



THYROID CANCER

Thyroid cancer in children is increasing and is more common in girls than in boys

WHAT IS THE STUDY ABOUT?

Thyroid cancer is the most common endocrine cancer in children. As in adults, thyroid cancer in children includes papillary, follicular and medullary thyroid cancer. However, children tend to have more advanced cancer when diagnosed, with a greater frequency of lymph-node metastases and spread outside of the neck. Most studies on thyroid cancer in children are relatively small or are from single institutions, which may not fully represent the features of this disease, including the long-term response to therapy. This is particularly important, since healthy children have a long life expectancy that may not be achieved in children with thyroid cancer, even with aggressive therapy. The aim of this study was to examine outcomes and predictors of survival for children with thyroid cancer.

THE FULL ARTICLE TITLE:

Hogan AR et al. Pediatric thyroid carcinoma: incidence and outcomes in 1753 patients. *J Surg Res* 2009;156:167-72.

WHAT WAS THE AIM OF THE STUDY?

The aim of this study was to examine outcomes and predictors of survival for children with thyroid cancer.

WHO WAS STUDIED?

This study was performed on the records from the Surveillance, Epidemiology and End Results (SEER) registry from 1973 through 2004 for all patients with thyroid cancer who were younger than 20 years of age.

HOW WAS THE STUDY DONE?

The patient's records were reviewed as to the type cancer diagnosed, whether it had spread at the time of diagnosis, what therapy they received and the response to therapy.

WHAT WERE THE RESULTS OF THE STUDY?

A total of 1753 children with thyroid cancer were identified during the study period. The rate of new cancers has been growing at ~1.1% per year over the 31 year study period. The average age at the time of diagnosis was 15.9 years. Girls outnumbered boys more than 4 to 1. A total of 95% were older than 10 years of age, and 74% were in the 15 through 19 years age range. The most common cancer was papillary or follicular variant of papillary

cancer in 83%, followed by follicular cancer in 10% and medullary cancer in 7.6%. Spread of the cancer outside of the neck was found in 7.6% of the patients at the time of diagnosis and was most commonly found in the lung. Spread of the cancer to the lymph nodes in the neck were found in 46%. Surgery was performed on 97% of the patients, with most receiving a total thyroidectomy. Half of the patients received some form of radiation therapy.

The vast majority of children with thyroid cancer recovered from their cancer, with >90% of patients alive 30 years after their diagnosis (30 year survival rate). The children with medullary cancer had a slightly worse prognosis, with a 30 year survival rate of 86%. Patients who had spread of the cancer outside of the neck at the time of initial diagnosis had a significantly worse outcome as compared with patients whose cancer was confined to the neck. Survival in patients who had surgery, regardless of the extent, had significantly longer survival as compared with patients who did not have surgery.

HOW DOES THIS COMPARE WITH OTHER STUDIES?

Other studies have shown an increase in the rate of thyroid cancer in children. This has been suggested to be due to increased exposure of radiation treatment for other cancers. Thyroid cancer also has been reported to be more common in girls than boys.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The incidence of thyroid cancer in children is increasing and is more common in girls than in boys, who also had a better survival rate. However, thyroid cancer has an excellent survival rate in the majority of children. Those children who had either spread of the cancer outside of the neck at the time of diagnosis, a cancer other than papillary thyroid cancer or did not have surgery were more likely to die of their thyroid cancer.

— Alan Farwell, MD

ATA THYROID BROCHURE LINKS

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

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THYROID CANCER, continued

ABBREVIATIONS & DEFINITIONS

SEER: Surveillance, Epidemiology and End Results program, a nation-wide anonymous cancer registry generated by the National Cancer Institute that contains information on 26% of the United States population. Website: <http://seer.cancer.gov/>

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

Follicular thyroid cancer – the second most common type of thyroid cancer.

Medullary thyroid cancer – a relatively rare type of thyroid cancer that also may be inherited.

Total thyroidectomy – Surgery to remove the entire thyroid gland.