



# **NUHS** Diagnostics

NUHS Diagnostics is a business unit under the National University Health System (NUHS). We provide diagnostic services to polyclinics in the western region of Singapore. Strategically positioned as part of the integrated Academic Health System, NUHS Diagnostics is able to leverage and access a wealth of resources residing within the cluster to provide seamless and holistic care to the community.

NUHS Diagnostics supports polyclinics, general practitioners, community hospitals, nursing homes, home care providers and the community in Singapore.

## **Diagnostic Imaging Services**

We offer the following diagnostic imaging services:



X-Ray



Ultrasound



Mammogram



Bone Mineral Densitometry

## **General X-Ray**

An X-ray exposes a part of the body (e.g. chest and extremities, etc.) to X-ray radiation, under medical instructions by the referring doctor. No preparation is required.

## Mammogram

A mammogram is an X-ray examination of the breast, used to detect and diagnose breast disease in women. It is used to look for early signs of breast cancer.

#### + Preparation for a mammogram

- Do not use talcum powder, body lotion or deodorant on your chest or underarms as these products can interfere with the accuracy of the mammogram images.
- You are encouraged to wear a two-piece outfit on the day of the mammogram. You will need to undress above the waist for the procedure.
- If your breasts tend to feel tender before your period, you may find it more comfortable to have a mammogram done just after the end of your period.
- Please inform your doctor or radiographer if there is a possibility that you may be pregnant, or are breastfeeding.

#### + What should I expect during a mammogram?

A female radiographer will attend to you. She will ask you a few questions regarding your medical history.

During the procedure, the radiographer will ask you to undress to the waist before taking the mammogram. The mammogram for each breast will then be taken separately. You may feel slight discomfort for a few seconds while your breast is being compressed.

With modern equipment, the amount of radiation delivered to the breast is very low. Breast compression is required to reduce the depth of the breast tissues and minimise movement. This helps to obtain a more detailed image and results in a lower dose of radiation.



## Ultrasound

An ultrasound scan involves the use of inaudible high frequency sound waves to obtain images of internal organs. These sound waves will be used to produce diagnostic images, which will then be interpreted by a radiologist (a doctor who specialises in the interpretation of images).



#### + What should I expect during an ultrasound?

- The room lights will be dimmed in order for the radiographer to visualise the images on the monitor properly.
- You will be asked to lie down on the examination couch and be positioned comfortably.
- The area of the body to be examined will be uncovered.
- The radiographer will apply a water-soluble gel onto the area that is being examined to facilitate the transmission of sound waves through your body.
- The radiographer will move an ultrasound probe across the area under examination. The ultrasound waves generated from the probe will produce images on the display monitor. Slight pressure may be applied to better visualise certain organs.
- The gel will be wiped off after the examination is completed. You may then leave the examination room.

Your doctor will inform you of the results at your next appointment.

#### + Preparation for an ultrasound

Preparation for the procedure varies according to the type of scan required, as listed below:

#### a) Ultrasound for the thyroid

• No preparation is required.

## b) Ultrasound for the abdomen and the hepatobiliary system (liver and gallbladder)

- Please fast at least 6 to 8 hours prior to your appointment time.
- Sips of plain water are allowed.
- For fasting diabetic patients, please stop all diabetic medications (including insulin injections) on the day of the scan.
- For ultrasound of the upper abdomen, please abstain from smoking on the day of the examination as smoking is likely to stimulate the biliary system and affect the accuracy of the diagnosis.

#### c) Ultrasound for the pelvis, kidneys and bladder

- No fasting is required.
- Please drink at least four cups of plain water an hour before the scan to keep your bladder full. If you are on fluid restriction, please disregard this instruction and inform our staff when you make your appointment.

#### d) Ultrasound for the abdomen and pelvis

- Please fast at least 6 to 8 hours prior to your appointment time.
- For fasting diabetic patients, please stop all diabetic medications (including insulin injections) on the day of the scan.
- Please drink at least four cups of plain water an hour before the scan to keep your bladder full. If you are on fluid restriction, please disregard this instruction and inform our staff when you make your appointment.
- For ultrasound of the upper abdomen, please abstain from smoking on the day of the examination as smoking is likely to stimulate the biliary system and affect the accuracy of the diagnosis.

## Bone Mineral Densitometry Scan

A Bone Mineral Densitometry (BMD) scan measures an individual's bone mass density. The measurements are used to diagnose osteoporosis and ensure that preventive action can be taken against fractures. BMDs are most commonly done for the left hip and lumbar spine, as these are the areas most prone to fractures in patients with osteoporosis.

Osteoporosis is a disease characterised by the loss of bone mineral, leading to bone fragility. Fracture prevention is critical, especially for the elderly.



#### + Preparation for a BMD scan

You are advised not to have a BMD scan in the first week after examinations that involve contrast media such as contrast studies of the stomach and bowels, CT scan, intravenous urography, etc.

Please inform the radiographer if there is a possibility that you may be pregnant.

#### + What should I expect during the BMD scan?

- You will need to change into a patient gown.
- You will be asked to lie down on the examination couch and be positioned comfortably.
- A scanner will move over the regions to be scanned and emit a low dose X-ray to form the image required for analysis.
- You will not experience any pain or discomfort during the procedure.
- It is important to refrain from moving to allow the radiographer to obtain good quality images.
- The room lights may be dimmed in order for the radiographer to visualise the images on the monitor properly.

## **Laboratory Services**

We also offer a range of laboratory services such as:



**Blood Collection** 



**Urine Collection** 



**Stool Collection** 



Electrocardiography (ECG)



Spirometry

## **Blood Collection**

Blood tests provide insights for healthcare providers to confirm a diagnosis for a patient and pave the way for an appropriate treatment plan.

Some of the blood tests that we offer require patient preparation prior to testing – for example, fasting for 10 to 12 hours prior to the procedure. Fasting plays an essential role in helping the healthcare provider obtain an accurate result. Components that come from our food and beverage will affect testing, yielding inaccurate results that may lead to a misdiagnosis. Our care team will inform you if there is a need to fast or stop your medication(s) before blood-taking.

#### + Preparation for a blood test

- Fast for only as long as specified by your doctor, and do not overfast as this may falsely lower the results.
- Drinking plain water will not affect the test. You are encouraged to consume water as per normal to prevent dehydration.
- Drinking other beverages such as coffee, tea or milo is not allowed.
- Do check with your doctor if medicating before a blood test is allowed.
- Avoid excessive exercising before the test, as vigorous exercise will cause a false surge in certain components in the blood, yielding inaccurate results.

## **Urine Collection**

Urine tests are simple laboratory tests that measure what is in the urine.

You are encouraged to hydrate prior to urine collection. Depending on the objective of the urine test, the first or early morning urine is usually preferred as it is the most concentrated. To get an accurate result, you should only collect the midstream urine.

Midstream urine is collected by first passing some urine. Without interrupting the flow, collect urine in the sample cup provided. Once there is sufficient urine, pass the remaining urine in the toilet bowl.

Specimens obtained from females experiencing menstruation will not be processed as the results will not be accurate. If you are menstruating, you will be advised to revisit the laboratory for the urine test only after your menstrual cycle is over.

## **Stool Collection**

A stool test (faecal test) involves the collection and analysis of faecal matter. If a stool test is required, sample cups with a scoop will be provided to you. Our doctors will advise on medication and diet intake prior to sampling.

## Electrocardiography

An Electrocardiography (ECG) test is a non-invasive procedure that measures the rate and regularity of heartbeats to determine if there is any damage to the heart. The test is painless and is used to detect heart diseases, heart attacks or other heart abnormalities which could lead to heart failure.

#### + Preparation for an ECG procedure

• Avoid strenuous activities one day before the procedure.

#### + Prior to the ECG procedure, please inform the staff if you have:

- Applied powder, oil or lotion on your chest.
- A pacemaker attached to your body.
- Dextrocardia (right-sided heart).
- Any history of cardiac arrest.

#### + What should I expect during an ECG procedure?

The ECG procedure will take approximately 5 to 10 minutes and will be performed in supine (lying down, facing up) position. For wheelchair-bound patients, the procedure will be done in a sitting position. Our healthcare professionals will attach a total of 10 self-adhesive pads on your chest area, legs and arms. Please relax and breathe normally as the ECG machine takes the reading.

## Spirometry

Spirometry is the most common type of pulmonary function test. It is a test used to measure how much air enters the lungs when you take a deep breath, as well as how easy and fast you can forcefully blow the air out from your lungs. The test will determine how well the lungs function and the quality of air intake.

Spirometry is a painless test that does not require any intravenous procedure.

#### + Preparation for a spirometry procedure

- Do not consume alcohol four hours prior to the test.
- Do not smoke one hour prior to the test.
- Do not engage in strenuous exercise 30 minutes prior to the test.
- Have a light meal, if required.
- Bring along your personal inhaler, if any.

#### + What should I expect during a spirometry procedure?

The complete spirometry procedure will include a pre- and postbronchodilator test. Your height and weight will be measured. During the procedure, please sit upright (do not slouch or lean forward) and only breathe through your mouth. Repeated attempts for the procedure are common in order to get consistent results.

The whole procedure will take approximately 30 to 45 minutes.

## Do I need to book an appointment?

A doctor's referral is required for the following procedures:

- Spirometry
- BMD
- Ultrasound

After obtaining the referral, please proceed to our website (www.nuhs.edu.sg/nuhs-diagnostics) for links to the appointment forms.

You are required to book your own appointment.

## Location

Where are the NUHS Diagnostics centres located?

- Bukit Batok Polyclinic
- Bukit Panjang Polyclinic
- Choa Chu Kang Polyclinic
- Clementi Polyclinic
- Jurong Polyclinic
- Pioneer Polyclinic
- Queenstown Polyclinic

## **Find Out More**

For more information on the services provided by NUHS Diagnostics, scan the QR code to visit our webpage.



## **Contact Us**

- Website : www.nuhs.edu.sg/nuhs-diagnostics
- Email : nuhsd\_contact@nuhs.edu.sg
- Tel : (65) 6370 6556

#### **Our Patient Care Institutions**

National University Hospital Ng Teng Fong General Hospital & Jurong Community Hospital Alexandra Hospital National University Polyclinics Jurong Medical Centre National University Cancer Institute, Singapore National University Heart Centre, Singapore National University Centre for Oral Health, Singapore NUHS Diagnostics NUHS Pharmacy



Scan the QR code for more information on our patient care institutions.

OneNUHS Hotline: (65) 6908 2222 OneNUHS General Enquiries: contactus@nuhs.edu.sg OneNUHS Appointments: appointment@nuhs.edu.sg www.nuhs.edu.sg

Take charge of your health and access health information and services across NUHS institutions.

Download the OneNUHS App now!



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Information is correct at time of printing (Nov 2023) and subject to revision without prior notice.