

CT-Guided Lung Biopsy



Information for patients and families

Your lung biopsy is scheduled for:

Date: _____ Time: _____

Important: You must arrive 1 hour before your appointment.

Questions about your biopsy?

Need to reschedule or cancel your appointment?

Call the Medical Imaging Central Booking Office at 416 340 3384.



Important:

After your lung biopsy, a responsible adult must take you home in a car or a taxi and stay with you for 24 hours.

If someone cannot be with you, your biopsy will be cancelled and re-booked until someone is available.

Do not travel by airplane within 7 days of your biopsy.

What is a lung biopsy?

If you had a CT scan that showed an abnormal area in your chest, a lung biopsy is the procedure used to help find a diagnosis.

Your radiologist (doctor) uses a CT scanner to get images of your lungs to plan the biopsy. The images act as a map to help guide them when they insert a very thin needle into your lung. The needle will collect a small sample of tissue. The tissue is then sent to the laboratory to be tested.

How long does the biopsy take?

The entire procedure takes about 45 to 90 minutes and you will be in the hospital for about 4 to 6 hours.

Will there be pain or discomfort during my biopsy?

Our patients tell us they feel:

- A **slight burning** or **stinging feeling** when the needle is used to “freeze” or numb the biopsy area. This helps ease the pain when the needle takes the small sample of tissue.
- **Some discomfort** because of the position you must lie in on the procedure table. You may also feel some soreness as you shouldn’t move during the important parts of the procedure.
- You may feel **some pressure in the chest area** when the radiologist is inserting the biopsy needle into your lung.

The staff will make sure you are as comfortable as possible before the procedure starts.

The radiologist may order medicine to help you relax and prevent pain or discomfort during the biopsy.

How do I prepare for my lung biopsy?

Some medicines may increase your risk of bleeding during or after your procedure. The list below is a guideline only. Please ask your family doctor or primary care provider for specific instructions before stopping your medications.

- **Name of medicine:** ASA and NSAIDs, such as ibuprofen, Advil, naproxen, Indomethacin, Toradol
When to stop: Stop taking 7 days before biopsy
- **Name of medicine:** Anti-platelet medications, such as Clopidogrel (Plavix), Prasugrel (effient), ticagrelor (Brillinta)
When to stop: Stop taking 7 days before biopsy
- **Name of medicine:** Warfarin (Coumadin)
When to stop: Stop taking 5 days before the biopsy
- **Name of medicine:** Rivaroxaban (Xarelto), apixaban (Eliquis) or endoxaban (Lixiana)
When to stop: Stop taking 48 hours before your biopsy (if your kidneys work normally)
- **Name of medicine:** Dalteparin (Fragmin), Endoxaparin (Lovenox) or tinzaparin (Innohep)
When to stop: Stop taking 24 hours before biopsy (if your kidneys work normally)
- **Name of medicine:** Fondaparinux (Arixtra) and argatroban (Acova)
When to stop: Talk to your hematologist
- **Name of medicine:** Unfractionated Heparin and bivalrudin
When to stop: Stop taking 4 hours before the biopsy

- **Name of medicine:** Prophylactic dose low-molecular weight heparin, unfractionated heparin or fondaparinux
When to stop: You may continue taking it. Consider not taking it on the morning of the biopsy

If you are taking any medication that is an antiplatelet or anticoagulation (blood thinner) and it is not on this list, talk to your doctor.

If you have atrial fibrillation (irregular heartbeat), mechanical heart valve, thrombus (within the past 3 months), or stent (put in within the last 12 months), see your cardiologist or vascular surgeon before stopping any medication.

For further questions talk to the radiologist or hematologist.

Remember:

- Bring all of your medications to hospital with you.
- Tell the nurse if you have allergies. Do this before your biopsy in the Medical Imaging Department.
- **Do not eat or drink anything after midnight the night before your biopsy.**

To make sure you leave the hospital safely and are ready for recovery, you MUST:

- **Have an adult take you home.** This person must be able to pick you up from the hospital, carry your belongings, and push you to the front entrance with a wheelchair.
 - Staxi chairs (temporary wheelchair transportation) are available near all the main entrances. There is a \$1.00 deposit, which is reimbursed to you when the chair is returned.
- **Have someone stay with you for 24 hours after the surgery.** This person must be able to help you at home after your surgery because the medications you receive in hospital can make you dizzy or light-headed.

Important: If you do not have an adult take you home after surgery, your surgery may be cancelled.

When you are ready to go home, the nurses will give you an information booklet about how to care for yourself at home. If you need home care or physiotherapy, your surgeon or health team will arrange this before you go home.

What are the risks of a lung biopsy?

A **risk** is the chance that something might go wrong during the biopsy.

The risks of a lung biopsy depend on many factors including:

- your age
- the condition of your lungs
- the location and size of the biopsy area

Remember: The radiologist will talk to you about the lung biopsy and risks specific to you before you sign the consent form.

Some of the risks the radiologist **may** talk with you about are:

1. Pneumothorax (collection of air around the lungs)

Of every 100 patients who take this test, 33 have a small amount of air leak into the space around the lung after the needle is removed.

If there is too much air, it can make breathing difficult. The smallest possible needle is used for the biopsy to minimize the chances of this happening.

2. Chest tube insertion

Of every 100 people who take this test, 3 have a large enough collection of air around their lung that it causes trouble breathing or chest pain.

A small tube can be inserted through your chest to drain off the air and make your breathing easier. **If you need a chest tube, you may be admitted to hospital overnight.**

3. Bleeding

You may cough up blood. The bleeding usually stops on its own. To minimize the chance of bleeding:

- the doctor orders blood tests before your biopsy to make sure your blood can clot normally
- we use as small a biopsy needle as possible

4. Radiation

CT scans and chest x-rays expose you to ionizing radiation (x-rays). This may slightly raise your chance of getting cancer at some point in your life. The radiation you receive from this procedure is considered a low risk. Your radiologist will lower your risk by using as low a dose of radiation as possible.

A fetus may have a higher chance of defects or cancer in their lifetime if a pregnant person is exposed to radiation during the biopsy.

If you are pregnant or there is a chance you may be pregnant, please tell your doctor right away.

5. Infection

There is always a chance you may get an infection if your skin is broken or cut in any way. Since we use sterile (germ-free) techniques, your risk of infection is very low.

What are the steps for my biopsy?

Step 1: Check in

Go to the 1st floor of the Peter Munk Building at the Toronto General Hospital and check in at the Medical Imaging Main Reception desk. Once they check your information they will tell you where to find the Medical Imaging Day Unit.

Bring your Ontario health card (OHIP) with you.

Step 2: Go to the Medical Imaging Day Unit

- One responsible adult can come with you to the MIDU.
- The nurse admits you and starts an intravenous (IV) line.
- The radiologist explains the biopsy and will ask for your consent to do the biopsy. You can ask any questions that you have about the biopsy and the risks.

Step 3: Go to the CT biopsy room

- The MIDU nurse will tell you what to expect in the CT Biopsy room.
- You go on a stretcher to the CT Biopsy room where the lung biopsy is done.

Step 4: Recover in the MIDU

- You go back to the MIDU on a stretcher.
- The MIDU nurses check your heart rate and blood pressure.
- One hour after your biopsy, you will have a chest x-ray to see if any air has leaked into the space around your lung.
- The radiologist decides if you need to have more chest x-rays.
- You can get out of bed and have something to eat and drink once the team has decided it is safe for you to do so.

- Complications do not happen very often. If your team is concerned, you may have to stay at the hospital overnight.

Tell the nurse if you feel pain in your chest or if you find it hard to breathe.

What happens when I leave the hospital?

We will give you an instruction sheet. It has important information about what health problems to watch for and how to take care of yourself.

When is my follow-up appointment?

It can take up to 1 week for the biopsy results to come back. After 1 week, call your doctor if you do not already have this follow-up appointment arranged.



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