



## 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](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).