



THYROID CANCER

Patients with spread of papillary thyroid cancer to the lymph nodes at the time of their diagnosis are more likely to experience return of their cancer to lymph nodes over time

WHAT IS THE STUDY ABOUT?

When papillary thyroid cancer spreads outside of the thyroid, it initially spreads into the lymph nodes in the neck around the thyroid. The spread of thyroid cancer into lymph nodes occurs frequently and is often detected at the time of initial surgery. Return of thyroid cancer after the initial surgery also is not uncommon. Despite these observations, neither factor changes the generally good prognosis of thyroid cancer and the low mortality rates. Because of this, it is unclear whether extensive lymph node surgery has any effect on recurrence of thyroid cancer in the lymph nodes of the neck. Understanding risks associated with cancer recurrence will help physicians and patients determine the best treatment for thyroid cancer. This study was done to identify diagnostic features of papillary thyroid cancer associated with recurrence of the cancer to lymph nodes in the neck.

THE FULL ARTICLE TITLE:

Baek et al. Clinical risk factors associated with cervical lymph node recurrence in papillary thyroid carcinoma. *Thyroid* 2010;20:147-52.

WHAT WAS THE AIM OF THE STUDY?

The aim of this study was to identify diagnostic features of papillary thyroid cancer associated with recurrence of the cancer to lymph nodes in the neck.

WHO WAS STUDIED?

The study reviewed 189 patients with papillary thyroid cancer who had undergone surgical removal of the thyroid from 1992 through 2003 and had at least 2 years of follow-up. Within this group were 33 patients (17%) found to have recurrence of the cancer to neck lymph nodes and 156 (83%) that did not have any spread to neck lymph nodes.

HOW WAS THE STUDY DONE?

The patients' medical records were reviewed. Patients who had been diagnosed with spread of the cancer to the neck lymph nodes either prior to thyroidectomy or who were

suspected to have spread during the surgery underwent more extensive surgery that removed lymph nodes from the neck along with the thyroid gland. After the initial surgery, patients were monitored every 3 to 6 months for any return of thyroid cancer. On average, patients were followed for 81 months after the initial surgery.

WHAT WERE THE RESULTS OF THE STUDY?

Only 11 of the 189 patients were treated initially with a partial thyroidectomy and none of these patients had recurrence of the thyroid cancer. Of the 178 patients treated with a total thyroidectomy, 18.5% had recurrence of the cancer to the neck lymph nodes over time. Characteristics associated with recurrence of thyroid cancer to the neck lymph nodes included: 1) cancer size > 2 cm, 2) presence of spread of cancer beyond the thyroid gland at the time of initial surgery and 3) spread of cancer to neck lymph nodes at the time of initial surgery. Only 10% of 130 patients without initial spread of cancer to neck lymph nodes ultimately developed spread of cancer to neck lymph nodes. The return of cancer in these cases involved multiple regions of the neck on the side of the neck where the cancer was removed.

HOW DOES THIS COMPARE WITH OTHER STUDIES?

The authors of this study conclude that if there is no spread of papillary thyroid cancer to the neck lymph nodes at the time of initial surgery, extensive surgery to remove neck lymph nodes may not be needed. Several studies have found a similar result, while others suggest that routine, more extensive removal of neck lymph nodes is warranted at the time of initial surgery. Other studies have found additional risk factors for neck lymph node papillary thyroid cancer recurrence, including the number of lymph nodes with cancer at the time of initial study, spread of the thyroid cancer initial tumor beyond the thyroid gland, cancer size > 4 cm and elevations of blood thyroid cancer markers.

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THYROID CANCER, continued

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study emphasizes the challenge that patients and physicians currently face in choosing the best surgery for papillary thyroid cancer. Most patients do well and do not die from papillary thyroid cancer. More extensive initial surgery may be associated with more surgical risk but also may benefit patients who are more likely to have return of their cancer. Also, more extensive initial surgery may provide important information guiding future therapy decisions. Future well-designed studies could clarify how to help patients remain free of disease with targeted, personalized therapy.

— Ruth Belin, MD

ATA THYROID BROCHURE LINKS

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

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

ABBREVIATIONS & DEFINITIONS

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.

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

Cancer recurrence — return of cancer after an initial treatment that was successful in destroying all detectable cancer at some point