

# Thyroid Nodules

## What You Should Know

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### **I was told that I have a ‘lump’ on my thyroid. Is it a cancer?**

Probably not. About 5% of us have thyroid nodules, and they are more common as we age. The chance that any given thyroid nodule is a cancer is about 5-10%. The risk of cancer in a nodule increases for people with a family history of thyroid cancer, history of head and neck irradiation, rapid growth of the nodule, or symptoms associated with the nodule (pain, cough, voice change, difficulty swallowing).

### **Do I need surgery?**

Again, probably not. The best way to tell if a thyroid nodule is a cancer is to do a nodule biopsy. Benign thyroid nodules (those with normal looking thyroid cells on a biopsy sample) rarely need to be removed. A blood test called a TSH, which tests the function of your thyroid, can also be helpful.

### **What is a thyroid nodule biopsy? Does it hurt?**

A thyroid nodule biopsy, also called a fine-needle aspiration biopsy (FNAB), is a quick method of collecting thyroid cells from the nodule to determine if a cancer is present. This usually involves cleaning the skin over the nodule, numbing the skin, and inserting a small needle (23 or 25 gauge, smaller than a needle to draw blood) into the nodule to collect cells. This is done four times to collect enough thyroid cells for analysis and generally takes 5-10 minutes. Most patients are surprised how little pain is felt during the biopsy.

### **Once the biopsy is done, when will I know the results?**

The collected cells are prepared on glass slides and stained. They are then screened by a technologist for groups of thyroid cells, and later fully reviewed by a pathologist. The slides are often reviewed by your thyroid specialist with the pathologist to correlate your particular history with the biopsy results. This whole process takes about 2-3 days to get the information back to you.

### **What if the biopsy is benign (normal cells), am I done?**

The chance that a benign biopsy is wrong is about 1%, so these results are encouraging. You will still need to be followed by a thyroid specialist for any changes in the nodules size and a repeat biopsy 3-12 months later is sometimes indicated. You also need to be followed for any new symptoms, but these are unlikely.

Some, but not all, patients seem to benefit from thyroid hormone tablets, to help shrink the nodule or at least keep it from growing. This needs to be an individualized decision that you should discuss with your doctor.

### **What if the biopsy is positive for a cancer?**

If your biopsy shows cancer cells, there is a 98% chance that you have a thyroid cancer, and the tumor as well as most of the thyroid needs to be removed by surgery. If you have a thyroid cancer, or are wondering about the treatment for thyroid cancer, please read the pamphlet on thyroid cancer. Basically, thyroid cancer is one of the easiest cancers to treat and most people with thyroid cancer are cured after appropriate treatment.

### **Anything else I should know about the biopsy?**

Most of the time, the biopsy is read as benign (60-70%) or cancer (5-10%). The other basic biopsy reading is indeterminate or suspicious (20-30%). This means that the cells that are seen are not completely normal, but yet don't meet the criteria for a cancer diagnosis. The chance that an indeterminate or suspicious biopsy turns out to be a cancer is about 20%. Whether you should have surgery or not is a more complicated decision that includes extensive review of the slides by your thyroid specialist and the pathologist, as well as taking your specific history and physical examination into account. It is generally recommended that most patients with an indeterminate or suspicious biopsy have the tumor and at least half of the thyroid removed, but this needs to be an individual decision between you and your thyroid specialist.

### **Someone told me that my nodule is 'hot'. What does that mean?**

The function of a nodule can be measured by a nuclear medicine scan. You are given a pill or small amount of liquid by mouth that contains radioactive iodine. Since iodine is concentrated by the thyroid to make thyroid hormone, the radioactive iodine is concentrated in your thyroid and can be seen on a scan done six and/or 24 hours after you take the pill. If your thyroid nodule is actively making thyroid hormone, it will be detected on the scan and this is called a 'hot' nodule. The chance that a hot nodule is a cancer is very low (< 1%). If your thyroid nodule concentrates iodine poorly in comparison with the rest of your thyroid, the scan will show a hole where your nodule is and this is called a 'cold' nodule (5-10% risk of cancer). A thyroid scan is no longer one of the first tests performed since the nodule biopsy is so accurate and 90-95% of all thyroid nodules are cold on a scan, requiring a biopsy anyway. If your TSH blood test (thyroid function) is abnormal, your thyroid specialist may decide to perform a thyroid scan first.

### **How do you treat a hot nodule?**

The two basic ways to treat a hot nodule are radioactive iodine and surgery. Most patients are treated with a dose of radioactive iodine that will destroy the overactive cells in your nodule. Both work quite well and you should discuss with your thyroid specialist which option is best for you.