Atlantic Health System

Fine Needle Aspiration Biopsy of the Thyroid

Nodule(s):

The Patient's Guide

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Fine needle aspiration biopsy scheduled: _____

It is **strongly advised** that you bring someone with you to your biopsy appointment. This person must remain with you throughout the visit to ensure your safety after the procedure, as you may not be able to travel alone. If you have any questions, please speak with the clinician prior to your thyroid biopsy.

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 hormone helps the body use energy, stay warm and keep the brain, heart, muscles, and other organs working as they should.

What is a thyroid nodule?

The term thyroid nodule refers to a lump within the thyroid gland. Although most thyroid nodules are not cancerous, a small proportion of thyroid nodules do contain thyroid cancer. To diagnose and treat thyroid cancer at the earliest stage, most thyroid nodules need some type of Evaluation.

What are the symptoms of a thyroid nodule?

Most thyroid nodules do not cause symptoms. Often, thyroid nodules are discovered incidentally during a routine physical examination or on imaging tests like CT scans or neck ultrasound done for completely unrelated reasons. Occasionally, patients themselves find thyroid nodules by noticing a lump in their neck while looking in a mirror, buttoning their collar, or fastening a necklace. Very rarely, If a nodule is large enough to compress the windpipe or esophagus, it may cause difficulty with breathing, swallowing. Rarely, patients with thyroid nodules may complain of pain in the neck, jaw, or ear. Even less commonly, hoarseness can be caused if the nodule invades the nerve that controls the vocal cords but this is usually related to thyroid cancer.

What is the relation of a thyroid nodule with the thyroid function Test?

Thyroid tests are most typically normal—even when cancer is present in a nodule. Abnormal thyroid function tests may occasionally be the reason a thyroid nodule is found. Thyroid nodules may produce excess amounts of thyroid hormone causing hyperthyroidism. However, most thyroid nodules, including those that cancerous, are non-functioning, meaning tests like TSH are normal.

What causes thyroid nodules and how common are they?

We do not know what causes most thyroid nodules, but they are extremely common. By age 60, about one-half of all people have a thyroid nodule that can be found either through examination or with imaging. Fortunately, over 90% of such nodules are benign. Hashimoto's thyroiditis, which is the most common cause of hypothyroidism, is associated with an increased risk of thyroid nodules. Iodine deficiency, which is very uncommon in the United States, is also known to cause thyroid nodules.

How is a thyroid nodule evaluated and diagnosed? Once the nodule is discovered, your doctor will try to determine whether the rest of your thyroid is healthy or whether the entire thyroid gland has been affected by a more general condition such as hyperthyroidism or hypothyroidism. Your physician will feel the thyroid to see whether the entire gland is enlarged and whether a single or multiple nodules are present. A neck ultrasound helps to evaluate the entire thyroid gland and the

surrounding structures including lymph nodes and parathyroid. The initial laboratory tests may include measurement of thyroid hormone (thyroxine, or T4) and thyroid-stimulating hormone (TSH) in your blood to determine whether your thyroid is functioning normally. Since it's usually not possible to determine whether a thyroid nodule is cancerous by physical examination and blood tests alone, the evaluation of the thyroid nodules often includes specialized tests such as fine needle aspiration.

Do I really need a fine needle aspiration? Fna?

An FNA is the only non-surgical method of determining whether your thyroid nodule is benign or malignant.

What is a Fine Needle Aspiration?

It is a simple procedure like drawing blood from your arm. The skin is cleaned with an alcohol swab, then it is dried. Lidocaine spray and gel is used to numb the skin. The thyroid nodule is then localized and lidocaine, local anesthetic, is injected to numb the skin and subcutaneous tissue over the thyroid. Then, the biopsy needle is used to prick the nodule. The needle used is thinner than the one for drawing blood and is attached to a syringe. Cells from the thyroid lesion is extracted using this thin needle. At least 2, if not 3 passes are made to ensure adequate cells are obtained to be evaluated. The aspirate is then smeared on glass slides, which are placed in a tube containing a solution which help preserve the cells until they are ready to be examined in the microscope. After examining all the slides, the pathologist makes a cytologic diagnosis and issues a written report. If there is any fluid in the nodules, it is aspirated.

How long does an FNA take?

The procedure usually takes about 10 minutes for one thyroid nodule. Each needle stick only requires a few seconds but be prepared to spend at least 30 minutes in the office, as you will need to fill in registration forms, insurance forms and consent.

Should I fast before the FNA?

You do not need to skip a meal before the procedure. There are no restrictions on eating, either before or after the FNA.

“I am on blood-thinners. “Should I stop taking them?

Please consult with the physician who prescribed the anti-coagulants. He will advise you on the safety of discontinuing such medications. If this cannot be stopped for a couple of days prior to the FNA, make sure that the physician performing the FNA is aware if this medication, so special precautions may be taken.

How can I dress for the procedure?

When having a thyroid biopsy, you must uncover your neck. It is easier for the doctor to perform the procedure if your clothing allows easy exposure of your neck. If you wear turtleneck, it should have a zipper that will allow the collar to fold down.

Avoid wearing jewelry around your neck.

Avoid wearing foundation on the neck. NO moisturizing lotion. NO perfume.

Please be advised that we do not provide leg coverings during the procedure. If you choose to wear a skirt or dress, use your discretion and consider your comfort and privacy during the biopsy.

Do's and Don'ts during the procedure.

Neck Position:

During the procedure the neck is placed in an extended position, by placing a pillow under the shoulder blades. Please let the doctor know if you have any neck problems. You can then be positioned in a different way that helps expose the thyroid and is comfortable to you as well.

Can I breathe while the doctor performs the procedure?

Yes, of course you can, and you should breathe while your doctor performs the procedure. Just try not to take deep breaths or tense your neck.

What should I not do during the procedure?

Try not to swallow or talk while the needle is in your neck. Talking or swallowing causes the thyroid to move and increases the risk of injury of neighboring structures.

After Care Instructions.

Discharge Instructions:

You will have an ice pack on your neck following the procedure. The ice pack may need to be in place for about 10-15 min on and off for the next 24 hours.

Pain killers:

Most patients do not need any painkillers after the FNA. If you have any pain or discomfort in the neck later in the day, you could take Tylenol. Avoid Aspirin, Advil or Aleve.

Work Restrictions:

You may go back to work after the FNA. You may exercise or work out after the procedure. You may swim, use a treadmill, etc., but try to avoid heavy weightlifting.

What are the benefits of having an FNA?

If a nodule is benign, surgery can be avoided. If the nodule is malignant, surgery can be planned promptly.

What are the risks, complications, or side effects of FNA?

Local bleeding: The patient might notice a bruise or swelling in the neck, with variable degrees of tenderness, which usually disappears in one or two weeks. It is extremely rare that this event may require any medical treatment.

Fainting (Vasovagal reaction): It is extremely rare and is usually seen in patients who faint when they have their blood drawn.

Infection: A very rare complication. The patient may experience severe pain and swelling in the neck accompanied by fever and difficulty in swallowing. This requires prompt treatment with antibiotics prescribed by a physician.

Sincerely,

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