

Clinical THYROIDOLOGY FOR PATIENTS

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Cheng SP et al. Preoperative ultrasonography assessment of vocal cord movement during thyroid and parathyroid surgery. World J Surg 2012;36:2509-15.

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Is obesity a risk factor for thyroid cancer? Thyroid cancer is common and appears to be increasing in incidence, especially among women. Obesity has also increased over time and has been associated with a number of different cancers. These authors sought to determine whether obesity was associated specifically with an increased risk of thyroid cancer.

Han JM et al. Obesity is a risk factor for thyroid cancer in a large, ultrasonographically screened population. Eur. J. Endocrinol. 2013. 168:879-886.

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Is there a relationship between thyroid cancer and Hashimoto's thyroiditis? There has been a long standing debate regarding the relationship between thyroid cancer and Hashimoto's thyroiditis. Specifically, it is unclear if the thyroid inflammation in Hashimoto's is a cause, or a result, of the thyroid cancer. Also, it is uncertain if the prognosis of thyroid cancer is affected by the thyroiditis when it is present. The goal of the study was to examine the relationship between papillary thyroid cancer and Hashimoto's thyroiditis.

Lee JH et al. The association between papillary thyroid carcinoma and histologically-proven Hashimoto's thyroiditis: a meta-analysis. Eur J Endocrinol. December 4, 2012.

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The risk of cancer increases when a thyroid nodule is larger than 2cm In the evaluation of thyroid nodules, many factors can increase the risk of cancer. However, it is not known whether or not larger nodules have a higher risk of being cancerous than smaller ones. In this study, the authors examined the effect on nodule size on the risk of thyroid cancer.

Kamran SC et al. Thyroid nodule size and prediction of cancer. J Clin Endocrinol Metab 2013;98:564-70. Epub December 28, 2012; doi: 10.1210/jc.2012-2968.

THYROID CANCER.....8

The BRAF V600E gene mutation in papillary thyroid cancer is associated with more rapid cancer growth and a higher death rate Papillary thyroid cancer is usually a slow growing cancer with a low death rate of about <5%. A genetic mutation in cancer cells, BRAF V600E, is associated with a higher death rate than cancers without the mutation. This study was done to confirm the incidence of this mutation in a large number of patients with papillary thyroid cancer in different countries and to determine if this mutation increases the risk of death beyond that predicted by the stage identified at the initial surgery.

Xing M et al. Association between BRAF v600e mutation and mortality in patients with papillary thyroid cancer. JAMA 2013; Vol. 309: pp.1493-1501.

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AMERICAN THYROID ASSOCIATION

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www.thyroid.org

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Clinical Thyroidology for Patients

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CLINICAL THYROIDOLOGY **FOR PATIENTS**

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VOLUME 6 • ISSUE 7 • 2013

EDITOR'S COMMENTS

Welcome to **Clinical Thyroidology for Patients**, bringing to you, the patient, the most up-to-date, cutting edge thyroid research. What you read here as research studies will likely become the accepted practice in the future. *Clinical Thyroidology for Patients* is published on a monthly basis and includes summaries of research studies that were discussed in a recent 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.

We will be providing even faster updates of late-breaking thyroid news through **Twitter** at [@thyroidfriends](https://twitter.com/thyroidfriends) and on **Facebook**. Our goal is to provide you with the tools to be the most informed thyroid patient in the waiting room. Also check out our friends in the **ATA Alliance for Thyroid Patient Education**. The Alliance member groups consist of: the *American Thyroid Association*, the *Graves' Disease and Thyroid Foundation*, the *Light of Life Foundation*, *ThyCa: Thyroid Cancer Survivors Association*, *Thyroid Cancer Canada* and *Thyroid Federation International*.

In this issue, the studies ask the following questions:

- How many patients and clinicians are aware of the changes that occur with hypothyroidism during pregnancy?
- Can pre-op ultrasound help identify vocal cord abnormalities?
- Is obesity a risk factor for thyroid cancer?
- Is Hashimoto's thyroiditis a risk factor for thyroid cancer?
- Does nodule size matter to the risk for thyroid cancer?
- Are papillary cancers that have a gene mutation more aggressive?

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



HYPOTHYROIDISM AND PREGNANCY

Clinical care of women with hypothyroidism during their reproductive years requires awareness of the consequences by patients and clinicians

BACKGROUND

Hypothyroidism affects predominantly women and is common during the reproductive years. During pregnancy, the body's demand for thyroid hormone increases. Indeed, in women with hypothyroidism who become pregnant, their thyroid hormone requirements can increase up to 30-50%. Physicians typically check a TSH early in pregnancy and increase the patient's dose of thyroid medication by to keep the TSH in the low half of the normal range. This study was performed to determine how frequently TSH was checked before and during pregnancy and to see what proportion of the hypothyroid pregnant population had their thyroid dose adjusted.

THE FULL ARTICLE TITLE

Vadiveloo T et al. Thyroid testing in pregnant women with thyroid dysfunction in Tayside, Scotland: the thyroid epidemiology, audit and research study (TEARS). Clin Endocrinol (Oxf) 2013;78:466-71.

SUMMARY OF THE STUDY

A total of 950 pregnant women were studied between January 1, 1993 and March 31, 2011 in Tayside, Scotland. These women had already been diagnosed with hypothyroidism at least 6 months prior to pregnancy. The mean age of the women in the study was 32.1 years. A total of 96.9% of patients had their TSH checked just

before pregnancy and a total 81.2% of women had their TSH checked during the first trimester. As expected, 55% of women had an elevated TSH in the first trimester, but the thyroid hormone dose was adjusted in only 39.2% of women.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

As shown before, the majority of hypothyroid women have an elevated TSH during the 1st trimester of their pregnancy. However, in this study only ~70% had their thyroid hormone doses adjusted. Since even mild hypothyroidism during pregnancy can have adverse effects on the baby, it is important that the thyroid hormone dose be adjusted to keep the TSH in the lower half of the normal range. This study is important to help both physicians and patients become aware of this problem.

— Heather Hofflich, DO

ATA THYROID BROCHURE LINKS

Thyroid and Pregnancy: <http://www.thyroid.org/thyroid-disease-and-pregnancy>

Thyroid Hormone Treatment: <http://www.thyroid.org/thyroid-hormone-treatment>

Hypothyroidism: <http://www.thyroid.org/what-is-hypothyroidism>

ABBREVIATIONS & DEFINITIONS

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

Thyroid hormone therapy: patients with hypothyroidism are most often treated with Levothyroxine in order to return their thyroid hormone levels to normal. Replacement therapy means the goal is a TSH in the normal range and is the usual therapy. Suppressive therapy means that the goal is

a TSH below the normal range and is used in thyroid cancer patients to prevent growth of any remaining cancer cells.

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

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.



THYROID SURGERY

Surgeon-performed laryngeal ultrasound can be used to screen for vocal-cord abnormalities before thyroid surgery

BACKGROUND

A possible complication of thyroid surgery is loss or change in voice related to injury to nerves that lead to the vocal cords. These are either the recurrent laryngeal nerve or the superior laryngeal nerve. This complication can be temporary or permanent. The easiest way for a doctor to evaluate the motion of the vocal cords is through examination, either with a mirror through the patient's mouth or by the use of a fiberoptic scope through the patient's nose or mouth. This latter procedure is called a laryngoscopy. A new option is using ultrasound of the voice box to determine if the vocal cords are working normally. This study was designed to evaluate ultrasound as a less invasive screening study for the detection of impaired vocal-cord movement before thyroid or parathyroid surgery.

THE FULL ARTICLE TITLE

Cheng SP et al. Preoperative ultrasonography assessment of vocal cord movement during thyroid and parathyroid surgery. *World J Surg* 2012;36:2509-15.

SUMMARY OF THE STUDY

Over a 6 month period, the authors evaluated all patients undergoing thyroid or parathyroid surgery. In the first part of the study, all patients were evaluated with both a laryngoscopy and an ultrasound of the voice box. Vocal-cord movement could be assessed with the ultrasound in 82% of 93 patients. In 2 of 93 patients the vocal-cord movement was determined to be abnormal on the ultrasound exam and laryngoscopy revealed impaired motion of one vocal cord in both patients. In the second part of the study, all patients had ultrasound of the voice box and patients with either voice changes or abnormal ultrasound underwent laryngoscopy. Vocal-cord motion

was successfully evaluated in 349 of 415 patients (84%). Four patients with abnormal vocal-cord movement were identified with ultrasound and underwent laryngoscopy showing impaired motion of one vocal cord. For 66 of 415 patients (16%), vocal-cord movement could not be evaluated with ultrasound. Only 45 of these patients went on to laryngoscopy and one patient with impaired vocal-cord motion was identified.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study demonstrates the motion of the vocal cords can be assessed using ultrasound prior to thyroid and parathyroid surgery in many people. In spite of this, laryngoscopy remains the gold standard for assessing the motion and anatomy of the vocal folds. Seeing the vocal cords with a laryngeal mirror and light provides much more information than indirectly examining the vocal cords with an ultrasound. There is no cost associated with a mirror examination. For patients that cannot tolerate a mirror exam, flexible fiberoptic laryngoscopy is well tolerated and also provides much more information about the vocal cords than an ultrasound. For surgeons performing their own ultrasounds, this may be a useful additional technique, but certainly is not a replacement for proper viewing of the vocal cords. The use of ultrasonography to see the vocal cords uses the most expensive possible equipment and provides the least amount of useful information.

— Ronald B. Kuppersmith, MD, FACS

ATA THYROID BROCHURE LINKS

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.

Laryngoscopy: any technique to view the motion, anatomy, and function of the vocal cords and laryngeal (voice box) structures.



THYROID CANCER

Is obesity a risk factor for thyroid cancer?

BACKGROUND

Thyroid cancer is common and appears to be increasing in incidence, especially among women. A number of reasons for this have been raised, including increased detection of nodules due to the more frequent use of neck imaging studies like CT and MRI scans that include the neck. Obesity has also increased over time and currently there is worldwide concern regarding the high prevalence of obesity and its associated medical conditions. Additionally, obesity has been associated with increased risk of a number of different cancers. These authors sought to determine whether obesity was associated specifically with an increased risk of thyroid cancer.

THE FULL ARTICLE TITLE

Han JM et al. Obesity is a risk factor for thyroid cancer in a large, ultrasonographically screened population. *Eur. J. Endocrinol.* 2013. 168:879-886.

SUMMARY OF THE STUDY

This was a very large study of 15,068 individuals (8491 men and 6577 women) who participated in a voluntary health screening study in Seoul, Korea from January 2007 through December 2008. All individuals received a thyroid ultrasound and thyroid fine needle aspiration biopsy of any discovered thyroid nodules as per a defined protocol. A variety of measurements including height and weight, for calculation of the body mass index (BMI), were obtained. A total of 1427 nodules were biopsied which led to the finding of thyroid cancer in 267 individuals. Most of the thyroid cancers were papillary thyroid cancers (98.5%) and most were less

than 1 cm in size (76%). These investigators found an association between increasing BMI and increased risk of thyroid cancer in women. Women with thyroid cancer were more likely to be obese than women without thyroid cancer in this study. This relationship between obesity and risk of thyroid cancer was not observed in the men in this study.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Obesity appears to be a risk factor for thyroid cancer in women. Future studies are needed to clarify the nature of this association and identify the potential biological mechanisms involved. This study importantly identified a potentially modifiable risk factor for thyroid cancer, namely obesity.

— Whitney Woodmansee, MD

ATA THYROID BROCHURE LINKS

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

ABBREVIATIONS & DEFINITIONS

Body mass index (BMI) — Calculated as body weight in kilograms divided by height in meters squared. A person with a BMI greater than or equal to 25 is considered overweight and a person with a BMI greater than or equal to 30 is considered obese.



THYROID CANCER

Is there a relationship between thyroid cancer and Hashimoto's thyroiditis?

BACKGROUND

Thyroid cancer is the fastest rising cancer in women and the most common type is papillary cancer. Hashimoto's thyroiditis is the most common cause of hypothyroidism, which is mostly seen in women. When thyroid cancers are removed at the time of surgery, the cellular changes of Hashimoto's thyroiditis is commonly seen surrounding the thyroid cancer. There has been a long standing debate regarding the relationship between thyroid cancer and Hashimoto's thyroiditis. Specifically, it is unclear if the thyroid inflammation seen in Hashimoto's thyroiditis causes the cancer or if the inflammation is the result of the cancer. Also, it is uncertain if thyroid cancers surrounded by inflammation behave better or worse than those without the surrounding thyroiditis. The goal of the study was to examine the relationship between papillary thyroid cancer and Hashimoto's thyroiditis.

THE FULL ARTICLE TITLE

Lee JH et al. The association between papillary thyroid carcinoma and histologically-proven Hashimoto's thyroiditis: a meta-analysis. *Eur J Endocrinol*. December 4, 2012.

SUMMARY OF THE STUDY

The authors examined the data of 38 published studies that previously looked at the relationship between

thyroid cancer and Hashimoto's thyroiditis. Hashimoto's thyroiditis was more likely to be detected around papillary cancer (40%) than around benign thyroid nodules (21%), in female patients (23%) compared to males (11%) and in papillary thyroid cancer (17%) compared to other types of thyroid cancer (8%). Patients with papillary cancer that also had Hashimoto's thyroiditis were less likely to have cancer recurrence on follow up as compared with those with papillary cancer in the absence of Hashimoto's thyroiditis.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The current study showed that Hashimoto's thyroiditis is commonly seen surrounding papillary thyroid cancer and, when present, it is associated with a better prognosis. Further studies are needed to confirm this association.

— Mona Sabra, MD

ATA THYROID BROCHURE LINKS

Thyroid cancer: <http://www.thyroid.org/cancer-of-the-thyroid-gland>

Hypothyroidism: <http://www.thyroid.org/what-is-hypothyroidism>

Thyroiditis: <http://www.thyroid.org/what-is-thyroiditis>

ABBREVIATIONS & DEFINITIONS

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

Hashimoto's thyroiditis: the most common cause of hypothyroidism in the United States. It is caused by antibodies that attack the thyroid and destroy it.

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

Thyroiditis: inflammation of the thyroid, most commonly caused by antibodies that attack the thyroid as seen in Hashimoto's thyroiditis and post-partum thyroiditis. It can also result from an infection in the thyroid.



THYROID CANCER

The risk of cancer increases when a thyroid nodule is larger than 2cm

BACKGROUND

Thyroid nodules are very common, occurring in up to 50% of the population over 60 years old. Many of these nodules are small (<1 cm). In the evaluation of thyroid nodules, factors such as young age, male gender, prior head and neck irradiation and family history of thyroid cancer can increase the risk of cancer. However, it is not known whether or not larger nodules have a higher risk of being cancerous than smaller ones. Certainly larger nodules in other organs such as in the lung carry a higher risk of cancer. In this study, the authors examined the effect on nodule size on the risk of thyroid cancer.

THE FULL ARTICLE TITLE

Kamran SC et al. Thyroid nodule size and prediction of cancer. *J Clin Endocrinol Metab* 2013;98:564-70. Epub December 28, 2012; doi: 10.1210/jc.2012-2968.

SUMMARY OF THE STUDY

A total of 7348 thyroid nodules greater than 1 cm from the records of 4955 consecutive patients referred to a single hospital for evaluation of thyroid nodules from 1995-2009 were studied. A total of 49% of the nodules were between 1 to 1.9 cm, 27% between 2 to 2.9 cm, 14% between 3 to 3.9 cm and 11% were greater than 4 cm. Based on the findings at surgery, 13% of the nodules were cancers and of these, papillary thyroid cancer was the most common type (86%). A diagnosis of cancer was made in 10.5% of nodules measuring 1 – 1.9 cm. The risk of cancer increased to 15% of nodules greater than 2 cm. In nodules that were larger than this 2 cm threshold, the cancer risk was unchanged. However, the proportion of

rarer types of thyroid cancer such as follicular and Hurthle cell cancer did progressively increase with increasing nodule size.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This is the largest study to date correlating thyroid nodule size and the risk of cancer. This study shows that nodules >2 cm hold a higher risk of cancer than cancers <2 cm. While this risk does not increase beyond 2.0 cm, the proportion of rarer types of thyroid cancer does. However, this was a retrospective study from one single institution and thus the significance of the results must be confirmed.

— Philip Segal, MD

ATA THYROID BROCHURE LINKS

Thyroid cancer: <http://www.thyroid.org/cancer-of-the-thyroid-gland>

Thyroid Nodules: <http://www.thyroid.org/what-are-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.

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



THYROID CANCER

The BRAF V600E gene mutation in papillary thyroid cancer is associated with more rapid cancer growth and a higher death rate

BACKGROUND

Papillary thyroid cancer is usually a slow growing cancer with a low death rate of about <5%. A higher risk of death is found in more aggressive cancers which at initial diagnosis and surgery are found to have spread from the thyroid gland to the tissues around the thyroid and to other parts of the body. These features are used to stage or classify the cancer in order to predict the chances of cure and/or death and to determine the appropriate treatment. A genetic mutation in cancer cells, BRAF V600E, is associated with a higher death rate than cancers without the mutation. This gene mutation is found in 45% of papillary thyroid cancers. This study was done to confirm the incidence of this mutation in a large number of patients with papillary thyroid cancer in different countries and to determine if this mutation increases the risk of death beyond that predicted by the stage identified at the initial surgery.

THE FULL ARTICLE TITLE

Xing M et.al. Association between BRAF v600e mutation and mortality in patients with papillary thyroid cancer. JAMA 2013; Vol. 309: pp.1493-1501.

SUMMARY OF THE STUDY

A total of 1849 patients with papillary thyroid cancer at 13 medical centers in 7 countries were studied by reviewing their medical records. The cancer tissue of each patient was analyzed for the BRAF V600E mutation.

A total of 45.7% of the cancers were positive for the mutation. A total of 5.3% of the patients with the mutation had died, compared to 1.1% of the patients without the mutation. A greater percentage of BRAF V600E patients had higher stages of cancer, suggesting a faster and more aggressive growth pattern compared to the mutation negative patients. This higher stage (stage 4) accounted for the higher death rate. When papillary thyroid cancer was discovered in stages 1-3, the death rate was the same as other patients in stages 1-3 without the mutation.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The conclusion of the study is that although papillary thyroid cancer overall has a low risk of death from the cancer and is usually slow growing, the presence of the BRAF V600E mutation in the cancer predicts a faster rate of growth, spread and a higher risk of death. This suggests that all papillary thyroid cancers should be tested for the BRAF V600E mutation. Those patients with cancers that are positive may benefit from more aggressive therapy, although that needs to be studied.

— Jerrold M. Stock, MD

ATA THYROID BROCHURE LINKS

Thyroid cancer: <http://www.thyroid.org/cancer-of-the-thyroid-gland>

ABBREVIATIONS & DEFINITIONS

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

Mutation: A permanent change in one of the genes.

BRAF gene: this is gene that codes for a protein that is involved in a signaling pathway and is important for cell growth. Mutations in the BRAF gene in adults appear to cause cancer.

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



ATA Alliance for Thyroid Patient Education

WELCOME

The American Thyroid Association is pleased to welcome our two newest members, **Thyroid Federation International** and **Thyroid Cancer Canada**, to the 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 towards the improvement of thyroid education and resources for patients.

WHO WE ARE (in alphabetical order)

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 AND THYROID FOUNDATION

www.gdatf.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.

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



Thyroid Cancer Canada
Cancer de la thyroïde Canada



Light of Life Foundation
checkyourneck.com





ATA Alliance for Thyroid Patient Education

Continued...

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.

THYROID CANCER CANADA

www.thyroidcancercanada.org

Phone: 416-487-8267

Fax: 416-487-0601

e-mail: info@thyroidcancercanada.org

Thyroid Cancer Canada is a non-profit organization founded in 2000. The organization works towards creating an environment in which people who are dealing with thyroid cancer, especially the newly diagnosed, are met with support and information. Their goals & objectives include facilitating communication among thyroid cancer patients, providing credible information about the disease, providing emotional support, and assisting thyroid cancer patients with voicing their needs to health care professionals and those who are responsible for health care policy.

THYROID FEDERATION INTERNATIONAL

<http://www.thyroid-fed.org/>

e-mail: tfi@thyroid-fed.org

Thyroid Federation International (TFI) was established in Toronto in 1995. Thyroid Federation International aims to work for the benefit of those affected by thyroid disorders throughout the world by providing a network of patient support organizations.



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



Thyroid Cancer Canada
Cancer de la thyroïde Canada



Light of Life Foundation
checkyourneck.com





ATA Alliance for Thyroid Patient Education CALENDAR OF EVENTS

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

ATA Conferences www.thyroid.org

October 16–20, 2013 — San Juan, Puerto Rico

83rd Annual Meeting of the American Thyroid Association (ATA)

www.thyroid.org

ThyCa Conferences www.thyca.org

September 27–29, 2013 — Philadelphia, Pennsylvania

16th International Thyroid Cancer Survivors' Conference -

See more at: <http://www.thyca.org/support/conferences/>

Every Month

ThyCa Support Group Meetings around the United States and in Canada, Costa Rica, and Philippines. Complete list of groups, meetings, and contacts at www.thyca.org

The ATA is Getting Social



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www.twitter.com/@thyroidfriends



Facebook

www.facebook.com/ThyroidAssociation

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