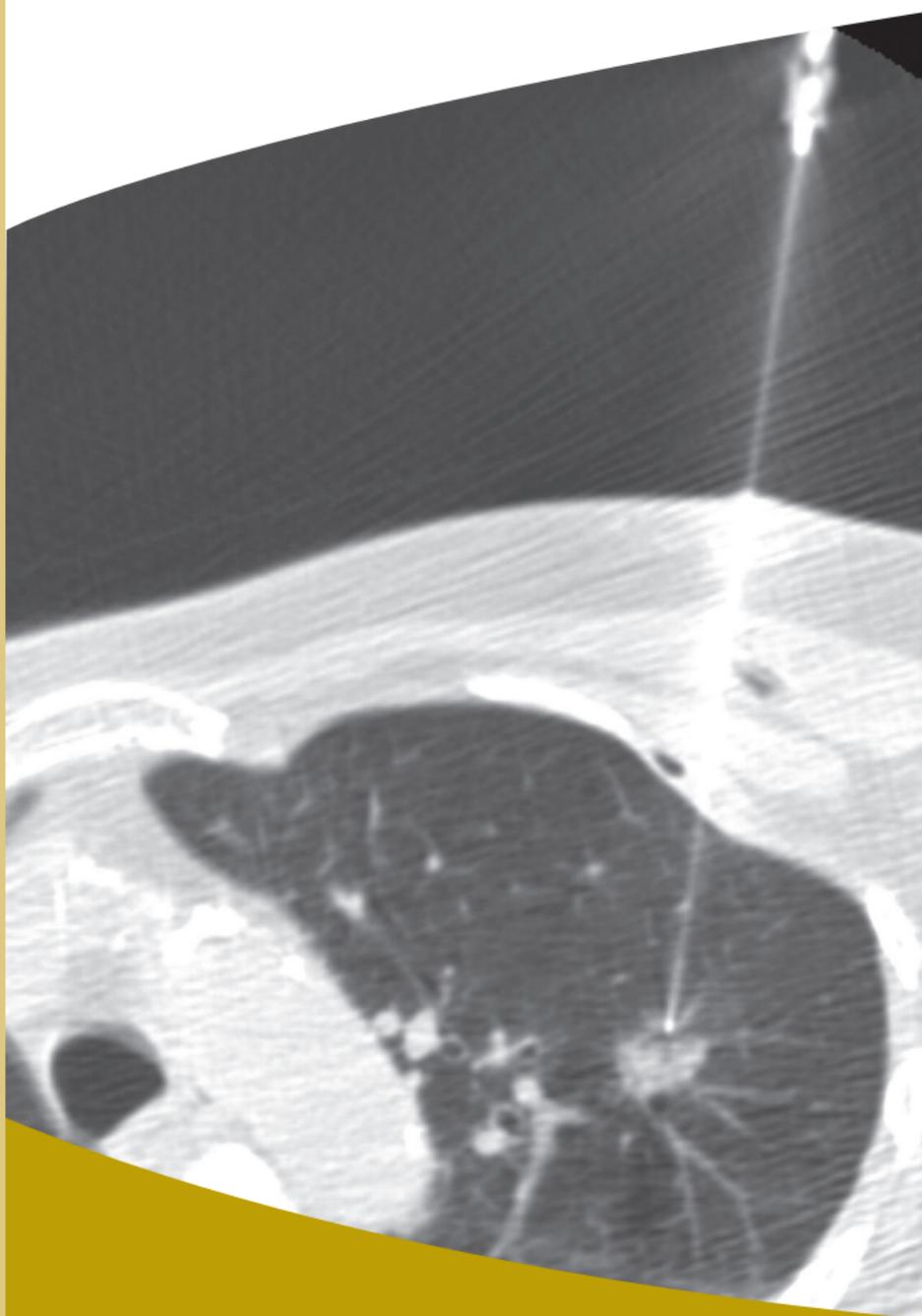


Needle Biopsy



PERCUTANEOUS NEEDLE BIOPSY

This brochure tells you about your needle biopsy. It explains briefly what is involved, its benefits over alternatives and some of the more salient risks. It is not meant to replace an informed discussion between you and your referring doctor or interventional radiologist who will be performing the procedure. If you have any questions regarding the procedure, do not hesitate to ask your referring doctor or the interventional radiology staff.

What is a needle biopsy?

A needle biopsy is a way of taking a small sample of tissue out of a suspicious area in the body, using a special needle. This will be sent to the laboratory where the pathologist will study the sample under a microscope to make a diagnosis. As the needle is inserted through the skin, the procedure is called a percutaneous biopsy.

Preparation for the procedure

A blood test may be required to test for any blood clotting problems.

If you are on any medication, kindly inform your referring doctor and the Radiology Department of this. If you are currently taking any blood thinners, this may have to be stopped for 3-5 days prior to the procedure. Your referring doctor will advise you on this. Similarly, diabetic medication may have to be halted until after the procedure as fasting may be required for the procedure.

In general, fasting 4-6 hours prior to the procedure is recommended. This is especially so if sedation or general anaesthesia is required.

Arrive early at the hospital as time is often required for registration, admission and other administrative details. If the procedure is to be performed as an outpatient, please arrive at least 20 minutes before your procedure time. If the procedure is to be performed as a day-case or inpatient, please arrive at least 2 hours before the procedure time.

What happens during a percutaneous needle biopsy?

This procedure is performed in the Radiology department under image-guidance, to enable accurate insertion of the needle into the target. Imaging used include fluoroscopy (real-time X-ray imaging), CT fluoroscopy (real-time CT imaging), ultrasound and mammography. These procedures are performed under local anaesthetic. Occasionally, these may be performed under conscious sedation by an anaesthetist. As the needle is small, repeat passes with the needle may be necessary to obtain sufficient samples for analysis.

What happens after the biopsy?

Following the biopsy, further imaging may be necessary to evaluate for any immediate or delayed complications. For example, following a lung biopsy, serial chest X-rays may be required to track a pneumothorax (see below) and to evaluate whether further intervention is required.

You will stay in the recovery area of Radiology for a brief period of time so that the staff may monitor you for stability before allowing you to leave or to be sent back to the ward for further observation. In the ward, you will be monitored for a period of time to ensure that you are fit for discharge. Depending on the type of biopsy, you may be admitted as a day case or overnight for observation. Some biopsies can be performed as an outpatient.

You should keep physical activity to a minimum for the rest of the day after the biopsy. The biopsy area may be tender or sore for the next one or two days.

Success of percutaneous needle biopsy

In most cases, the needle biopsy gives sufficient information for a diagnosis to be made. Do note however that occasionally, needle biopsies fail to give an answer. This may be because, despite taking every possible care and with accurate image-guidance, the samples taken may have been from normal tissue adjacent to the abnormal tissue. For small targets, this is especially so. Alternatively, although abnormal tissue has been obtained, the sample may not be enough for the pathologist to make a definite diagnosis. A second needle biopsy or surgical biopsy may then be required.

Benefits and Risks

BENEFITS

- Safe
- Minimally invasive procedure involving needle punctures
- Usually done under local anaesthesia
- Usually done as a day case or in certain circumstances, as an outpatient

RISKS

- Any invasive procedure has a risk of bleeding, even with just a needle puncture. Depending on the target organ being biopsied, some have a higher risk of bleeding. In most cases, the bleeding stops by itself but rarely, a transfusion may be necessary and further procedures may be required to stop the bleeding.

- Any procedure involving a skin puncture carries a low risk of infection
- For lung biopsies, any needle puncture carries a risk of an air-leak into the space in the chest surrounding the lung (called the pleural space). This complication, called a pneumothorax, may result in collapse of the lung. A pneumothorax can occur in up to 30% of lung biopsies but most of the time, this is small and does not require further treatment. However, about 10% of these will require further treatment, if the pneumothorax is large or if this is causing difficulty or pain on breathing. This involves insertion of a chest tube to remove the air pocket trapped around the lung and to allow the lung to re-expand. In such cases, a longer hospital stay may be needed.
- Inadvertent puncture of neighbouring structures with their own set of complications, depending on the structure which is punctured. This is rare as the procedure is performed under image-guidance.
- Seeding of the tumour along the needle track is listed as an extremely rare complication (Eur J Radiol 2006; 59:60-64; Cancer, Vol 115, Issue 23, Aug 2009)
- In any procedure, rare and unpredictable complications, including death, may occur.

Alternatives

The alternative to an image-guided percutaneous biopsy is an open surgical biopsy. This should be discussed with your referring doctor.

I confirm that I understand the information herein about Needle Biopsy as it has been read by me and / or explained to me.

Name: _____

*Passport/NRIC No: _____

Signature: _____

Date: _____

Confirmation given before (Staff's name): _____

Staff's Signature: _____

Date: _____

*Please delete as applicable



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