

Thyroid Nodules FAQ

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1 SYMPTOMS

What are the symptoms of a thyroid nodule?

The term *thyroid nodule* refers to any growth of thyroid cells into a lump within the thyroid. Most thyroid nodules do not cause any symptoms. Rarely, a nodule can cause pain, difficulty swallowing or breathing, hoarseness, or hyperthyroid symptoms.

2 CAUSES

What causes a thyroid nodule?

Thyroid cancer is the most important cause of a thyroid nodule. Fortunately, cancer occurs in less than 10% of nodules (see the [Thyroid Cancer brochure](#)). This means that about 9 of 10 nodules are benign (noncancerous); these include *colloid nodules*, *follicular neoplasms*, and *thyroid cysts*. *Autonomous nodules*, which overproduce thyroid hormone, can occasionally lead to hyperthyroidism. We do not know what causes most noncancerous thyroid nodules to grow.

3 DIAGNOSIS

How is a thyroid nodule diagnosed?

Most nodules are discovered during an examination of the neck for another reason. Blood tests of thyroid hormone (thyroxine, or T4) and thyroid-stimulating hormone (TSH) are usually normal. Specialized tests are necessary to determine whether a thyroid nodule is cancerous. You may be asked to undergo a thyroid fine needle biopsy, a thyroid scan, and/or a thyroid ultrasound

- **Thyroid fine needle biopsy.** This simple procedure is done in the doctor's office, and patients usually return home or to work after the biopsy without any ill effects. Your doctor will use a very thin needle to withdraw cells from the thyroid nodule. The cells are then examined under a microscope. A benign (noncancerous) result is found in 50% to 60% of biopsies. A definite cancer is found in about 5% of biopsies. A suspicious result, which is found in about 10% of biopsies, may lead to further testing (a thyroid scan) or surgery. In up to 20% of biopsies, there are not enough cells to make a diagnosis. These nodules may be re-evaluated with a second fine needle biopsy.
- **Thyroid scan.** A thyroid scan uses a small amount of a radioactive substance, usually radioactive iodine, to obtain a picture of the thyroid gland. A "cold" nodule means that the nodule is not functioning normally. A patient with a "cold" nodule is sent to have a fine needle biopsy of the nodule. A "functioning", or "hot", nodule means that the nodule is taking up radioactive iodine to a degree that is either similar to or greater than the uptake of normal cells. The likelihood of cancer in these nodules is very low.
- **Thyroid ultrasound.** Thyroid ultrasound, which uses sound waves to obtain a picture of the thyroid, can determine if a nodule is solid or cystic. The ultrasound can be used to keep an eye on benign thyroid nodules to see if they are growing. Thyroid ultrasound also can be used to localize the nodule and assist the placement of the needle within the nodule during a fine needle biopsy. Ultrasound is especially helpful if the nodule is hard to feel.

4 TREATMENT

How are thyroid nodules treated?

An experienced thyroid surgeon should remove all thyroid nodules thought to contain a thyroid cancer. Benign thyroid nodules need to be watched closely, with at least annual examinations. You may be given thyroid hormone suppression therapy to try to shrink the nodule.

ADDITIONAL PATIENT RESOURCES WWW.THYROID.ORG

For further details on this and other thyroid-related topics, please visit the patient resources section on the American Thyroid Association website at www.thyroid.org