

# The Thyroid Nodule

## **What is a thyroid nodule?**

The thyroid gland is located in the lower front of the neck, below the larynx (“Adam’s apple”) and above the collarbones. A thyroid nodule is a lump in or on the thyroid gland. Thyroid nodules are common and occur in about 4% of women and 1% of men: they are less common in younger patients and increase in frequency with age. Sometimes several nodules will develop in the same person. Any time a lump is discovered in thyroid tissue, the possibility of malignancy (cancer) must be considered. Fortunately, the vast majority of thyroid nodules are benign (not cancerous).

Many patients with thyroid nodules have no symptoms whatsoever, and are found by chance to have a lump in the thyroid gland on a routine physical exam or an imaging study of the neck done for unrelated reasons (CT or MRI scan of spine or chest, carotid ultrasound, etc.). However, a minority of patients may become aware of a gradually enlarging lump in the front portion of the neck, and/or may experience a vague pressure sensation or discomfort when swallowing. Obviously, finding a lump in the neck should be brought to the attention of your physician, even in the absence of symptoms.

Nodules can be caused by a simple overgrowth of “normal” thyroid tissue, fluid-filled cysts, inflammation (thyroiditis), or a tumor (either benign or cancerous). Most nodules were surgically removed until the 1980s. In retrospect, this approach led to many unnecessary operations, since fewer than 10% of the removed nodules proved to be cancer. Most removed nodules could have simply been observed or treated medically.

It is not usually possible for a physician to determine whether a thyroid nodule is cancerous on the basis of a physical examination or blood test. Endocrinologists rely heavily on 3 specialized tests for help in deciding which nodules should be treated surgically:

- Thyroid fine needle biopsy
- Thyroid scan
- Thyroid ultrasonography