

CLINICAL THYROIDOLOGY FOR PATIENTS



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Kuppens SM et al. Maternal thyroid function during gestation is related to breech presentation at term. *Clin Endocrinology (Oxf)* Volume 72, Issue 6, June, 2010, pp 820-824 5

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A total thyroidectomy is the usual first treatment for papillary thyroid cancer, the most common type of thyroid cancer. Removing all the central neck lymph nodes, even if no obvious cancer is apparent in these lymph nodes (prophylactic central neck lymph node dissection), at the same time has long been debated. This study looks specifically at the characteristics and outcomes of patients presenting with papillary microcarcinoma who undergo prophylactic central neck lymph node dissection at the time of the initial total thyroidectomy.

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Lymph node surgery for papillary thyroid cancer

Papillary thyroid cancer is the most common form of thyroid cancer and, overall, has a good prognosis. When thyroid cancer recurs or persists after the initial treatment, the options are to treat (or re-treat) the patient with radioactive iodine to destroy the thyroid cancer cells in the lymph nodes or to have another surgery to remove the lymph nodes. The present study attempts to determine the long-term benefit from surgical removal of cancer that has spread to the lymph nodes without repeating radioactive iodine therapy.

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THYROID CANCER

In patients with thyroid cancer, total thyroidectomy and radioactive iodine improves the survival rate but not the cancer recurrence

In most patients with thyroid cancer, surgery is performed to remove the cancer and the entire thyroid gland. After surgery, many of these patients are treated with radioactive iodine to destroy all remaining cancerous or normal thyroid cells. Because very few patients will die from their cancer, it is unclear how aggressive the treatment should be for these patients. The goal of this study was to determine the effect of thyroidectomy followed by postsurgical radioactive iodine on the survival of patients with thyroid cancer.

Doi SA et al. Total thyroidectomy followed by postsurgical remnant ablation may improve cancer specific survival in differentiated thyroid carcinoma. *Clin Nucl Med* 2010..... 11

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CLINICAL THYROIDOLOGY FOR PATIENTS

A publication of the American Thyroid Association

VOLUME 3 • ISSUE 7 • JULY 2010

EDITOR'S COMMENTS

Welcome to *Clinical Thyroidology for Patients*. This publication is a collection of summaries of the top articles from the recent medical literature that cover the broad spectrum of thyroid disorders. *Clinical Thyroidology for Patients* is published on a monthly basis and includes summaries of research studies that were discussed in the previous month's issue of *Clinical Thyroidology*, a publication of the American Thyroid Association for physicians. This means that you, the patients, are getting the latest information on thyroid research and treatment almost as soon as your physicians. The **Calendar of Events** highlights educational forums and support groups that are organized around the country by members of the **Alliance for Thyroid Patient Education**. The Alliance member groups consist of: the *American Thyroid Association*, the *Graves' Disease Foundation*, the *Light of Life Foundation* and *ThyCa: Thyroid Cancer Survivors Association*.

In this issue, studies ask the following questions:

- How much should your thyroid hormone dose change during pregnancy?
- Is there an increase in breech delivery in pregnant hypothyroid women?
- Should extensive lymph node surgery be performed in patients with papillary microcarcinoma?
- When thyroid cancer spreads to the lymph nodes, should you have repeat surgery or radioactive iodine therapy?
- Does surgery and radioactive iodine therapy decrease mortality in low risk patients with thyroid cancer?

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

HOW TO NAVIGATE THIS DOCUMENT: The Table of Contents and the Bookmarks are linked to the articles. To navigate, move your cursor over the article title you wish to see (either in the Contents or in the Bookmarks panel) and the hand will show a pointing finger, indicating a link. Left-click the title and the article will instantly appear. To return to the Contents, move the cursor to the bottom of the page and left-click **Back to Table of Contents**.



THYROID AND PREGNANCY

Thyroid hormone replacement in pregnancy

WHAT IS THE STUDY ABOUT?

Thyroid hormone is essential for a baby to develop normally during pregnancy. For at least the first half of pregnancy, the fetus gets thyroid hormone from the mother. Development of the fetus may be harmed if the mother is hypothyroid during this time. It is known that women who are treated with levothyroxine for hypothyroidism before pregnancy often must increase their thyroid hormone replacement by 20-40% to keep their thyroid hormone levels within the normal range. Most physicians measure the levels of thyroid stimulating hormone (TSH) early in pregnancy and adjust the dose of levothyroxine accordingly. Sometimes this results in the patient becoming transiently hypothyroid before the dose is increased. This study examined whether increasing the thyroid hormone dose by two or three tablets a week as soon as the patient was found to be pregnant could keep the TSH levels within the normal range during pregnancy.

THE FULL ARTICLE TITLE:

Yassa et al. Thyroid hormone early adjustment in pregnancy (The THERAPY Trial). *J Clin Endocrinol Metab* 2010; May 12 [Epub ahead of print].

WHAT WAS THE AIM OF THE STUDY?

The aim of this study was to determine whether increasing the thyroid hormone dose by two or three tablets a week as soon as the patient was found to be pregnant could keep the TSH levels within the normal range during pregnancy.

WHO WAS STUDIED?

The study group included 60 women with previously diagnosed hypothyroidism on stable doses of levothyroxine for at least 6 weeks. All women had a normal TSH before starting the study and becoming pregnant.

HOW WAS THE STUDY DONE?

The women were randomly assigned to take either two (Saturday and Wednesday) or three (Monday, Wednesday and Friday) extra tablets a week of levothyroxine once pregnancy was confirmed, resulting in a 29% or 43% increase in their weekly dose of levothyroxine. Blood TSH levels were checked every 2 weeks until 20 weeks of pregnancy and once more at 30 weeks. The levothyroxine dose was adjusted as necessary at 4, 8, 12, 16, 20 and

30 weeks to keep the TSH levels between 0.01 and 2.5 mIU/L for patients with thyroid cancer and between 0.05 and 5.0 mIU/L in patients without thyroid cancer.

WHAT WERE THE RESULTS OF THE STUDY?

A total of 48 women completed the protocol. The miscarriage rate (16.6%) was the same as the expected rate for this age group of pregnant women. During the middle third of pregnancy, 8% of the women who took two extra tablets had a high TSH (>5 mIU/ml) and 32% had a low TSH (<0.5 mIU/ml), while 4% of the women who took three extra tablets had a high TSH and 65% had a low TSH. The major factor that predicted excessive suppression of the TSH was a dose of levothyroxine of at least 100 µg per day before pregnancy. The study authors concluded that an increase of two levothyroxine tablets at the time pregnancy is confirmed significantly reduces the risk of hypothyroidism occurring in the mother during the first trimester. They recommend checking the serum TSH levels every 4 weeks through the second trimester.

HOW DOES THIS COMPARE WITH OTHER STUDIES?

Other studies have shown that the dose of levothyroxine must be increased during pregnancy. This study provides a simple, practical method to achieve the desired TSH concentration to keep the mother from becoming hypothyroid during the pregnancy.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

It is important to avoid hypothyroidism in the mother because it can lead to problems with the pregnancy as well as developmental defects in the fetus. Because women who are hypothyroid and on stable doses of levothyroxine before pregnancy require more thyroid hormone early in pregnancy, the technique for increasing the dose described here—taking two extra tablets per week as soon as pregnancy is diagnosed—should help decrease hypothyroid-related pregnancy disorders.

— Glen Braunstein, MD

ATA THYROID BROCHURE LINKS

Thyroid and Pregnancy: http://thyroid.org/patients/patient_brochures/pregnancy.html

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THYROID AND PREGNANCY, 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.

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

Thyroxine (T₄): the major hormone secreted by the thyroid gland. Thyroxine is broken down to produce Triiodothyronine which causes most of the effects of the thyroid hormones.

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 AND PREGNANCY

Pregnant women with mild hypothyroidism may be at increased risk for breech presentation at delivery

WHAT IS THE STUDY ABOUT?

It is well known that thyroid hormone plays an essential role for the development of the fetus during pregnancy. An initial study also suggested that certain “out of range” thyroid function tests were associated with a breech presentation during labor, which can result in a difficult delivery of the baby. Established risk factors for breech presentation and delivery include: low birth weight, first pregnancy, smoking and prematurity. The present study is much larger than the prior study and was designed to learn more about the connection between breech presentation at delivery and thyroid disease.

THE FULL ARTICLE TITLE:

Kuppens SM et al. Maternal thyroid function during gestation is related to breech presentation at term. Clin Endocrinology (Oxf) Volume 72, Issue 6, June, 2010, pp 820-824.

WHAT WAS THE AIM OF THE STUDY?

The aim of the study is to determine if specific thyroid function tests can be used to predict breech presentation in order to understand the connection between thyroid disease and this pregnancy complication.

WHO WAS STUDIED?

The study group included 1058 pregnant women living in or near Eindhoven, The Netherlands, who delivered after 37 weeks of gestation.

HOW WAS THE STUDY DONE?

Thyroid function blood tests (TSH, free T₄ and TPO antibodies) were measured at 12, 24 and 36 weeks of pregnancy. Clinical factors were recorded including smoking status, family history of thyroid disease, whether it was a first pregnancy and birth weight of the baby.

WHAT WERE THE RESULTS OF THE STUDY?

A total of 108 women had a TSH >2.5, while 59 women had a TSH >2.89. Overall, 11% of women with a TSH >2.5 had a breech presentation, as compared to 4.8 % if TSH was

less than 2.5. Women with a TSH < 0.5 had no breech presentations. There was no relationship between FT₄ or TPO antibodies and breech presentation. As expected, breech presentation was more common if risk factors were present, such as smoking, first pregnancy and low birth weight.

HOW DOES THIS COMPARE WITH OTHER STUDIES?

The earlier study by the same group with smaller numbers of patients did not demonstrate an association between TSH and breech presentation. However, that study did suggest an association between a low FT₄ and breech presentation, which was not found in the present study.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study provides another reason to maintain normal thyroid levels during pregnancy. Careful monitoring and treatment of thyroid problems during the entire pregnancy is recommended to increase the chances of successful pregnancy and delivery. Breech presentation is now recognized as associated with thyroid problems and may be considered one of the potentially preventable complications of thyroid problems during pregnancy.

— Jerrold Stock, MD

ATA THYROID BROCHURE LINKS

Hypothyroidism: http://thyroid.org/patients/patient_brochures/hypothyroidism.html

Thyroid and Pregnancy: http://thyroid.org/patients/patient_brochures/pregnancy.html

Thyroid Function Tests: http://thyroid.org/patients/patient_brochures/function_tests.html

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HYPOTHYROIDISM AND PREGNANCY, 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.

Thyroxine (T4): the major hormone secreted by the thyroid gland. Thyroxine is broken down to produce Triiodothyronine which causes most of the effects of the thyroid hormones.

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.

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.



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THYROID

Prophylactic central-compartment lymph node dissection may be indicated in some patients with papillary thyroid microcarcinoma

WHAT IS THE STUDY ABOUT?

A total thyroidectomy is the usual first treatment for papillary thyroid cancer, the most common type of thyroid cancer. Papillary thyroid cancer that extends outside of the thyroid often initially spreads into the neck lymph nodes. At the time of initial surgery, any abnormal-looking lymph nodes located in the center of the neck would be removed. Removing all the central neck lymph nodes, even if no obvious cancer is apparent in these lymph nodes (prophylactic central neck lymph node dissection), at the same time has long been debated. While some studies show improved survival and decreased recurrence rates in patients with papillary thyroid cancer, others point to the increased incidence of postoperative surgical complications including vocal cord paralysis and hypocalcemia. Prophylactic central neck lymph node dissection is especially controversial in patients with papillary microcarcinoma, in whom spread to the lymph nodes is thought to be less common. This study looks specifically at the characteristics and outcomes of patients presenting with papillary microcarcinoma who undergo prophylactic central neck lymph node dissection at the time of the initial total thyroidectomy.

THE FULL ARTICLE TITLE:

So YK et al. Subclinical lymph node metastasis in papillary thyroid microcarcinoma: a study of 551 resections. *Surgery* 2010. doi:10.1016/j.surg.2010.01.003.

WHAT IS THE AIM OF THE STUDY?

The aim of this study was to determine the clinical factors associated with the spread of cancer to the central lymph nodes in patients with papillary microcarcinoma.

WHO WAS STUDIED?

The study group included 551 Korean patients with papillary microcarcinoma who were treated and followed between January 2005 and March 2009.

HOW WAS THE STUDY DONE?

All patients had a total thyroidectomy and bilateral prophylactic central neck lymph node dissection. Postoperatively the cancers were divided into three categories:

1) confined within the thyroid, 2) cancer invading the thyroid capsule and 3) spread of the cancer outside of the thyroid. Patients with multiple small regions of cancer within the thyroid or evidence of cancer spread beyond the capsule were treated with radioactive iodine after surgery. Patients were followed for up to 3 years to assess for postoperative adverse reactions (hypocalcemia and/or vocal cord paralysis) and cancer recurrence.

WHAT WERE THE RESULTS OF THE STUDY?

More than a third of the patients had evidence of spread of cancer to the central lymph nodes. Factors that seem to predict spread to the lymph nodes included: 1) male sex, 2) multiple small regions of cancer within the thyroid and 3) cancer invading the thyroid capsule. Only 20% of women with one region of cancer confined to the thyroid gland had spread of the cancer to the lymph nodes. The rates of post operative complications in this study were similar to those noted in previous studies at the hand of experienced surgeons. Only 1.1% of patients developed permanent hypocalcemia and close to 5% had permanent vocal cord damage. On follow-up, only one patient had cancer recurrence that required a repeat surgery.

HOW DOES IT COMPARE WITH OTHER STUDIES?

Other studies have shown that papillary microcarcinoma behaved similarly as larger sized papillary cancers, requiring long term follow-up. Similarly, studies of patients with papillary cancers showed up to a 65 % rate of spread of the cancer to the lymph nodes, with improved outcomes with prophylactic central neck lymph node dissection.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

In patients with papillary microcarcinoma, there is a high incidence of spread of the cancer to the central lymph nodes, especially in the following patient groups: 1) male sex, 2) multiple small regions of cancer within the thyroid and 3) cancer invading the thyroid capsule. These metastatic lymph nodes can be effectively treated with

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THYROID, continued

prophylactic central neck lymph node dissection without a high complication rate and with very few recurrences of the cancer. Prophylactic central neck lymph node dissection should be considered in high-risk patients.

— Mona Sabra, MD

ATA THYROID BROCHURE LINKS

Thyroid cancer: http://thyroid.org/patients/patient_brochures/cancer_of_thyroid.html

Thyroid Surgery: http://thyroid.org/patients/patient_brochures/surgery.html

ABBREVIATIONS & DEFINITIONS

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

Papillary microcarcinoma: a papillary thyroid cancer smaller than 1 cm in diameter.

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.

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.

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

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.

Prophylactic central neck dissection: careful removal of all lymphoid tissue in the central compartment of the neck, even if no obvious cancer is apparent in these lymph nodes.



THYROID CANCER

Lymph node surgery for papillary thyroid cancer

WHAT IS THE STUDY ABOUT?

Papillary thyroid cancer is the most common form of thyroid cancer and, overall, has a good prognosis. However, up to 7% of patients with Papillary thyroid cancer die from their cancer within 10 years of diagnosis. Local recurrences are found in 5 to 20% of patients with Papillary thyroid cancer and approximately 60% of these recurrences are localized to the lymph nodes of the neck. When thyroid cancer recurs or persists after the initial treatment, the options are to treat (or re-treat) the patient with radioactive iodine to destroy the thyroid cancer cells in the lymph nodes or to have another surgery to remove the lymph nodes. The present study attempts to determine the long-term benefit from surgical removal of cancer that has spread to the lymph nodes without repeating radioactive iodine therapy.

THE FULL ARTICLE TITLE:

Al-Saif O et al. Long-term efficacy of lymph node reoperation for persistent thyroid papillary cancer. *J Clin Endocrinol Metab* 2010;95:2187-94.

WHAT WAS THE AIM OF THE STUDY?

The aim of the study is to determine the long-term benefit from surgical removal of cancer that has spread to the lymph nodes in patients with papillary thyroid cancer.

WHO WAS STUDIED?

The study group included 95 patients with papillary thyroid cancer that had recurrence of the cancer to the lymph nodes in the neck and who were treated with repeat surgery at the Arthur G. James Cancer Hospital and Richard J. Solove Research Institute at Ohio State University from 1999 through 2005. Of this group, 70 patients had negative thyroglobulin antibodies and formed that basis of the study.

HOW WAS THE STUDY DONE?

The records of patients were reviewed and analyzed as to the long-term course of their disease and the need for further treatment including surgery. Blood tests of thyroglobulin and imaging studies were examined. Thyroid cancer remission was determined to have occurred if the blood thyroglobulin levels were undetectable.

WHAT WERE THE RESULTS OF THE STUDY?

Of the 70 study patients, 22 (31%) were men and 48 (69%) were women. Average age at the time of cancer diagnosis was 35 years for men and 41 years for women. Time from initial thyroidectomy to the first repeat neck surgery was 3 years. The majority of patients had spread of the cancer to the lymph nodes identified during initial thyroid surgery. The patients underwent a total of 107 surgeries for recurrent lymph node disease. Neck ultrasound was performed in 102 of 107 cases (95%) prior to neck exploration with the selective use of fine-needle aspiration biopsy of lymph nodes in 48 of 102 cases (47%). Utilizing this approach, recurrent papillary thyroid cancer was accurately identified in 100 of 102 patients (98%) prior to surgery. A total of 12 patients (17%) had remission of their cancer after the first repeat surgery while another 5 patients achieved remission after a second repeat surgery. A third repeat surgery was performed in seven patients and none resulted in remission of the thyroid cancer. There were no significant long term complications from re-operation to remove lymph nodes.

HOW DOES THIS COMPARE WITH OTHER STUDIES?

This study shows similar results to another study that demonstrated the usefulness of repeat surgery for spread of the cancer to lymph nodes without repeating radioactive iodine therapy in selected patients with papillary thyroid cancer and lymph node metastasis.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study provides further data concerning the incidence of lymph node metastasis in papillary thyroid cancer and provides data supporting the use surgery over repeat radioactive iodine therapy in selected patients with papillary thyroid cancer.

— Frank Crantz, MD

ATA THYROID BROCHURE LINKS

Thyroid cancer: http://thyroid.org/patients/patient_brochures/cancer_of_thyroid.html

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THYROID CANCER, continued

ABBREVIATIONS & DEFINITIONS

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

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.

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

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

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).



THYROID CANCER

In patients with thyroid cancer, total thyroidectomy and radioactive iodine improves the survival rate but not the cancer recurrence

WHAT IS THE STUDY ABOUT?

In most patients with thyroid cancer, surgery is performed to remove the cancer and the entire thyroid gland. After surgery, many of these patients are treated with radioactive iodine to destroy all remaining cancerous or normal thyroid cells. In general, thyroid cancer is a low risk cancer since very few patients will die from their cancer. Because of this, it is unclear how aggressive the treatment should be for these patients. In fact, many patients with small cancers and no clear spread of the cancer outside of the thyroid will not receive radioactive iodine initially, a practice supported by the recent American Thyroid Association guidelines for treating thyroid cancer. In addition, there are few good studies on the best surgery to perform and when to use post-operative radioactive iodine in these low risk patients. The goal of this study was to determine the effect of thyroidectomy followed by postsurgical radioactive iodine on the survival of patients with thyroid cancer.

THE FULL ARTICLE TITLE:

Doi SA et al. Total thyroidectomy followed by postsurgical remnant ablation may improve cancer specific survival in differentiated thyroid carcinoma. Clin Nucl Med 2010.

WHAT WAS THE AIM OF THE STUDY:

The aim of this study was to determine the effect of thyroidectomy and radioactive iodine on survival of patients with thyroid cancer.

WHO WAS STUDIED?

The study looked at 614 patients with thyroid cancer registered between Jan. 1, 1987 and Jan. 31, 2006 in Marshfield Clinic Electronic Medical records.

HOW WAS THE STUDY DONE?

The patient's records were examined for the following data: age, sex, cancer type, cancer size, spread of the cancer to the lymph nodes, presence of cancer spread outside of the neck, cancer recurrence, location of recurrence, length of survival and cause of death.

Patients were divided into 4 Groups: 1) 417 patients received both total thyroidectomy and radioactive iodine, 2) 82 had total thyroidectomy alone, 3) 28 patients received radioactive iodine alone and 4) neither treatment was recorded in 59 patients.

The risk factor for dying of cancer or for cancer recurrence was determined for each group. The reference range for expected survival was thyroidectomy plus radioactive iodine.

WHAT WERE THE RESULTS OF THE STUDY?

A total of 614 patients were included in this study (459 females and 155 men). As compared to patients that were treated with both total thyroidectomy and radioactive iodine, those that did not get any treatment had a 4-fold risk of dying of their cancer and those that were only treated with radioactive iodine had a 3.7-fold risk of dying of their cancer. There was a trend for an increased risk for dying from their cancer in patients who did not have radioactive iodine. Interestingly, while surgery and radioactive iodine decreased the mortality rate of thyroid cancer, neither had any effect on the recurrence rate in this analysis.

HOW DOES THIS COMPARE WITH OTHER STUDIES?

There is controversy as to whether treating low risk patients with radioactive iodine is helpful. One study did not show any effect of radioactive iodine on survival of patients with thyroid cancer but they could observe a lower recurrence rate in patients who received radioactive iodine (4%) as compared to those without radioactive iodine (10%). A recent study found that the survival rate is related to surgery and tumor features. Most other studies fail to show that radioactive iodine has an effect on cancer mortality, although recurrence rates usually are decreased.

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THYROID CANCER, continued

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study supports the routine use of thyroidectomy followed by radioactive iodine in most patients with thyroid cancer. Further studies are needed to expand these recommendations to all thyroid cancer patients.

— Jamshid Farahati, MD

ATA THYROID BROCHURE LINKS

Thyroid cancer: http://thyroid.org/patients/patient-brochures/cancer_of_thyroid.html

Thyroid Surgery: <http://thyroid.org/patients/patient-brochures/surgery.html>

ABBREVIATIONS & DEFINITIONS

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.

Total thyroidectomy — surgery to remove the entire thyroid gland.

Partial thyroidectomy — surgery that removes only part of the thyroid gland (usually one lobe with or without the isthmus).

Near-total thyroidectomy — removal of nearly all of each thyroid lobe, leaving only a small portion of the thyroid gland.

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).

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



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.

WHO WE ARE

AMERICAN THYROID ASSOCIATION

www.thyroid.org

ATA Patient Resources: <http://www.thyroid.org/patients/>

Find a Thyroid Specialist: www.thyroid.org

Phone (toll-free): 1-800-THYROID

e-mail: thyroid@thyroid.org

ATA Mission: The ATA leads in promoting thyroid health and understanding thyroid biology.

ATA Vision: The ATA is the leading organization focused on thyroid biology and the prevention and treatment of thyroid disorders through excellence and innovation in research, clinical care, education, and public health.

ATA Values: The ATA values scientific inquiry, clinical excellence, public service, education, collaboration, and collegiality.

To further our mission, vision and values the ATA sponsors “Friends of the ATA” online to advance the information provided to patients and the public such as this publication, *Clinical Thyroidology for Patients*. We welcome your support.

GRAVES' DISEASE FOUNDATION

www.ngdf.org

Phone (toll-free): 1-877-NGDF-123 or 643-3123

e-mail: Gravesdiseasefd@gmail.com

Founded in 1990, the Graves' Disease Foundation offers support and resources to Graves' disease patients, their families, and health care professionals. Their mission is to find the cause of and the cure for Graves' thyroid disease through research, to improve the quality of life for persons with Graves' disease and their caregivers and to educate persons with Graves' disease, their caregivers, healthcare professionals, and the general public about Graves' disease and its treatment. The web site features a monitored bulletin board.

LIGHT OF LIFE FOUNDATION

www.checkyourneck.com

email: info@checkyourneck.com

The Light of Life Foundation, founded in 1997, is a nonprofit organization that strives to improve the quality of life for thyroid cancer patients, educate the public and professionals about thyroid cancer, and promote research and development to improve thyroid cancer care.

THYCA: THYROID CANCER SURVIVORS' ASSOCIATION, INC.

www.thyca.org

Phone (toll-free): 877 588-7904

e-mail: thyca@thyca.org

ThyCa: Thyroid Cancer Survivors' Association, Inc., founded in 1995, is an international nonprofit organization, guided by a medical advisory council of renowned thyroid cancer specialists, offering support and information to thyroid cancer survivors, families, and health care professionals worldwide.





ATA Alliance for Thyroid Patient Education CALENDAR OF EVENTS

Educational forums, patient support groups and other patient-oriented meetings

ATA Conferences www.thyroid.org

Graves' Disease Conferences www.ngdf.org

October 22 - 24, 2010 — San Diego, CA.

Graves' Disease Foundation 2010 Patient & Family Conference

Sponsored by Graves' Disease Foundation

Fall 2010 — San Diego, CA

Annual Meeting

Light of Life Foundation www.checkyourneck.com

ThyCa Conferences www.thyca.org

September 2010

Thyroid Cancer Awareness Month

Sponsored by ThyCa: Thyroid Cancer Survivors' Association, Inc. Plus year-round awareness campaigns. Visit the Raise Awareness Page to download free flyers, or request free awareness materials.

October 15–17, 2010 — Dallas, Texas.

The 13th International Thyroid Cancer Survivors' Conference

Sponsored by ThyCa: Thyroid Cancer Survivors' Association, Inc.

October 16, 2010 — Dallas, Texas

The 8th Annual Dinner/Auction Fundraiser for Thyroid Cancer Research

Thyroid Cancer Survivors' Conference. Sponsored by ThyCa: Thyroid Cancer Survivors' Association, Inc.