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# Thyroid Cancer

## Follicular Thyroid Cancer

### Definitions

#### **Thyroid gland:**

Located at the base of the throat, an organ that makes hormones affecting heart rate, blood pressure, body temperature, and weight.

**Follicular:** Affecting or growing in a pattern similar to thyroid follicles.

**Nodules:** Cellular growths in the thyroid gland. These growths are usually benign but may be cancerous.

**Pathologist:** A physician who examines tissues and fluids to diagnose disease in order to assist in making treatment decisions.

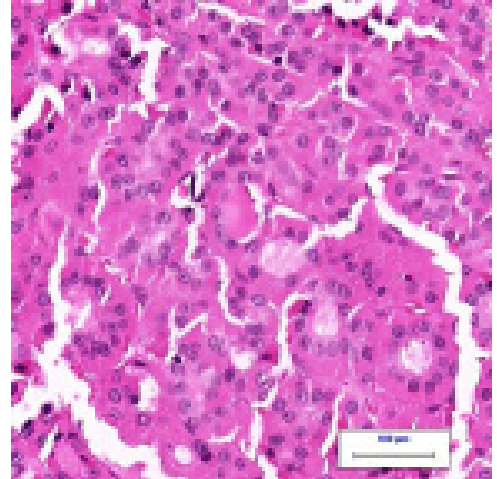
#### **What is follicular thyroid cancer?**

About 44,670 Americans are diagnosed with thyroid cancer each year, according to the National Cancer Institute. Thyroid cancer incidence is increasing at a faster rate among American men and women than any other type of cancer.

Follicular thyroid cancer makes up about 15 percent of these cases. Follicular thyroid cancer begins in the follicular cells and grows slowly; it can be treated successfully if diagnosed at an early stage. About 1,500 Americans die from all types of thyroid cancer each year. This relatively low death rate is due to successful early detection and treatment in most cases.

#### **Who is likely to have follicular thyroid cancer?**

Women are three times more likely than men to have follicular thyroid cancer. Most cases afflict individuals between the ages of 40 and 60. Potential risk factors include having a benign thyroid nodule, a family history of thyroid cancer, and too little iodine in the diet. Unlike papillary thyroid cancer, follicular thyroid cancer is rarely associated with exposure to high levels of radiation.



Follicular thyroid cancer.

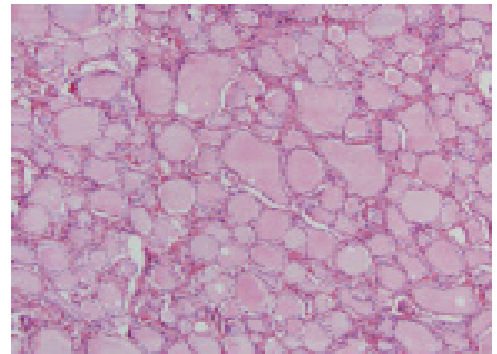
#### **What characterizes follicular thyroid cancer?**

Follicular thyroid cancer stems from nodules in the thyroid. Ninety percent of these nodules are benign and do not need to be treated. Cancerous nodules, however, can become life-threatening by spreading via blood vessels to other organs such as the lungs and bones, as well as to other tissues.

Nodules can be detected when your primary care physician checks your neck and throat and feels the thyroid for lumps. Otherwise, early thyroid cancer does not have symptoms. If the cancer grows, symptoms may include a lump in the front of the neck, hoarseness or voice changes, swollen lymph nodes in the neck, trouble swallowing or breathing, or throat or neck pain.

#### **How does the pathologist make the diagnosis?**

If your symptoms suggest the possibility of thyroid cancer, your primary care physician will order a **blood test** that the pathologist will check for abnormal levels of **thyroid-stimulating hormone (TSH)**. Too much or too little TSH shows that the thyroid is not working well.



Normal thyroid cells.

#### **What else does the pathologist look for?**

Your primary care physician may also order an **ultrasound and thyroid scan**, which are reviewed by radiologists. The removal of cells by **fine-needle aspiration (FNA)** or tissue by a **biopsy** are sent to the pathologist for examination. An ultrasound or thyroid scan can create images of thyroid nodules that the radiologist can view for signs of cancer. An FNA or a biopsy, however, are the only potential sure ways to diagnose cancer.

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## What kinds of questions should I ask my doctors?

Ask any question you want. There are no questions you should be reluctant to ask. Here are a few to consider:

- Please describe the type of cancer I have and what treatment options are available.
- What is the stage of my cancer?
- What are the chances for full remission?
- What treatment options do you recommend? Why do you believe these are the best treatments?
- What are the pros and cons of these treatment options?
- What are the side effects?
- Is your medical team experienced in treating the type of cancer I have?
- Can you provide me with information about the physicians and others on the medical team?
- If I want a second opinion, could you provide me with the names of physicians and/or institutions that you would recommend?

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## What is meant by the stage of the cancer?

Your pathologist and primary care doctor determine the cancer's **stage** to plan the best treatment. This process involves determining the size of the cancerous nodule, whether or not the cancer has spread and, if so, to what parts of the body. Follicular thyroid cancer spreads most often to the various organs, including lungs and bones, and rarely spreads to lymph nodes. Stage 1 cancers are small and confined to the thyroid, and stage 4 tumors have spread well beyond the thyroid. Stages 2 and 3 describe conditions in between these two extremes.

Staging may involve tests including **ultrasound, CT or MRI scans, chest x-rays, or whole body scans**. These tests enable the pathologist to determine where the cancer has spread and its stage.

## How do doctors determine what treatment will be necessary?

Your treatment will depend on the type of thyroid cancer you have, the size of the nodule, your age, and whether or not the cancer has spread. The pathologist consults with your primary care physician or specialist. Together, using their combined experience and knowledge, they determine treatment options most appropriate for your condition. It's important to learn as much as you can about your treatment options and make the decision that's right for you.

## What kinds of treatments are available for follicular thyroid cancer?

Follicular thyroid cancer may be treated with **surgery, external radiation therapy, thyroid hormone treatment, radioactive iodine therapy, or chemotherapy**. Many patients receive a combination of these treatments.

Surgery and external radiation therapy are **local therapies** that remove or destroy cancer in the thyroid. When the cancer has spread beyond the thyroid, these two therapies can control the disease in the thyroid. The most common surgical procedure for follicular thyroid cancer is the **total thyroidectomy** (removal of the thyroid), with **lobectomy** (removal of part of the thyroid) used in some cases of stage 1 cancer. In addition, a surgeon will perform a **lymphectomy** if the cancer has spread to nearby lymph nodes. External radiation therapy is generally used after surgery; this therapy uses high-energy beams projected from outside the body to destroy any remaining cancer.

Thyroid hormone treatment, radioactive iodine therapy, and chemotherapy are **systemic therapies** that are delivered through the bloodstream to destroy or stop the progression of cancer cells present throughout the body. These therapies also can reduce pain.

Any of these treatments may cause side effects and alter your normal activities. Ask your primary care physician or specialist to explain possible side effects thoroughly so that you know what to expect. If your treatment removes or destroys your entire thyroid, or a large portion of your thyroid, you will be required to take thyroid hormone pills for the rest of your life to replace the natural thyroid hormone. If the surgeon removes the parathyroid glands, located behind the thyroid, you will need to take calcium and vitamin D supplements for the rest of your life.

Follow-up care is very important because thyroid cancer comes back in up to 30 percent of all cases. Also, if you receive radioactive iodine therapy or external radiation therapy, you have an increased chance of developing other cancers later in your life. You should receive regular blood tests to check your levels of TSH and **thyroglobulin** (thyroid hormone stored in the thyroid). Your physicians also may recommend repeating some of the diagnostic and staging tests to see if the cancer has returned.

**Clinical trials** of new treatments for follicular thyroid cancer may be found at [www.cancer.gov/clinicaltrials](http://www.cancer.gov/clinicaltrials). These treatments are highly experimental in nature but may be a potential option for advanced cancers. Some trials may involve biologic therapy, which uses the natural defenses of the immune system to fight cancer.

**For more information**, go to [www.cancer.gov](http://www.cancer.gov) (National Cancer Institute), [www.medicinenet.com](http://www.medicinenet.com) (owned and operated by Web MD), or [www.thyca.org](http://www.thyca.org) (Thyroid Cancer Survivors' Association). Type the keywords **thyroid cancer** into the search box.