

# **Thyroid Nodules**

# The Thyroid Gland

The thyroid gland is a butterfly-shaped gland that is located in the lower part of neck. The function of the gland is to produce thyroid hormones which are secreted into the blood, affecting every part of the body. It helps to control many body functions including the brain, heart and muscles.

# What Is A Thyroid Nodule?

A thyroid nodule is an abnormal collection of thyroid cells that forms a lump in the gland. While the vast majority of the lumps are non-cancerous, about a tenth of the lumps tend to be cancerous. Therefore, it is important to evaluate the thyroid nodules to ensure the lumps are not cancerous.

# What Are The Symptoms Of A Thyroid Nodule?

The vast majority of thyroid lumps do not present any symptoms. Some lumps may be visible as a swelling in the neck and others may be felt during clinical examinations. Most thyroid lumps are discovered in ultrasound scans performed for health screens and investigations in the form of Computerised Tomography (CT) scans or Magnetic Resonance Imaging (MRI) scans done for other medical problems. Most thyroid nodules do not produce any excess hormones, but when they do, patients may have symptoms associated with it.

Patients with large thyroid nodules may have symptoms of pressure in the neck such as hoarseness (rough voice), difficulty in breathing or swallowing. Rarely, hoarseness may be seen in cases of cancer where the cancer may be invading the nerves.

#### Why Do Thyroid Nodules Form?

Some reasons for the formation of thyroid nodules include Hashimoto's Thyroiditis (inflammatory condition of the thyroid gland), family history of thyroid cancers and iodine deficiency (although uncommon in Singapore). The incidence of thyroid nodules increases with age especially in those above the age of 60.

## What Investigations Will I Need?

Following a consultation and examination by the doctor, you will undergo some blood test, an ultrasound examination of the thyroid and a needle biopsy of the nodule. The ultrasound scan can access the thyroid nodule and provide information about the size, nature and features of the lump that may suggest the presence or absence of cancer. The scan also helps in guiding the needle into the right nodule for biopsy. The needle biopsy is performed using a small needle and involves drawing some cells for examination under a microscope to give a diagnosis. Patients usually have no complications from the biopsy.

The ultrasound scan and biopsy can be performed on the day of the visit and the report will be available within a hour. This allows you to make treatment plans without further delay.

## **How Are Thyroid Nodules Treated?**

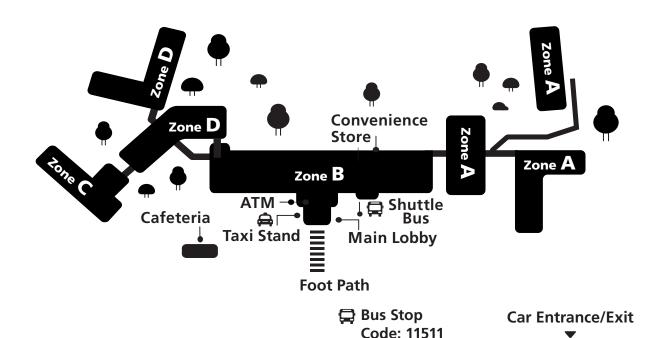
Symptomatic thyroid nodules will require treatment if suspected to be cancerous or have pressure symptoms. Most thyroid cancers are curable if diagnosed early. Thyroid nodules or cancers cannot be treated with oral medications. However, when the nodules cause symptoms of overproduction of thyroid hormones, treatment with oral medications for a short period before surgery is needed. Small nodules which are benign simply require surveillance with ultrasound examinations every 6 to 12 months.

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