignancy in the C-TIRADS (11%). The proportion of nodules diagnosed as cancerous was highest in the EU-TIRADS (82%) for the high-suspicion group, highest in the K-TIRADS (32.5%) for the intermediate-suspicion group, and highest in the C-TIRADS (20%) in the low-suspicion group.

The ATA system and EU-TIRADS showed higher rate of identifying cancer but also had higher benign biopsy rate for both small (≤2 cm) and large nodules (>2 cm), whereas ACR-TIRADS had both a lower rate of identifying cancer and a lower benign biopsy rate across both size groups. K-TIRADS demonstrated the lowest rate of identifying cancer and rate of benign biopsies for small nodules, but

THYROID NODULES, continued

a high benign rate for large nodules. C-TIRADS showed a low rate of identifying cancer for both size groups, but a significantly higher rate of benign biopsies than ACR-TIRADS in the large nodule group.

Most missed cancers were from the intermediate-suspicion group in the EU-TIRADS, K-TIRADS, and ACR-TIRADS, from the low-suspicion group in the ATA system and from the no-biopsy-indicated group in the C-TIRADS. For small nodules, benign biopsies were most frequent in the high-suspicion group for the EU-TIRADS, and intermediate-suspicion group in the ATA system, K-TIRADS, ACR-TIRADS, and C-TIRADS. For large nodules, benign biopsies were most frequent in the low-suspicion group for the ATA system, EU-TIRADS, K-TIRADS, and C-TIRADS, and in the intermediate-suspicion group in the ACR-TIRADS.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Comparison using the same standardized ultrasound vocabulary showed that the 5 currently used ultrasound-based cancer risk stratification systems for thyroid nodules had significant differences in nodule risk classification and diagnostic performance, depending on the nodule size. These differences were mainly driven by variations in ultrasound criteria and nodule size thresholds used for biopsy by each system. The study results emphasize the importance of developing a unified, standardized ultrasound-based risk stratification system for cancer in thyroid nodules.

— Alina Gavrila, MD, MMSC
Elie Naous, MD

ATA THYROID BROCHURE LINKS

Fine Needle Aspiration Biopsy of Thyroid Nodules: https://www.thyroid.org/fna-thyroid-nodules/
Thyroid Nodules: https://www.thyroid.org/thyroid-nodules/

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 (malignant).

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.

Fine needle aspiration/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.

AMERICAN THYROID ASSOCIATION
Optimal Thyroid Health for All

Volume 19 | Issue 9 | September 2026

Clinical Thyroidology® for the Public

THYROID CANCER

Should I take extra thyroid hormone for my thyroid cancer?

BACKGROUND

Thyroid cancer is common. Fortunately, most people do well and the prognosis is excellent. Most patients are treated with thyroid surgery, after which they need to take thyroid hormone pills. For patients with a low risk of thyroid cancer returning (cancer recurrence), thyroid hormone pills were usually adjusted to keep TSH levels in the normal range.

For many years, thyroid cancer patients that were at intermediate or high risk of thyroid cancer recurrence were treated with extra thyroid hormone to get their TSH levels below the normal range. The theory behind the practice of prescribing extra thyroid hormone to decrease TSH levels was that TSH levels that were normal or slightly high would cause any remaining cancer cells to grow. Indeed, the 2015 American Thyroid Association thyroid cancer guidelines recommended to keep the TSH goal <0.1 for cancers that were high risk of recurrence and 0.1-0.5 for cancers that were intermediate risk of recurrence. However, more recent studies have investigated whether giving extra thyroid hormone to keep the TSH below normal improves thyroid cancer patients' lifespan.

The goal of this study is to examine the effect of extra thyroid hormone on the lifespan of thyroid cancer patients at intermediate and high risk of recurrence, as well as the bad effects of giving extra thyroid hormone replacement.

THE FULL ARTICLE TITLE

Gubbi S, et al. The effect of thyrotropin suppression on survival outcomes in patients with differentiated thyroid cancer: a systematic review and meta-analysis. Thyroid 2024;34(6):674–686.

SUMMARY OF THE STUDY

Adults above the age of 18 who had intermediate and high risk of recurrence thyroid cancer were followed for 5-40 years after their diagnoses depending on the research project. In the nine research projects that were studied between 1996-2019, patients were given extra thyroid hormone to lower the TSH according to the 2015 American Thyroid Association guidelines for thyroid cancer. Patients whose TSH levels were kept below the normal range (any value below 0.5 mIU/L) were compared to those patients whose TSH levels were kept normal (above mIU/L) with levothyroxine.

When more than 3,500 patients were studied, the lifespan and time without any worsening of the thyroid cancer were not different between patients with a low TSH and those with a normal TSH. When 1,294 patients were studied through two studies, there was a higher chance of having a heart or bone problem in patients who had a low TSH.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study shows that there is no better disease control or life span improvement when extra thyroid hormone supplementation is given to patients who have intermediate and high risk of recurrence thyroid cancers. There can be heart and bone damage from taking too much thyroid hormone. Therefore, the 2025 American Thyroid Association Thyroid Cancer guidelines support TSH goals that are mostly normal depending on the patient's response to their thyroid cancer therapy. In addition, TSH goals are re-evaluated depending on if the patient's response to therapy changes based on labs and imaging. These data suggest that unless a patient has distant spread of the thyroid cancer to the lungs or bones, keeping the TSH level normal might be more beneficial.

— Pinar Smith, MD

THYROID CANCER, continued

ATA THYROID BROCHURE LINKS

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

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

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 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.

Pituitary gland: this endocrine gland sits at the base of the brain and secretes hormones that control thyroid and adrenal function, growth and reproduction. The pituitary gland secretes TSH to control thyroid function.

Cancer metastasis: spread of the cancer from the initial organ where it developed to other organs, such as the lungs and bone.

AMERICAN THYROID ASSOCIATION
Optimal Thyroid Health for All

Volume 19 | Issue 9 | September 2026

Clinical Thyroidology® for the Public

THYROID SURGERY

Routine versus selective calcium supplementation after thyroidectomy

BACKGROUND

Calcium levels in the body are controlled by parathyroid hormone (PTH), which is produced by the parathyroid glands. There are 4 parathyroid glands and they are located next to the thyroid, usually 2 glands on each side. One of the potential complications of a total thyroidectomy is bruising of the parathyroid glands, causing them to not work well after the operation. This can lead low calcium levels. Postoperative hypocalcemia (or low calcium levels) following thyroidectomy is a common complication that can be seen transiently in up to 30% of cases. This is very rare after a lobectomy, since 2 of the parathyroid glands on the opposite side will not be affected. Fortunately, permanent parathyroid damage and hypocalcemia is very rare. Postoperative hypocalcemia is typically managed with calcium supplementation with or without calcitriol (an active form of vitamin D). Parathyroid function is usually restored in days to weeks after the operation.

The approach to the management of postoperative hypocalcemia varies depending on the surgical team or hospital. Some providers may choose to routinely start calcium supplementation for all patients following thyroid surgery, while others may selectively recommend calcium supplementation based on postoperative parathyroid hormone levels measured on blood work.

This study is a randomized controlled trial comparing the clinical outcomes of routine versus selective calcium supplementation following thyroid surgery.

THE FULL ARTICLE TITLE

Garcia-Lozano C et al. Routine vs selective calcium supplementation after total thyroidectomy: a randomized clinical trial. JAMA Otolaryngol Head Neck Surg 2026;152(4):392–399; doi: 10.1001/jamaoto.2025.5514. PMID: 41712216.

SUMMARY OF THE STUDY

The study looks at patients who underwent a total or completion thyroidectomy (removal of the 2nd lobe after a prior lobectomy). Participants in the study either received calcium carbonate (1200 mg every eight hours) with calcitriol (0.25 mcg every 12 hours) routinely for two weeks after surgery (routine supplementation group with 141 participants) or received the calcium carbonate and calcitriol if the parathyroid hormone level measured four hours after surgery was low (less than 15 pg/ml) (selective supplementation group with 117 participants).

In the selective supplementation group, 50 patients (42.7%) had low postoperative parathyroid hormone levels and were started on calcium supplementation. As a result, postoperative calcium supplementation was required less often in the selective supplementation group compared to the routine supplementation group.

There was no difference in the rate of symptomatic hypocalcemia in the two groups – 7.8% in the selective supplementation group versus 11.1% in the routine supplementation group. Similarly, there was no difference in the occurrence of biochemical hypocalcemia in the two groups – 21.6% in the selective supplementation group versus 17.6% in the routine supplementation group.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

In patients who undergo thyroidectomy, both approaches of routine and selective calcium supplementation for the management of potential hypocalcemia demonstrated similar effectiveness. Individual hospitals may choose a specific strategy based on factors such as the cost of testing and the patient population they serve.

— Poorani Goundan, MD

THYROID SURGERY, continued

ATA THYROID BROCHURE LINKS

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

ABBREVIATIONS & DEFINITIONS

Total thyroidectomy: surgery to remove the entire thyroid gland.

Completion thyroidectomy: surgery to remove the remaining thyroid lobe in thyroid cancer patients who initially had a lobectomy.

Hypocalcemia: low calcium levels in the blood, a complication from thyroid surgery that is usually short-term and relatively easily treated with calcium pills. If left untreated, low calcium may be associated with muscle twitching or cramping and, if severe, can cause seizures and/or heart problems.

Parathyroid glands: usually four small glands located around the thyroid that secrete parathyroid hormone (PTH) which regulates the body's calcium levels.

Parathyroid hormone (PTH): the hormone that regulates the body's calcium levels. High levels of PTH cause hypercalcemia, or too much calcium in the blood. Low levels of PTH cause hypocalcemia, or too little calcium in the blood.

Calcitriol: active form of Vitamin D that acts rapidly and is the preferred form of Vitamin D for treatment of postoperative hypocalcemia.

AMERICAN THYROID ASSOCIATION
Optimal Thyroid Health for All

Volume 19 | Issue 9 | September 2026

Clinical Thyroidology® for the Public

HYPOTHYROIDISM

Thyroid disease and liver function

BACKGROUND

Hypothyroidism, or underactive thyroid, is common. Thyroid hormone, usually levothyroxine, is used to treat hypothyroidism. Thyroid hormones play an important role in metabolism, which is how the body produces and stores energy. The liver is a major organ that is involved in producing and storing energy. Thyroid hormone also has effects on liver function. As a result, diseases that impact the thyroid gland such as hypo or hyperthyroidism can contribute to the development of liver problems.

A major liver problem is metabolic dysfunction-associated steatotic liver disease (MASLD). This is a condition where excess fat builds up in the liver and is associated with diabetes, high blood pressure, high cholesterol and obesity. MASLD affects ~30% of people worldwide and has emerged as the most common cause of chronic liver disease, including cirrhosis and liver cancer. Studies have shown a strong association between MASLD and hypothyroidism. This study examines the association between hypothyroidism and the risk of cirrhosis and liver cancer in a group of patients with MASLD.

THE FULL ARTICLE TITLE

Jin X et al. Hypothyroidism and the risk of liver-related events in patients with metabolic dysfunction-associated steatotic liver disease. Clin Mol Hepatol 2026;32(1):353–367; doi: 10.3350/cmh.2025.0860. PMID: 41321024

SUMMARY OF THE STUDY

This study was conducted in Hong Kong, China. The medical records of a group of patients with MASLD treated between the years 2000 and 2024 were reviewed. Patients in this group with hypothyroidism were identified and thyroid function tests were measured both at baseline and follow-up. The liver-related events that were studied included liver cancer, cirrhosis or liver related death.

A total of 20,478 patients were studied. Hypothyroidism was associated with higher risk of cirrhosis. When hypothyroidism was divided by severity, overt hypothyroidism remained significantly associated with cirrhosis, while subclinical hypothyroidism was not. Compared with patients with normal TSH levels, those with high TSH levels had a 2.49-fold increased risk of developing cirrhosis or liver cancer.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study shows that hypothyroidism is linked with high risk of liver problems, including cirrhosis and liver cancer, in patients who had a diagnosis of MASLD. These data suggest that patients with MASLD should be followed with thyroid function testing to identify these high-risk patients. Further studies are needed to determine how these patients can best be treated to decrease this risk.

—Vibhavasu Sharma,MD, FACE

ATA THYROID BROCHURE LINKS

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

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

Thyroid Function Tests: https://www.thyroid.org/thyroid-function-tests/

All patients with overt hypothyroidism are usually treated with thyroid hormone pills.

HYPOTHYROIDISM, continued

ABBREVIATIONS & DEFINITIONS

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

Subclinical Hypothyroidism: a mild form of hypothyroidism where the only abnormal hormone level is an increased TSH. There is controversy as to whether this should be treated or not.

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.

AMERICAN THYROID ASSOCIATION
Optimal Thyroid Health for All

Volume 19 | Issue 9 | September 2026

Clinical Thyroidology® for the Public

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.

ATA® *Optimal Thyroid Health for All*

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!

Thyroid Federation International

American Thyroid Association®
www.thyroid.org
ATA® Patient Resources:
www.thyroid.org/thyroid-information/
Find a Thyroid Specialist: www.thyroid.org
(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

AMERICAN THYROID ASSOCIATION
ATA | *Founded 1923*

Friends of the ATA

FOUNDED 2005

Get the latest thyroid health information. You'll be among the first to know the latest cutting-edge thyroid research that is important to you and your family.

Become a Friend of the ATA!
Subscribe to *Friends of the ATA e-news*

By subscribing to *Friends of the ATA Newsletter*, you will receive:

- ✔ *Friends of the ATA e-news*, providing up-to-date information on thyroid issues, summaries of recently published articles from the medical literature that covers the broad spectrum of thyroid disorders, and invitations to upcoming patient events
- ✔ Updates on the latest patient resources through the ATA® website and elsewhere on the world wide web
- ✔ Special e-mail alerts about thyroid topics of special interest to you and your family

We will use your email address to send you *Friends of the ATA e-news* and occasional email updates. We won't share your email address with anyone, and you can unsubscribe at any time.

www.thyroid.org