What is a CT or Ultrasound Guided Thoracic/Mediastinal Biopsy?

Your doctor has suggested you have a CT or Ultrasound Guided Thoracic/Mediastinal Biopsy as part of your evaluation at National Jewish Health.

A CT or Ultrasound Guided Biopsy uses real-time images to ensure biopsy samples are accurately taken from the desired part of the mediastinum. The mediastinum is the area between the lungs in the chest cavity. These biopsy samples are checked for adequacy during the procedure to make sure a diagnostic sample is obtained.

Following the procedure, these tissue samples will be analyzed by a pathologist, and a report will be sent to your doctor. It may take up to a week for your doctor to receive the complete results. This will help your doctor determine the best treatment plan for you.

How do you get ready for the test?

Planning Ahead:

- You will be called on the telephone by the Radiology PA (Practitioner Assistant) before the test. The PA will give you instructions for preparation and review risks involved with the procedure.
- You need to have recent blood work. Talk with your doctor about this before the test.
- Prior to a needle biopsy, talk with your doctor about all the medicines you are taking, including herbal supplements. Tell your doctor if you have any allergies, especially to anesthesia.
- There may be certain medicines that you will need to stop taking. The Radiology PA and/or your doctor will tell you about these. Your doctor may advise you to stop taking aspirin or a blood thinner before your procedure.
- Arrange for a companion (family member or friend) to pick you up after your test. You will not be able to drive or take a taxi home.
The Day of the Test:
- Do not have anything to eat or drink after midnight, the night before the test.
- If you are diabetic, please bring your blood glucose monitor and medicine, including insulin.
- Inform your doctor about recent illnesses and other medical conditions.
- Please check-in when you arrive at National Jewish Health. A nurse from MIDC (Minimally Invasive Diagnostic Center) will come and get you.

What is done during the test?
The nurse will explain the procedure to you before you start. Ask questions if you don’t understand. Before the test you will need to remove all clothing and jewelry from the waist up. You will be given a hospital gown to wear. The nurse will start an IV. You will feel a skin prick when the IV is started. You may have the procedure done in MIDC (ultrasound) or Advanced Biomedical Imaging (radiology for CT scan).
The nurse will stay with you and monitor you closely during the procedure. An EKG will monitor your heart rate. A blood pressure cuff may be placed on your arm to monitor your blood pressure. A pulse oximeter will be placed on your finger to monitor the oxygen level in your blood. You may receive oxygen through a nasal cannula.
A CT scan or ultrasound will be done. Your skin will be cleaned, and a sterile drape placed over the area where the biopsy will be. A local anesthesia will be used to numb the skin. This will cause a “sting” which will subside quickly. After the skin is numb, biopsies will be taken of the lymph node or mass in your mediastinum. You will need to lie still throughout the procedure. Using imaging or ultrasound guidance, the doctor will insert the needle through the skin, advance it to the site of the lymph node or mass and remove samples of tissue. Several samples may be needed for complete analysis. As the biopsies are obtained, the samples will be reviewed to ensure they are good. When all the necessary samples are obtained, a small bandage will be applied to the skin.

What should you do after the test?
- You will be monitored by a nurse for about 4 hours after the procedure.
- A companion (family member or friend) will need to pick you up after the biopsy. You will not be able to drive or take a taxi home after the test. Avoid driving on the day after the test also.
- Post-procedure instructions will be reviewed with you before you are discharged.
- If you are considering air travel soon after the biopsy, consult your doctor.

How long will the test take?
A CT scan or Ultrasound Guided Thoracic/Mediastinal Biopsy takes about 2 1/2 – 4 1/2 hours. This includes about 30 minutes to prepare for the test, 1 – 2 hours for the test and about 2 hours for recovery.

How do you get to your test?
On the day of your scheduled test, check in at the Front Desk. A nurse from MIDC will come to get you. If you have questions, you can contact Advanced Biomedical Imaging (Radiology) at 303.398.1611. Also, if you need to cancel the appointment, please call.
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