



## THYROID CANCER

### Small thyroid bed masses found after initial treatment of thyroid cancer have a benign outcome

#### BACKGROUND

While few patients with thyroid cancer will die of their cancer, they do have a 15-25% risk of cancer recurrence in the neck area after the initial total thyroidectomy, even if they undergo radioactive iodine therapy. Periodic neck ultrasound to evaluate for cancer recurrence is part of the routine follow up for patients with thyroid cancer. Masses found on ultrasound in the neck area where the thyroid is located can be malignant representing cancer recurrence or cancer spread to lymph nodes. However, most often they are benign representing fibrosis/scar tissue that develops after the thyroid surgery. Although frequently noted, there are no current guidelines regarding the management of small thyroid bed masses found on ultrasound after the initial therapy for thyroid cancer. The goal of this study was to determine the clinical impact and rate of growth of these small thyroid bed masses.

#### THE FULL ARTICLE TITLE:

Rondeau G et al. Ultrasonographically detected small thyroid bed nodules identified after total thyroidectomy for differentiated thyroid cancer seldom show clinically significant structural progression. *Thyroid*. 2011 Aug;21(8):845-53.

#### SUMMARY OF THE STUDY:

Evaluation of 1531 patients with thyroid cancer at Memorial Sloan-Kettering Cancer Center between August 1998 and June 2009 shows that 521 (34%) had thyroid bed nodules identified on the first follow up neck ultrasound performed after their initial treatment. This study included 191 patients who had at least one small thyroid bed mass noted on the first neck ultrasound (average size of 5 mm) and at least two additional follow-up exams. All patients underwent total thyroidectomy and 84% of patients also had radioactive iodine therapy. Only 17 (9%) of these patients had an increase in size

(≥3 mm in the largest dimension) of the thyroid bed mass during a mean follow-up of 7 years. A total of 3 of the 17 patients had a fine-needle aspiration biopsy which showed papillary thyroid cancer. The remaining 14 patients were followed without biopsy or treatment. Most thyroid bed masses showed only minor growth over several years (average rate of growth was 1.3 mm per year). Only 1 patient had significant growth from 9 mm on the first exam to 16 mm 40 months later and then 27 mm approximately 48 months later. There were no specific clinical or ultrasound features that reliably predicted which nodules were likely to grow.

#### WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study shows that only a small percentage of small thyroid bed masses found after initial therapy in patients with thyroid cancer increased in size over several years, even if they were cancerous masses. These masses, whether benign or cancerous, grow slowly with no evidence of local invasion into other neck structures. These small thyroid bed masses can be monitored closely with serial ultrasounds rather than exposing the patients to the risks of additional radioactive iodine therapy or second surgery, which has a higher risk of complications.

— Alina Gavrilă, MD

#### ATA THYROID BROCHURE LINKS

Thyroid cancer: [http://thyroid.org/patients/patient\\_brochures/cancer\\_of\\_thyroid.html](http://thyroid.org/patients/patient_brochures/cancer_of_thyroid.html)

Radioactive Iodine Therapy: [http://thyroid.org/patients/patient\\_brochures/radioactive.html](http://thyroid.org/patients/patient_brochures/radioactive.html)

Thyroid Surgery: [http://thyroid.org/patients/patient\\_brochures/surgery.html](http://thyroid.org/patients/patient_brochures/surgery.html)

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## **THYROID CANCER**, continued

### **ABBREVIATIONS & DEFINITIONS**

**Thyroid cancer:** cancer arising from the follicular cells of the thyroid gland that accounts for the vast majority of thyroid cancers and has a more favorable prognosis and long-term survival. It is represented by papillary and follicular thyroid cancers.

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

**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-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.

**Neck ultrasound:** a common imaging test that uses soundwaves to create a picture of the thyroid gland and surrounding tissues. Ultrasound is also frequently used to guide the needle into a nodule during a thyroid nodule biopsy.

**Benign mass:** non-cancerous growth.

**Malignant mass:** cancerous growth.

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

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

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