

# NIFTP

## Non-invasive Follicular Thyroid Neoplasm with Papillary-like Nuclear Features

### WHAT IS THE THYROID GLAND?

The thyroid gland is a butterfly-shaped endocrine gland that is normally located in the lower front of the neck. The thyroid's job is to make thyroid hormones, which are secreted into the blood and then carried to every tissue in the body. Thyroid hormones help the body use energy, stay warm and keep the brain, heart, muscles, and other organs working as they should.

### WHAT IS NIFTP?

Non-invasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP) is a new name for a very low risk thyroid tumor previously known as an Encapsulated Non-invasive Follicular Variant Papillary Thyroid Carcinoma. Although the cells in a NIFTP have features that look like papillary thyroid cancer, this finding alone does not mean NIFTPs are malignant. Because NIFTP tumors are not invasive and are contained within the tumor capsule, they are considered to have an extremely low risk of adverse outcomes like tumor recurrence or spread (metastasis). For correct diagnosis, NIFTP tumors must meet very stringent criteria—all related to how the tumor looks under the microscope. Key among these are the following requirements:

1. The tumor may not show evidence of invasion. This means the tumor cannot penetrate into its capsule, the blood vessel or the lymphatic channels within the tumor or thyroid.
2. The tumor must have a “follicular” growth pattern.
3. The entire tumor capsule must be reviewed by the pathologist
4. The tumor CAN NOT have any necrosis (i.e. areas of dead tumor cells that can be related to outgrowing its blood supply) or increased mitotic rate (i.e. faster speed of growth).
5. The tumor must have no or minimal (<1%) papillary appearance, and CAN NOT have the appearance of other thyroid cancer variants (some examples include insular, oncocytic, tall cell, columnar cell, diffuse sclerosing)

### WHY THE NAME CHANGE TO NIFTP?

Extensive literature has shown that NIFTP tumors are easily cured by conservative surgical removal, and do not require the aggressive treatments that are appropriate for other thyroid cancers. This tumor's prior name (follicular variant papillary thyroid cancer) contained the word cancer, leading to anxiety and mental anguish because of a “cancer” diagnosis, and frequent over-treatment with unnecessarily extensive surgery and radioactive iodine therapy. To decrease overtreatment and better reflect the extremely low risk associated with this tumor, an international panel of experts recommended that the name should be changed to remove the word “cancer”. These tumors were therefore renamed Non-invasive follicular thyroid neoplasm with papillary-like nuclear features—NIFTP.

### IF NIFTP IS NOT A CANCER, WHAT IS IT?

If left untreated, NIFTP is considered to have the potential to eventually develop invasive features and metastasize. NIFTP is therefore best thought of as a tumor in the very earliest stages of transition from a benign nodule to a true cancer. NIFTP is completely cured by surgical removal, and no further treatment following surgery is necessary.

### HOW IS NIFTP DIAGNOSED?

A thyroid tumor may be concerning for NIFTP due to several factors: the appearance of the tumor by ultrasound examination, an abnormal or atypical microscope appearance of cells removed from a tumor following *fine needle aspiration biopsy* (FNA), or because of a positive molecular genetic test in a biopsy specimen. However, the NIFTP diagnosis can only be made following surgical removal of the thyroid tumor and careful inspection of the tumor by a surgical pathologist to confirm the diagnostic criteria are met.

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### IF I AM DIAGNOSED WITH NIFTP, HOW SHOULD I BE TREATED?

Experts agree that following a diagnosis of NIFTP, additional surgery and radioactive iodine are not necessary and these treatments would only expose the person to greater side effects and risks without providing benefits. Patients diagnosed with NIFTP tumors should continue to have at least yearly follow up that includes a neck examination with their endocrinologist or surgeon. Alternative: Since NIFTP is still a relatively new diagnosis, many experts continue to suggest that patients with NIFTP have at least a yearly follow up with an endocrinologist or surgeon for a neck examination. Whether additional testing like routine neck ultrasonography, or blood tests for tumor markers like thyroglobulin should also be done yearly is unclear. Your follow up plan will require discussion with your treating provider, but will likely be far less intensive than follow up for thyroid cancer.



### FURTHER INFORMATION

Further details on this and other thyroid-related topics are available in the patient thyroid information section on the American Thyroid Association® website at [www.thyroid.org](http://www.thyroid.org).

For information on thyroid patient support organizations, please visit the [Patient Support Links](http://www.thyroid.org) section on the ATA website at [www.thyroid.org](http://www.thyroid.org)

