



## THYROID CANCER

### Are NIFTP tumors truly benign?

#### BACKGROUND

The incidence of thyroid cancer has been steadily rising, although the death rate from thyroid cancer has not changed. This is largely due to an increase in diagnosis of low-risk thyroid cancers. One such cancer is the encapsulated follicular variant papillary thyroid carcinoma. Outcomes for this cancer are particularly good and some feel that it may not even be a cancer at all, but rather a benign tumor. This has prompted recent work to rename this to “noninvasive follicular thyroid neoplasm with papillary-like nuclear features” (NIFTP). The incidence of NIFTP tumors has been reported to be between 16-23% and, when properly diagnosed using strict pathologic criteria, is felt to have a very favorable prognosis. However, the long-term effects of reclassifying this tumor have not been thoroughly studied. In the current study the authors reviewed thyroid cancer cases within a large tertiary care center to characterize the incidence of NIFTP tumors and to determine whether it is truly a benign tumor.

#### THE FULL ARTICLE TITLE

Parente DN et al 2018 Clinical safety of renaming encapsulated follicular variant of papillary thyroid carcinoma: is NIFTP truly benign? *World J Surg* 42:321–326. PMID: 28828746.

#### SUMMARY OF THE STUDY

The authors reviewed all the pathology reports and specimens from all the patients who had surgery and were subsequently diagnosed with papillary thyroid cancer between December 2004 and February 2013 at a single, high volume academic center in North America. From

these they identified 903 NIFTP tumors diagnosed using previously published criteria. The authors then applied even more rigorous criteria to these cases to identify a group of 102 (2.1%) “strictly diagnosed” NIFTP tumors. From these they calculated which of the NIFTP cases experienced an “adverse oncologic outcome” which they defined as patients whose cancer had spread to neck lymph nodes at the time of their initial treatment, as well as those whose cancer subsequently spread to neck lymph nodes or other organs in the body. They hypothesized that if NIFTP tumors were truly benign then very few patients would develop an adverse oncologic outcome.

Of the 102 cases that were analyzed, 77% were female and the average age was 48.6 years. Most (77.8%) were treated with a total thyroidectomy and 45 (44%) patients received radioactive iodine therapy. A total of 6 of the 102 patients (6%) had an adverse oncologic event (5 spread to neck lymph nodes and 1 to lungs).

#### WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The overall incidence of NIFTP tumors in this study was lower than expected; however, the small number of adverse oncologic events (6%) should not be dismissed by physicians. This study shows that, while NIFTP tumors have an excellent prognosis and do not need aggressive treatment after initial surgery, these patients still need to be monitored periodically for cancer recurrence.

— Phillip Segal, MD

#### ATA THYROID BROCHURE LINKS

Thyroid Cancer (Papillary and Follicular): <https://www.thyroid.org/thyroid-cancer/>





## THYROID CANCER, continued

### ABBREVIATIONS & DEFINITIONS

**Papillary thyroid cancer:** the most common type of thyroid cancer. There are 4 variants of papillary thyroid cancer: classic, follicular, tall-cell and noninvasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP).

**Noninvasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP):** a new term has been used to describe a type of papillary thyroid cancer which is non-invasive. These cancers behave less aggressively than typical papillary thyroid cancer and have been shown to have low risk for recurrence and low risk for spread outside of the thyroid.

**Follicular variant of papillary thyroid cancer:** one of the subtypes of papillary thyroid carcinoma, which has been classified to three different forms: non-invasive follicular thyroid neoplasm with papillary-like nuclear features, invasive encapsulated and infiltrative FVPTC.

**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.

**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).

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