



## THYROID CANCER

### WHAT IS THE STUDY ABOUT?

There are two main types of thyroid cancer: Papillary thyroid cancer and Follicular thyroid cancer. It has long been known that more people died if they had Follicular thyroid cancer than if they had Papillary thyroid cancer. This study is trying to find if this was because the follicular cancer was a worse cancer or if there are other reasons for this difference.

**THE FULL ARTICLE TITLE:** Verburg FA, Macier U, Luster M, Reiners C. Histology does not influence prognosis in differentiated thyroid carcinoma when accounting for age, tumor diameter, invasive growth and metastasis. *Eur J Endocrinol* 2009;160:619-24.

### WHAT WAS THE AIM OF THE STUDY?

To determine if the type of thyroid cancer, papillary or follicular, by itself affects how many people die of the cancer.

### WHO WAS STUDIED?

The investigators reviewed the records of 875 patients with Papillary thyroid cancer and 350 with Follicular thyroid cancer who were treated at the University of Würzburg (Germany) from January 1978 through December 2002. All patients had been treated with surgery to remove the entire thyroid followed by radioactive iodine therapy, except for patients with a very small papillary thyroid cancer (<1 cm).

### HOW WAS THE STUDY DONE?

The records of the patients were reviewed for many factors including age, sex, size of the tumor, whether there was a single or multiple cancers in the thyroid, whether the cancer spread into the surrounding fat and muscle, whether the lymph nodes in the neck were involved with cancer, and whether the cancer had spread beyond the neck to other tissues such as the lung, bone or liver.

### WHAT WERE THE RESULTS OF THE STUDY?

The average time the patients were followed was about 10 years. As has been known for a while, most people with either type of thyroid cancer survived their cancer. The 20-year thyroid cancer specific survival for all patients with Papillary thyroid cancer was 90.6% and for Follicular thyroid cancer was 73.7%. When patients with spread of the cancer to areas outside of the neck were not counted,

the survival for Papillary thyroid cancer was 93.1% and for Follicular thyroid cancer was 80.2% at 20 years. There was no difference in survival for patients with either type of thyroid cancer when the cancer had spread outside of the neck. Patients were more likely to survive their cancer if (1) it had not spread outside the neck; (2) were younger; (3) had a smaller cancer; and (4) the cancer had not spread into the tissues around the thyroid. More patients with Follicular thyroid cancer died because they were older, had larger cancers, and more frequently had spread of their cancer outside the neck. Thus, the type of cancer, Papillary thyroid cancer or Follicular thyroid cancer, did not by itself affect survival of patients.

### HOW DOES THIS COMPARE WITH OTHER STUDIES?

Several other studies have shown that advanced age, large tumor size, and spread outside the neck increase the risk of death from thyroid cancer, and that patients with follicular thyroid cancer usually present with more of these features than those with papillary cancer. Some studies have indicated that how these cancers look under the microscope does predict who are more likely to die of their cancer.

### WHAT ARE THE IMPLICATIONS OF THIS STUDY?

While most patients with thyroid cancer do not die as a result of their cancer, the key risk factors for dying from Papillary thyroid cancer or Follicular thyroid cancer are older age, larger cancer size, spread of the cancer into other tissues surrounding the thyroid, and whether there is spread of the cancer outside of the neck. When these factors are taken into consideration, the cancer type is less important in determining prognosis.

— Glenn Braunstein, 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)

### ABBREVIATIONS & DEFINITIONS

**Papillary thyroid cancer** — the most common type of thyroid cancer

**Follicular thyroid cancer** — the second most common type of thyroid cancer