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Evaluating the challenges to thyroid cancer care in rural areas

People who live in rural areas of the United States and Canada, generally receive less health care, including both general and specialized care, than people living in urban (city) settings. The authors of the study presented here seek to understand the challenges for surgeons who work in rural settings in providing thyroid cancer care to people living in rural areas. In so doing, they hope to better understand why such people are less likely to receive care for thyroid cancer, and why, when care is received, this happens later in the course of disease compared to people living in cities.

Huston-Paterson HH et al. Closing the distance: a qualitative study to identify equitable innovations for rural thyroid cancer treatment. Am Surg. Epub 2024 Dec

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Does radioactive iodine therapy for Graves' disease increase the risk for thyroid cancer? While studies have demonstrated a link between radioactive iodine therapy treatment for thyroid cancer and a slight increased long-term risk for other cancers in the body, a much lower dose of radioactive iodine therapy is used in the treatment of Graves' disease. A few studies have looked at the association between radioactive iodine therapy for hyperthyroidism and long-term cancer risk and the results are variable. This study specifically reviews the risk of identifying thyroid cancer in patients with Graves' disease who underwent thyroid surgery and compares the data between patients who previously received radioactive iodine therapy and those who did not.

Ramesh S, et al. Malignancy risk associated with radioactive iodine therapy for Graves' disease. Am J Surg 2024;241:116075; doi: 10.1016/j.amjsurg.2024.116075. PMID: 39546855.

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What is the effect of age on the frequency of subclinical hypothyroidism?

Subclinical hypothyroidism is present in 19.09% of the population over the age of 70 years. It is unclear if this represents a disease that should be treated or a variant related to normal aging. In this study, the authors examined the changes in thyroid function and thyroid antibodies in the older population, and whether it affects the diagnosis of thyroid disease.

Razvi SS et al. Changes in thyroid function and autoimmunity in older individuals: longitudinal analysis of the Whickham cohort. J Clin Endocrinol Metab. Epub 2024 Dec 14:dgae875; doi: 10.1210/clinem/dgae875. PMID: 39673773.

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Why do we keep thyroid hormone going when it might be time to stop?

Levothyroxine is the 4th most prescribed medication in the United States. While most patients on thyroid hormone have hypothyroidism, many prescriptions appear to be written for individuals without strong indications for therapy. Deprescribing means stopping or lowering a medication when it might no longer be needed or could even cause harm. The researchers wanted to find out why doctors don't always discuss deprescribing levothyroxine with older patients and what helps them when they do.

Moretti B, et al. Physician-reported barriers and facilitators to thyroid hormone deprescribing in older adults. J Am Geriatr Soc. Epub 2024 Oct 11; doi: 10.1111/jgs.19219. PMID: 39392046.

THYROID CANCER.....II

Is it safe to do a smaller surgery for thyroid cancer by only removing part of the thyroid and nearby lymph nodes?

Thyroid cancer is common has an excellent prognosis because we have very effective therapy, starting with thyroid surgery. This study looked at people with papillary thyroid carcinoma that had spread a little to nearby lymph nodes on one side of the neck. They determined whether a lobectomy with limited lymph node dissection was safe to perform as compared to a total thyroidectomy.

Saito Y, et al. Lobectomy vs total thyroidectomy with ipsilateral lateral neck dissection for n1b intermediate-risk papillary thyroid carcinoma. JAMA Otolaryngol Head Neck Surg. Epub 2024 Nov 27; doi: 10.1001/jamaoto.2024.3860. PMID: 39602155.

HYPERTHYROIDISM**13** Radiofrequency ablation for "hot" thyroid nodules.

Radiofrequency ablation (RFA) is a technique whereby radiofrequency electrical currents are applied to tissue to cause tissue destruction. In the case of overactive ("hot") thyroid nodules, radiofrequency current is applied to the nodule to cause nodule tissue destruction resulting in nodule shrinkage and resolution of hyperthyroidism. This study examined the safety and efficacy of radiofrequency ablation in hyperthyroid patients with a single overactive thyroid nodule.

Dueñas JP et al. Radiofrequency ablation for solitary autonomously functioning thyroid nodules: multicenter study from Latin America. Thyroid. Epub 2024 Dec 19; doi:10.1089/ thy.2024.0338. PMID: 39699644

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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 <u>@thyroidfriends</u> and on <u>Facebook</u>. 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: <u>www.thyroid.org/donate</u> and all donations are put to good work. The ATA[®] is a 501(c)3 nonprofit organization and your gift is tax deductible.

May is International Thyroid Awareness Month.

In this issue, the studies ask the following questions:

- What are the challenges to providing thyroid cancer care in rural areas?
- Does radioactive iodine therapy for Graves' disease increase the risk for thyroid cancer?
- What is the effect of age on the frequency of subclinical hypothyroidism?
- Why do we keep thyroid hormone going when it might be time to stop?
- Is it safe to do a smaller surgery for thyroid cancer?
- Can hyperthyroidism cause by an overactive thyroid nodule be treated with RFA?

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

THYROID CANCER

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Evaluating the challenges to thyroid cancer care in rural areas

BACKGROUND

Medical care in the United States and Canada is not equal for all people. The ability of a person to see, or their willingness to see, a health care provider depends on a wide range of factors, including a person's social, economic, cultural and religious background. Many studies also demonstrate that a person's access to, and/or willingness to pursue, medical care depends on where they live. People who live in rural areas of the United States and Canada, for example, generally receive less health care, including both general and specialized care, than people living in urban (city) settings. This means that for people living in rural areas, disease is identified and treated later than it is for people living in urban settings. For these reasons, people living in rural areas tend to be diagnosed at more advanced stages of disease, making them more ill and less likely to survive disease, compared to people living in cities with the same diagnosis. This is true for many kinds of disease, including thyroid cancer, which requires surgery for treatment.

The authors of the study presented here seek to understand the challenges for surgeons who work in rural settings in providing thyroid cancer care to people living in rural areas of the United States and Canada. In so doing, they hope to better understand why such people are less likely to receive care for thyroid cancer, and why, when care is received, this happens later in the course of disease compared to people living in cities.

FULL ARTICLE TITLE

Huston-Paterson HH et al. Closing the distance: a qualitative study to identify equitable innovations for rural thyroid cancer treatment. Am Surg. Epub 2024 Dec

SUMMARY OF THE STUDY

The study authors interviewed 13 surgeons (6 women and 7 men) trained in general surgery, all of whom work in rural areas across the United States or Canada. This was done by telephone call, video conference and/or in person visit. The interviews focused on all aspects of thyroid cancer care, including initial diagnosis, treatment and survivorship after treatment. For each aspect of thyroid cancer care, interviews included questions focusing on the availability of resources for care, the presence of deficiencies that might impact care and how care might be improved.

When the authors analyzed the results of their surgeon interviews, they identified four areas that might negatively impact the ability of people living in rural areas to receive thyroid cancer care:

- 1. The interest and ability (expertise) of the local surgeon to treat thyroid cancer
- 2. Feelings of isolation on the part of local surgeons (absence of other health care providers like them) when providing thyroid cancer care
- 3. The absence of key local non-surgeon specialists also needed for thyroid cancer care (specifically endocrinologists)
- 4. The preference of people living in rural areas to avoid traveling away from home to pursue thyroid cancer treatment

The interviewed surgeons expressed need for more communication and collaboration among health care providers caring for people diagnosed with thyroid cancer, including increased support from major health care institutions in their regions. The authors also learned that thyroid cancer care in rural areas was negatively impacted by the need for family support at home, the need to meet family responsibilities, the negative impact of travel for medical care on job responsibilities/employment and the increased cost associated with traveling away from home for health care.

In light of their findings, the authors of this study suggest that thyroid cancer care for people living in rural areas could be improved in several ways. These include

THYROID CANCER, continued

increasing the availability of, and access to, endocrinologists (specialists with particular expertise in thyroid disease) in rural areas, providing education related to thyroid cancer care to rural health care providers treating thyroid cancer, and developing expanded methods for communication and partnership among health care providers treating thyroid cancer in rural settings.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This work adds to our understanding of why people living in rural areas are less likely to pursue and/or receive thyroid cancer care (and, by extension, health care in general) than are people living in city settings. The interviewed surgeons revealed clear reasons why thyroid cancer care is more difficult in rural areas than in cities, including decreased availability of colleagues to assist with X 👎 in 🖸 🧿

care (including endocrinologists) and decreased ability to communicate with, and receive assistance from, regional health care centers having more treatment resources. This study does focus on a small number of general surgeons, who may not play a comprehensive role in thyroid cancer treatment in general, rather than including other important types of care providers, including nurse practitioners, physician's assistants, community health workers, head and neck surgeons and social workers. This study also involved relatively few geographic locations, making its findings somewhat limited relative to how much they represent the general state of thyroid cancer care in rural America and in rural Canada. Nonetheless, this study provides the groundwork for more comprehensive research exploring the challenges of treating thyroid cancer in rural settings.

— Jason D. Prescott, MD PhD

ATA RESOURCES

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

ABBREVIATIONS & DEFINITIONS

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).

Clinical Thyroidology® for the Public (from recent articles in Clinical Thyroidology)

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GRAVES' DISEASE



Does radioactive iodine therapy for Graves' disease increase the risk for thyroid cancer?

BACKGROUND

Graves' disease is the most common cause of hyperthyroidism in the United States. It can be treated with antithyroid medication, radioactive iodine therapy or thyroidectomy (thyroid surgery). For many years, radioactive iodine therapy was the most common treatment for Graves' disease in the United States. It works because the thyroid is the only tissue in the body that takes up and concentrates iodine within the gland. When iodine is radioactive with a certain isotope (I131), the radiation destroys thyroid cells, shrinking the size of the thyroid and often results in permanent hypothyroidism. Radioactive iodine therapy is also used to treat thyroid cancer.

Whenever radiation is involved, there is a concern that it may increase the risk of cancer in the cells that are exposed to the radiation but were not killed off. Indeed, studies have demonstrated a link between radioactive iodine therapy treatment for thyroid cancer and a slight increased long-term risk for other cancers in the body. However, a much lower dose of radioactive iodine therapy is used in the treatment of Graves' disease. A few studies have looked at the association between radioactive iodine therapy for hyperthyroidism and long-term cancer risk and the results are variable.

This study specifically reviews the risk of identifying thyroid cancer in patients with Graves' disease who underwent thyroid surgery and compares the data between patients who previously received radioactive iodine therapy and those who did not.

THE FULL ARTICLE TITLE

Ramesh S, et al. Malignancy risk associated with radioactive iodine therapy for Graves' disease. Am J Surg 2024;241:116075; doi: 10.1016/j.amjsurg.2024.116075. PMID: 39546855.

SUMMARY OF THE STUDY

Researchers reviewed data from the charts of 413 patients with Graves' disease who had undergone thyroid surgery. Overall, 38 patients had received radioactive iodine therapy prior to surgery (treated group) and 375 had not (non-treated group). The reason for surgery was more likely to be for the management of a thyroid nodule or cancer in the treated group (37% and 13% respectively) compared to the non-treated group (12% and 9% respectively).

Both groups had a similar number of thyroid nodules seen prior to surgery. Following surgery, after looking at the thyroid gland under the microscope, there was a similar rate of cancer seen in both groups. The size of the thyroid cancer in the treated group tended to be larger than the thyroid cancer seen in the non-treated group (1.65 vs 0.7 cm)

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study shows that patients with Graves' disease who were treated with radioactive iodine therapy and subsequently underwent thyroid surgery had a similar rate of thyroid cancer seen on the surgical specimen compared to those who did not undergo prior radioactive iodine therapy. Thus, it appears that radioactive iodine therapy for Graves' disease does not increase the risk for thyroid cancer. However, the study does not include a comparison with patients who received radioactive iodine therapy and did not require surgery and therefore does not provide information about the risk of thyroid cancer in all patients with Graves' disease who were treated with radioactive iodine therapy. Further research is required to help evaluate the question about the risk for thyroid cancer related to radioactive iodine therapy for hyperthyroidism. — Poorani Goundan, MD

GRAVES' DISEASE, continued



ATA RESOURCES

Graves' Disease: <u>https://www.thyroid.org/graves-disease/</u> Radioactive Iodine Therapy: <u>https://www.thyroid.org/radioactive-iodine/</u> Hyperthyroidism (Overactive): <u>https://www.thyroid.org/hyperthyroidism/</u>

ABBREVIATIONS & DEFINITIONS

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.

Graves' disease: the most common cause of hyperthyroidism in the United States. It is caused by antibodies that attack the thyroid and turn it on.

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*.

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-I3I is the destructive form used to destroy thyroid tissue in the treatment of thyroid cancer and with an overactive thyroid. I-I23 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*).

HYPOTHYROIDISM



What is the effect of age on the frequency of subclinical hypothyroidism?

BACKGROUND

Hypothyroidism is common. Overt hypothyroidism is diagnosed with an increased TSH and a low FT4 and is treated with thyroid hormone therapy, usually levothyroxine. The most common cause of overt hypothyroidism in the United Stated is autoimmune thyroid disease, where the body produces antibodies that attack and destroy the thyroid. Subclinical hypothyroidism is diagnosed with an increased TSH and normal FT4 and treatment with thyroid hormone is less clear and often controversial.

Thyroid levels vary with age, and several studies have shown that a large majority of people over 80 years old have a TSH above 7 mIU/L, which is mildly increased based on the standard TSH reference range. Further, subclinical hypothyroidism is present in 19.09% of the population over the age of 70 years. It is unclear if this represents a disease that should be treated or a variant related to normal aging. Thus, it is debated whether a more specific age reference range TSH should be used for the older population. Besides, the immune responses change with aging, and the levels of thyroid antibodies may also. In this study, the authors examined the changes in thyroid function and thyroid antibodies in the older population, and whether it affects the diagnosis of thyroid disease.

THE FULL ARTICLE TITLE

Razvi SS et al. Changes in thyroid function and autoimmunity in older individuals: longitudinal analysis of the Whickham cohort. J Clin Endocrinol Metab. Epub 2024 Dec 14:dgae875; doi: 10.1210/clinem/dgae875. PMID: 39673773.

SUMMARY OF THE STUDY

The Whickham cohort is a random population of individuals living in Whickham, England, who have been followed over many years to study development of disease. In particular, thyroid hormone levels have been followed in this group over the years. Of 1704 survivors of the Whickham cohort, a total of 204 remained for the study after attending a baseline visit between 2008 and 2012 and a follow-up visit between 2016 and 2019. Thyroid function levels were assessed as the change in TSH, FT4, and FT3 levels between baseline and follow-up values.

The average age of the individuals was 77.0 and 55.9% were female. The follow-up average was 7.8 years. The results showed that the serum TSH concentration increased from 1.94 mIU/L to 2.18 mIU/L over this time period, while FT4 remained similar and FT3 concentration decreased slightly. At the beginning of the study, 3.5% of patients were diagnosed with subclinical hypothyroidism. Throughout 7.8 years of follow-up, patients with subclinical hypothyroidism increased to 9.0% when using standard TSH reference ranges (0.3–4.5 mU/L), but it decreased to 2% when using the visit-specific reference ranges (0.54–6.28 mU/L). Thyroid antibodies also decreased significantly over the period of time.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study shows that TSH levels increase and thyroid antibodies decrease with aging. Therefore, it is important to develop and use more age-appropriate TSH reference ranges to avoid overdiagnosis and overtreatment of hypothyroidism in older adults.

— Joanna Miragaya, MD

ATA RESOURCES

Hypothyroidism (Underactive): <u>https://www.thyroid.org/hypothyroidism/</u> Older Patients and Thyroid Disease: <u>https://www.thyroid.org/thyroid-disease-older-patient/</u>

HYPOTHYROIDISM, continued



ABBREVIATIONS & DEFINITIONS

Autoimmune thyroid disease: a group of disorders that are caused by antibodies that get confused and attack the thyroid. These antibodies can either turn on the thyroid (Graves' disease, hyperthyroidism) or turn it off (Hashimoto's thyroiditis, hypothyroidism).

TPO 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.

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.

Thyroxine (T4): the major hormone produced by the thyroid gland. T4 gets converted to the active hormone T3 in various tissues in the body.

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.

HYPOTHYROIDISM

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Why do we keep thyroid hormone going when it might be time to stop?

BACKGROUND

Levothyroxine is one of the most prescribed medications, currently the 4th most prescribed medication in the United States. The most common reason for prescribing levothyroxine is hypothyroidism, which happens when the thyroid gland does not make enough thyroid hormone. More people have started taking thyroid hormones in recent years, possibly because mild or unclear thyroid problems are treated more often. However, many prescriptions appear to be written for individuals without strong indications for therapy. For example, some reasons thyroid hormone has been prescribed in the past are no longer indicated, such as for suppression of thyroid nodules (subsequently shown to be not helpful) or for treating fatigue or promoting weight loss with normal thyroid hormone levels. While most forms of hypothyroidism require lifelong treatment, there are some types of hypothyroidism that resolve on their own, such as some forms of thyroiditis. Finally, even when indicated, many patients are overtreated, which can cause heart problems, weaker bones, and anxiety, especially in older people.

Deprescribing is a medical practice that began in older adult care. It means stopping or lowering a medication when it might no longer be needed or could even cause harm. It's always done under a doctor's guidance. For thyroid hormone, this means checking if the medication is still needed, and if not, lowering the dose carefully. However, there are no clear recommendations on how and when to do this, and many doctors may not feel comfortable bringing it up.

The researchers wanted to find out why doctors don't always discuss this option with older patients and what helps them when they do.

THE FULL ARTICLE TITLE

Moretti B, et al. Physician-reported barriers and facilitators to thyroid hormone deprescribing in older adults. J Am Geriatr Soc. Epub 2024 Oct 11; doi: 10.1111/ jgs.19219. PMID: 39392046.

SUMMARY OF THE STUDY

The researchers interviewed 19 doctors from different parts of the US, including 6 in primary care, 5 in geriatrics, and 8 in endocrinology. All of them had treated at least 10 patients aged 65 or older with thyroid hormone in the past year. Most of the doctors were women (12, 63%) and practiced in the Midwest (14, 74%).

The doctors gave several reasons for not talking about stopping the thyroid medicine with their patients. The main reason was that patients themselves didn't want to stop. Some felt they needed it to feel better, feared feeling worse if the dose was decreased, or didn't understand why the doctor wanted to stop it. Some patients had heard wrong or confusing information about stopping thyroid pills. Doctors were also worried about upsetting or worrying their patients. Many said the visits were too short to have detailed conversations. Some didn't feel confident about how to stop the medicine safely. Other challenges included difficulty keeping track of changes if follow-up wasn't easy, and many said electronic medical records made the process more complicated to manage.

The doctors were more likely to deprescribe if the patient had recently started the medicine, had other health problems that made the medication riskier, or if the dose was low. They also felt more comfortable when they had support, like better information and more time, and when their patients had good information and were open to talking. Trust and good doctor-patient communication made these talks easier.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study showed that many doctors hesitate to deprescribe thyroid hormone in older adults. They worry about upsetting the patient, often don't have enough time,



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HYPOTHYROIDISM, continued

and lack clear guidance on how to do it safely. However, they were more open to the idea when they had a trusting relationship with the patient and felt supported with clear steps and follow-up. Even though the study was small and included doctors mostly from one region, it raises important questions and helps bring more attention to this issue. Future guidelines can help address some of the key points. This study is especially important for older adults who take thyroid hormone. It is a reminder to talk with their doctor about their medication. Sometimes, stopping or lowering the dose can be healthier, but should always be done together and with careful guidance from their care team.

— Ebru Sulanc, MD

ATA RESOURCES

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

ABBREVIATIONS & DEFINITIONS

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

Levothyroxine (T4): the major hormone produced by the thyroid gland and available in pill form as Synthroid[™], Levoxyl[™], Tyrosint[™] and generic preparations. Thyroid hormone therapy: patients with hypothyroidism are most often treated with Levothyroxine 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.

THYROID CANCER



Is it safe to do a smaller surgery for thyroid cancer by only removing part of the thyroid and nearby lymph nodes?

BACKGROUND

Thyroid cancer is common. Fortunately, thyroid cancer has an excellent prognosis because we have very effective therapy, starting with thyroid surgery. The standard surgery for thyroid cancer used to be removal of the entire thyroid (total thyroidectomy). However, in the last 10 years, we have become better at imaging the thyroid and lymph nodes prior to surgery and have learned more how to identify the less aggressive cancers, so surgeons have been doing less aggressive surgery for thyroid cancer. For smaller and lower-risk cancers, they often just remove part of the thyroid, called a lobectomy. This type of surgery helps patients because they are less likely to need thyroid medicine after surgery and are less likely to have problems like voice changes or low calcium levels. However, when only part of the thyroid is removed, the cancer is a little more likely to come back in the part that was left behind. It's also harder to find cancer that has spread far away because some special tests don't work as well.

This study looked at people with a type of thyroid cancer called papillary thyroid carcinoma that had spread a little to nearby lymph nodes on one side of the neck. They determined whether a lobectomy with limited lymph node dissection was safe to perform as compared to a total thyroidectomy.

THE FULL ARTICLE TITLE:

Saito Y, et al. Lobectomy vs total thyroidectomy with ipsilateral lateral neck dissection for n1b intermediaterisk papillary thyroid carcinoma. JAMA Otolaryngol Head Neck Surg. Epub 2024 Nov 27; doi: 10.1001/ jamaoto.2024.3860. PMID: 39602155.

SUMMARY OF THE STUDY

Researchers in Japan studied patients with papillary cancer who had surgery between 2005 and 2012. There were 401 patients included (244 had total thyroidectomy, 157 lobectomy), with an average age of 47 years; 21% were male, and the average cancer size was 19 mm. In the lobectomy group, more than one cancer within the thyroid was found in 20% (vs 32% of the total thyroid-ectomy group) and spread to lymph nodes was noted on 44% (vs. 50%).

WHAT THEY FOUND:

- Survival rates were almost the same whether patients had a total thyroidectomy or just a lobectomy.
- The chance of the cancer coming back was slightly higher for patients who had a lobectomy, but most cancer recurrences happened in the part of the thyroid that was not removed — and these could usually be treated later.
- Overall, the risk of dying from thyroid cancer was very low in both groups.
- Doing a lobectomy also means patients might not need to take thyroid hormone medicine for life and could have fewer side effects like voice changes or problems with calcium levels.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Overall, this study gives important information for patients who want to keep part of their thyroid, even if they have some cancer in their lymph nodes. It supports honest conversations between doctors and patients about the pros and cons of each choice. For patients with smaller amounts of cancer spread, it may be safe to do a less aggressive surgery. Patients and doctors can talk together to decide which surgery is best, depending on the patient's situation and preferences.

— Maria Brito, MD, ECNU



Clinical Thyroidology[®] for the Public

THYROID CANCER, continued



ATA RESOURCES

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

ABBREVIATIONS & DEFINITIONS

Total thyroidectomy: surgery to remove the entire thyroid gland.

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

Lobectomy: surgery to remove one lobe of the thyroid.

Papillary thyroid cancer: the most common type of thyroid cancer.

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Clinical Thyroidology[®] for the Public

HYPERTHYROIDISM

Radiofrequency ablation for "hot" thyroid nodules.

BACKGROUND

Hyperthyroidism is a condition whereby the thyroid gland becomes overactive and makes too much thyroid hormone. While Graves' disease is the most common cause of hyperthyroidism, overactive ("hot") thyroid nodules are also an important cause. This can be due to a single overactive nodule or multiple overactive nodules. Hyperthyroidism due to overactive nodules often includes treatment with antithyroid medications followed by more permanent solutions such as radioactive iodine therapy or surgical removal. This is because overactive thyroid nodules do not go into remission, as is seen with Graves' disease. Radioactive iodine therapy or surgical removal carry risks including development of hypothyroidism (especially if there are multiple overactive thyroid nodules) or surgical complications.

Thermal ablation has emerged a technique to destroy overactive nodules in hopes of restoring normal thyroid function without the potential side effects of the other options. Radiofrequency ablation (RFA) is a technique whereby radiofrequency electrical currents are applied to tissue to cause tissue destruction. In the case of overactive thyroid nodules, radiofrequency current is applied to the nodule to cause nodule tissue destruction resulting in nodule shrinkage and resolution of hyperthyroidism. This study examined the safety and efficacy of radiofrequency ablation in hyperthyroid patients with a single overactive thyroid nodule.

THE FULL ARTICLE TITLE:

Dueñas JP et al. Radiofrequency ablation for solitary autonomously functioning thyroid nodules: multicenter study from Latin America. Thyroid. Epub 2024 Dec 19; doi:10.1089/thy.2024.0338. PMID: 39699644

SUMMARY OF THE STUDY:

The study looked at patients that underwent RFA for treatment of a single overactive thyroid nodule. A total of 81 patients from several Latin American countries were

included in the study. All patients had hyperthyroidism (79 of 81 patients; 97.5%) or subclinical hyperthyroidism (2 patients) due to a single overactive nodule that had been determined to be noncancerous by thyroid biopsy. All underwent RFA using standard techniques at each institution and followed after RFA for a decrease in nodule size, resolution of hyperthyroidism and any complications. Data was collected at 1, 3, 6, 12, 18, and 24 months following the RFA.

RFA was associated with high clinical success; many nodules shrank in size over time, and most patients had resolution of their hyperthyroidism. In all, 76 of 81 patients (93.8%) had normalization of their thyroid function, with most occurring in the first month after treatment (47 of 81; 58%). The clinical response rate was not different between patients with smaller or larger nodules as has been seen in prior studies, but did correlate with the degree of nodule shrinkage. RFA was associated with a low complication rate (5 of 81 patients, 6.2%) and included 1 patient with Horner's syndrome (nerve damage that affects face and eye), 3 cases of transient voice changes and 1 case of hypothyroidism. In general, the procedure was well tolerated and associated with normalization of thyroid function in most patients. Given the relatively short duration of the study follow up, it is unclear whether the patients would all remain with normal thyroid function over time but results so far suggest that this may be a promising treatment option for hyperthyroidism caused by single overactive thyroid nodule.

WHAT ARE THE IMPLICATIONS **OF THE STUDY?**

This study shows that hyperthyroidism caused by a single overactive thyroid nodule can be treated effectively by RFA. This procedure is not associated with some of the risks that can occur with surgical removal. Successful treatment of hyperthyroidism is associated with reduction in nodule size following RFA. This procedure is well tolerated, successful at restoring normal thyroid



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HYPERTHYROIDISM, continued

function and has a lower rate of hypothyroidism than radioiodine ablation or surgery. Although a promising procedure, the durability of this treatment is currently

unclear, and more studies are needed to further evaluate long term safety and efficacy.

- Whitney W. Woodmansee MD

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ATA THYROID BROCHURE AND WEBSITE LINKS

Hyperthyroidism (Overactive): <u>https://www.thyroid.org/hyperthyroidism/</u> Thyroid Nodules: <u>https://www.thyroid.org/thyroid-nodules/</u> Thyroid Surgery: <u>https://www.thyroid.org/thyroid-surgery/</u> Radioactive Iodine Therapy: <u>https://www.thyroid.org/radioactive-iodine/</u>

ABBREVIATIONS & DEFINITIONS: FROM ACTIVE LIST

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.

Subclinical Hyperthyroidism: a mild form of hyperthyroidism where the only abnormal hormone level is a decreased TSH.

Graves' disease: the most common cause of hyperthyroidism in the United States. It is caused by antibodies that attack the thyroid and turn it on.

Toxic nodular goiter: characterized by one or more nodules or lumps 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.

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 nondestructive 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*).

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.

Radiofrequency ablation (RFA): using radio wave-based heat delivered by a needle to destroy abnormal tissue or lymph nodes containing cancer.



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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.





MCT8 - AHDS Foundation



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







American Thyroid Association®

www.thyroid.org

ATA[®] Patient Resources: www.thyroid.org/thyroid-information/ Find a Thyroid Specialist: www.thyroid.org (Toll-free): I-800-THYROID thyroid@thyroid.org

Bite Me Cancer

www.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-fed.org



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