Image Guided Lung Biopsy

Interventional Radiology

This leaflet provides information about the procedure, what to expect on the day, the potential risks and important information for afterwards.

Prior to the procedure, you may have a pre-assessment or telephone consultation, where you will have the opportunity to ask further questions.

Please note that this leaflet is not meant to replace discussion between you and your doctor. You should raise any questions you may have with the doctor who has referred you or with the doctor who will be performing the procedure.

What is a CT-guided lung biopsy?

A CT-guided lung biopsy is a procedure used to take a small sample of tissue from the lung or from a lung mass, for examination under a microscope. This helps doctors diagnose lung conditions, including infection, inflammation, or cancer and guide further treatment.

The biopsy is performed using CT (computed tomography) imaging to accurately guide a needle into the lung, allowing the tissue sample to be taken as safely and precisely as possible.

Why do I need a CT-guided lung biopsy?

You may need a lung biopsy to:

- Investigate a lung nodule or mass seen on imaging
- Diagnose or confirm lung cancer
- Identify infection or inflammation within the lung
- Clarify uncertain findings on CT or PET scans
- Help guide treatment decisions

Tel: 01932 723470 **Email:** asp-tr.ir-referrals@nhs.net

How do I prepare for a CT-guided lung biopsy?

You will have a pre-assessment telephone consultation with a nurse before your admission and may be asked to have blood tests before the procedure.

You should stop eating 6 hours prior the procedure, however you can drink 1 cup of clear water per hour until the procedure starts.

As it's a day case procedure, you need to arrange for an adult to collect you from the department and someone to stay with you overnight.

The procedure will take place in the Radiology Department at St. Peter's Hospital. When you arrive, you will be given a hospital gown to change into, and a staff will insert an IV cannula.

The doctor will discuss the procedure with you, answer any questions you may have and ask you to sign the consent form, if you are happy to proceed.

The procedure will likely be performed under local anaesthetic. Intravenous pain relief and light sedation may also be given, to ensure you are as comfortable as possible.

If you are feeling unwell closer to the day of the procedure, please let the team know.

How is a CT-guided lung biopsy performed?

You will lie on the CT table, on your back, front or side, depending on the location of the lung lesion.

CT images are used to plan a safe pathway to the target area. The skin is cleaned and numbed with local anaesthetic. A small incision is made, and a biopsy needle is carefully guided into the lung using CT imaging.

You may be asked to hold your breath briefly while samples are taken. One or more small tissue samples may be collected.

The biopsy itself usually takes 20 to 40 minutes, although you may be in the department longer for preparation and monitoring.

After the biopsy, pressure may be applied to the site and a dressing is placed.

What are the potential risks and complications of a CT-guided lung biopsy?

A CT-guided lung biopsy is a commonly performed and generally safe procedure. However, as with all medical procedures, there are some risks:

Pain or discomfort

- Mild pain or discomfort at the biopsy site is common (up to 30-40%) and is usually short-lived.
- This can normally be managed with simple pain relief.

Pneumothorax (collapsed lung)

- Air can leak into the space around the lung, causing partial collapse.
- This occurs in around 20-30% of patients.
- Most cases are small and require no treatment.
- A small number of patients (5-10%) may require insertion of a chest drain and overnight hospital admission.

Bleeding

- Small amounts of bleeding into the lung or coughing up a small amount of blood can occur in up to 5-10% of patients and usually settles without treatment.
- Significant bleeding is uncommon (<1-2%).
- Very rarely, major bleeding may require further treatment.

Infection

- Infection is rare (<1%) but may require antibiotics if it occurs.

Air embolism

- Entry of air into the bloodstream is extremely rare (<0.1%) but can be serious and requires urgent treatment.

Radiation exposure

- The procedure uses CT X-rays. The radiation dose is kept as low as reasonably achievable.

Death

- Death directly related to a CT-guided lung biopsy is very rare, estimated at approximately 1 in 5,000 procedures (around 0.02%).

What happens afterwards?

After the procedure, you will be monitored in a recovery area.

- A chest X-ray may be performed 1-2 hours after the biopsy to check for lung collapse
- Your blood pressure, pulse, oxygen levels, and comfort will be monitored
- Most patients can go home the same day

You should:

- Avoid strenuous activity, heavy lifting, or exercise for 48–72 hours
- Avoid flying for at least 7 days (or longer if advised)
- Take simple pain relief if needed

Seek urgent medical advice if you experience:

- Increasing shortness of breath
- Chest pain
- Coughing up large amounts of blood
- Dizziness or collapse
- Fever or signs of infection

Follow-up arrangements and biopsy results will be discussed with your referring consultant.

Further Information

We endeavour to provide an excellent service at all times, but should you have any concerns please, in the first instance, raise these with the Matron, Senior Nurse or Manager on duty. If they cannot resolve your concern, please contact our Patient Experience Team on 01932 723553 or email asp-tr.patient.advice@nhs.net. If you remain concerned, the team can also advise upon how to make a formal complaint.

Author: Cathie Tenreiro – IR Clinical Specialist Nurse **Department:** Imaging
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You can use Text Relay to turn telephone communications into text. Use the Relay UK app on your phone, tablet or PC. You can also use Relay UK via Minicom or Uniphone.

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اگر آپ اس کا اردو زبان میں ترجمہ چاہتے ہیں، تو براہ کرم اس فون نمبر 01932 723553 پر رابطہ کریں

Se precisa de uma tradução por favor contacte: 01932 723553

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यदि आपको अनुवाद की ज़रूरत है तो कृपया इस नंबर पर फोन करें: 01932 723553

Jeżeli chcemy, aby te informacje w innym języku, proszę zadzwonić 01932 723553

Ashford Hospital London Road, Ashford, Middlesex, TW15 3AA Tel: **01784 884488**
St. Peter's Hospital Guildford Road, Chertsey, Surrey, KT16 0PZ Tel: **01932 872000**
Website: **www.ashfordstpeters.nhs.uk**