



## THYROID CANCER

# Follicular variant of papillary thyroid cancer has a better prognosis than classic or tall-cell variant of papillary thyroid cancer

### BACKGROUND

Papillary thyroid cancer is the most common type of thyroid cancer. There are 3 types or variants of papillary thyroid cancer that make up the majority of these cancers: classic, follicular and tall-cell. The difference between these various papillary cancers is how they look under the microscope. The tall-cell variant of papillary thyroid cancer is the least common and more aggressive than follicular or classic papillary thyroid cancer, with higher risk for the spread of the cancer to lymph nodes in the neck and higher rates of recurrence of the cancer. This study compares the 3 variants of papillary thyroid cancer in terms of the patient characteristics as well as pathologic characteristics. The authors are looking to provide physicians with useful information that may help to improve and personalize the care of patients with these variants of papillary thyroid cancer.

### THE FULL ARTICLE TITLE

Shi X et al. Differential clinicopathological risk and prognosis of major papillary thyroid cancer variants. *J Clin Endocrinol Metab* 2016;101:264-74. doi: 10.1210/jc.2015-2917

### SUMMARY OF THE STUDY

The study included 6282 patients (4799 women and 1483 men) from 26 hospitals in 14 countries. The average age of patients was 44 years old and they were followed for an average of 37 months. About 75% of cases were classic papillary thyroid cancer, 18% follicular and 4% tall-cell

variants. Patients with the follicular variant of papillary thyroid cancer were seen to have less invasion of their tumors, less frequently involved lymph nodes, lower stages of papillary thyroid cancer and didn't require radioactive iodine treatment as frequently as the classic and tall-cell variants. Cancer recurrence was seen in 16% of classic, 9% follicular, and 27% in tall-cell papillary thyroid cancer. The rate of death was lowest in the follicular variant 0.6%, followed by 2.5% of classic and 6.7% of tall-cell. When they looked only at patients under age 45, the risk for recurrence and death was not different between the three variants of papillary thyroid cancer, however, those younger than age 45 had slightly greater rate of death than the other variants.

### WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The results of this study show that the three major papillary thyroid cancer variants have an order of risk: tall-cell > classic > follicular. This is important for patients because it helps the physician customize management of each patient's cancer instead of requiring all patients to be treated the same way. This would be especially important for patients with the follicular variant of papillary thyroid cancer which this study showed have better outcomes than both classic and tall-cell papillary thyroid cancer.

—Wendy Sacks, MD

### ATA THYROID BROCHURE LINKS

Thyroid cancer: <http://www.thyroid.org/thyroid-cancer/>

### ABBREVIATIONS & DEFINITIONS

**Papillary thyroid cancer:** the most common type of thyroid cancer. There are 3 variants of papillary thyroid cancer: classic, follicular and tall-cell.

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

**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).