

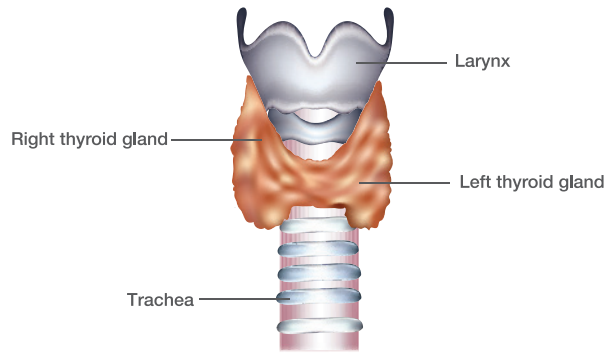
# Thyroid Nodules and Thyroid Cancer



The Department of Ear, Nose & Throat (ENT) - Head & Neck Surgery provides a wide range of surgical services for adult patients with ENT, head and neck diseases. Patients are referred from polyclinics, general practitioners, emergency services or transferred from other departments within the Ng Teng Fong General Hospital or other healthcare facilities, including nursing homes, community and other hospitals. Our team of highly-trained ENT-Head & Neck surgeons and allied healthcare professionals aim to provide the best possible care to our patients.

## What is the thyroid gland?

The thyroid is a bi-lobed gland located in the lower part of the neck, just in front of the windpipe. It produces and secretes thyroxine, a hormone responsible for regulating some of our bodily functions.

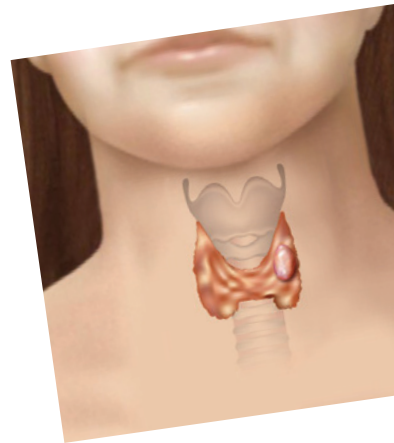


## What are thyroid nodules?

Thyroid nodules are abnormal lumps that develop in the thyroid gland. The nodules can be single or multiple and vary in size. They may be cystic or solid. Very large nodules can compress on the windpipe and gullet to cause difficulty in breathing or swallowing. Very small nodules cannot be felt and are sometimes detected incidentally by scans. Some nodules secrete an excessive amount of thyroxine to cause a condition known as hyperthyroidism.

The majority of thyroid nodules are benign swellings caused by thyroid inflammation.

Thyroid cancers are commonly the papillary or follicular carcinoma types that have good cure rates with treatment. The most aggressive type, anaplastic carcinoma, is rare and more common in the elderly. It is usually incurable.



# How is a diagnosis made?

## Fine needle aspiration biopsy (FNAC)

This is a minor procedure performed at the clinic where a fine needle is used to extract some cells from the thyroid nodule and sent to a pathologist to determine the cell type. If the cell yield is sufficient, FNAC is an accurate method to differentiate benign nodules from cancerous ones. However, in 15% of patients, the cell yield is either insufficient for a diagnosis or the pathologist is uncertain whether cancer cells are present.



## Ultrasound of the thyroid gland (U/S)

This is a test that uses sound waves to create images of the thyroid gland. For this procedure, the patient lies down with the neck extended while an ultrasound technician moves a lubricated transducer over the neck. Although it is not as accurate as the FNAC, there are certain features seen on the U/S thyroid that can suggest the presence of cancer in a nodule. This test also provides information on the exact size of the nodule, its content (solid or cystic) and the presence of other nodules that cannot be felt.

## Blood tests

A thyroid function blood test quantifies how much thyroxine is produced by the gland. Thyroid antibody tests are sometimes done to check for auto-immune thyroid disorders causing thyroid inflammation.

# What are the treatment options?

## Surgery

Surgery involves either removing one lobe of the thyroid (hemithyroidectomy) or removing the whole gland (total thyroidectomy). Thyroid cancer that has spread to the neck nodes require a neck dissection operation to remove cancerous nodes.

The indications for thyroidectomy are:

- Thyroid cancer or suspected thyroid cancer
- Large thyroid nodules compressing the windpipe or gullet
- Thyroid nodules causing hyperthyroidism in selected patients



## Observation

Benign thyroid nodules and those that are at low risk of being cancerous can be observed for a period of time. Observation involves assessing the size and nature of the nodule regularly through ultrasound and repeated FNAC procedures.

## Radioactive iodine treatment

This radiation treatment is administered orally. Radioactive iodine concentrates in the thyroid gland, and destroys both normal and abnormal thyroid cells. It is used for treating hyperactive thyroids (hyperthyroidism) and is administered after thyroid surgery for thyroid cancers.

## For more information

### Ng Teng Fong General Hospital and Jurong Community Hospital

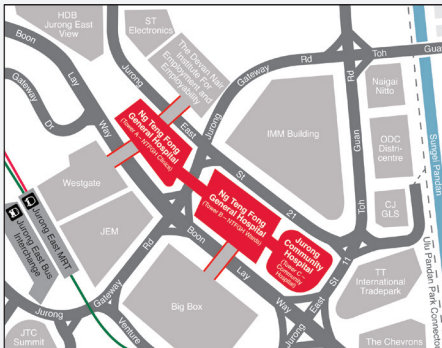
1 Jurong East St 21,  
Singapore 609606  
General enquiries: 6716 2000 Fax: 6716 5500  
www.juronghealth.com.sg

#### Clinical and appointment line hours (closed on Sundays and public holidays)

For appointments, please call 6716 2222  
Monday - Friday 8.00am - 5.30pm,  
Saturday 8.00am - 12.30pm

For dental appointments, please call 6716 2233  
Monday - Thursday 8.00am - 5.30pm  
Friday 8.00am - 5.00pm

#### Getting there



#### By train

Jurong East MRT Station

#### By bus

##### From Jurong East Bus Interchange

SBS 51, 52, 66, 78, 79, 97, 97e, 98,  
98M, 105, 143, 143M, 160, 183, 197,  
333, 334, 335, 506

##### Along Boon Lay Way

SBS 99, Private bus service 625

### Jurong Medical Centre

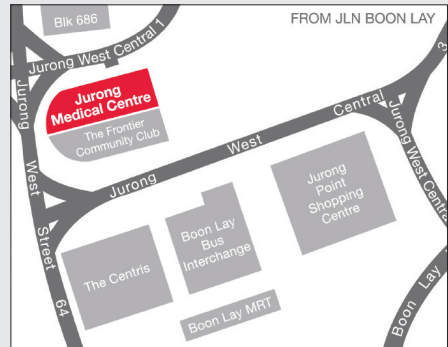
60 Jurong West Central 3,  
Singapore 648346  
General enquiries: 6716 2000 Fax: 6551 7999  
www.jmc.com.sg

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Boon Lay MRT Station

#### By bus

SBS 30, 79, 154, 157, 174, 179, 181,  
182, 192, 193, 194, 198, 199, 240, 241,  
242, 243 W/G, 246, 249, 251, 252, 254,  
255, 257, 405  
SMRT 172, 178, 180, 187

#### Disclaimer:

The information in this brochure is meant for educational purposes and should not be used as substitute for medical diagnosis or treatment. Please seek your doctor's advice before starting any treatment or if you have any questions related to your health, physical fitness or medical condition.