



THYROID CANCER

Determining which thyroid cancer patients are at low risk for cancer recurrence

BACKGROUND

Patients with thyroid cancer initially undergo surgery to remove the thyroid. This may be followed by radioactive iodine therapy. Because only a relatively few patients will die of thyroid cancer, the main risk is for cancer recurrence. Identification of patients at high risk for cancer recurrence would allow more aggressive follow up and treatment. Identification of those patients at low risk would decrease the need for close follow up. The aim of this study was to find out how well testing of patients with thyroid cancer at 8 to 12 months following initial surgery could identify high and low risk patients for cancer recurrence.

THE FULL ARTICLE TITLE:

Castagna MG et al. Delayed risk stratification, to include the response to initial treatment (surgery and radioiodine ablation), has better outcome predictivity in differentiated thyroid cancer patients. *Eur J Endocrinol* 2011;165:441-6. Epub July 12, 2011; doi: 10.1530/eje-11-0466.

SUMMARY OF THE STUDY

The authors studied 512 patients with papillary or follicular thyroid cancer at the University of Siena in Italy. All patients had a thyroidectomy followed by radioactive iodine. Using guidelines from the American and European Thyroid Associations, patients were separated into risk groups with slightly less than half of patients being defined as low risk of developing recurrent cancer and the rest being classified as intermediate or high risk. At 8 to 12 months following initial thyroid cancer treatment, the patients had a number of tests including: clinical examination, thyroglobulin blood tests, neck ultrasound and sometimes whole body radioactive iodine scans and were re-assigned

into high and low risk categories. If all the tests were completely normal, the patients were considered to be in “clinical remission” and defined as “low risk”. If one or more of the tests was abnormal, then patients were defined as “high risk”. About 1/3rd of patients (31%, 159/512) were placed in the high risk category and the rest (69%, 353/512) fell into the low risk category.

As expected, the risk of dying from cancer was very low (1.2%, 8/512 patients) and no low risk patient died of this disease. Over 95% of the low risk patients stayed in remission while ~1/3rd of high risk patients went into remission over the study period. The recurrence rate of the thyroid cancer was the same in both the high and low risk patients, ranging from 2.3-4%.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The risk of dying from thyroid cancer is very low. Also, while tests may become positive (blood tests or ultrasound), <5% of patients will have a recurrence of the cancer that will require further treatment. This study suggests that >95% of patients with thyroid cancer who have completely normal thyroid cancer tests at 8-12 months after initial treatment will remain in remission. In addition, 1/3rd of patients with initially positive cancer tests will achieve a remission. While these results need to be confirmed, this should be reassuring to thyroid cancer patients.

— Anna M. Sawka, MD, PhD, FRCPC

ATA THYROID BROCHURE LINKS

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



THYROID CANCER, continued

ABBREVIATIONS & DEFINITIONS

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

Follicular thyroid cancer: the second 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.

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).