



UW Medicine

CT 引导的肺活检

有关此医疗程序的解说

本讲义为患者解说 CT-引导的肺活检。它包括如何为此程序做准备、在做程序期间及之后的细节, 以及如何取得结果。

什么是 CT 引导的肺活检?

CT 是代表 *电脑断层扫描*、CT 扫描是使用一个特殊的 X 光射线机拍摄描人体内器官及组织的详细图片。

活检、是从患者体内取出小量组织。然后将此组织样本送到化实验室检查。

针穿刺活检 是从身体中取出组织样本最安全最简单的方法。做针穿刺活检时、放射科医生先用针穿过皮肤到达体内的组织、再使用注射器或自动针来抽取组织样本。

如何做此医疗程序?

在扫描过程中、患者将躺在 CT 机内。有 X 射线管围绕着患者、有许多 X 射线通过患者的身体。

机器从多个角度拍摄图片、形成区域的横截面图像 (片段) 医生可从电脑上查看这些造影。

做 CT 引导的活检、患者必须静躺在 CT 台面 1 小时或更久。

患者需要如何准备?

- 如患有糖尿病且使用胰岛素、请先与管理糖尿病医生讨论。可能需要调整胰岛素的剂量。因为 CT 扫描前 6 小时不能进食。



有位 CT 技术人员会协助您调整您在 CT 台面上的位置。

- 如平时服用阿司匹林或其他抗凝药物（血液稀释剂）、请遵照造影服务人员如何停止服用此类药物的指示。他们已与诊所的医生查询过、患者在做活检前是否应该停止服用血液稀释的药物。

做此医疗程序的当天

在家里

- 在活检前 6 小时、可依照日常的饮食进食。
- 除了胰岛素及血液稀释剂、可照常服用其他的处方药物、除非医生或放射科诊所的工作人员有其他不同的指示。
- 务必与接送者确认他可以在活检后开车载患者回家。

在医院

- 做这医疗程序前患者需要换上医院的袍子。留院期间随身的物件都会与患者在一起。
- 需要除去发夹、首饰、眼镜、助听器、及任何可以取出的假牙、因为它们会影响图像。
- *妇女*：如认为可能怀孕了、请在**扫描前**告诉放射科医生或做扫描的技师。
- 活检之前、做此医疗程序的放射科医生、或助手会详细解释这个医疗程序。他们会解说如何做活检、及可能的并发症、并提供术后自我护理的指示。有任何疑问都可在此时提问。
- 患者需要签一份同意书、确认明白所解说的有关事项、并同意做这医疗程序。
- 在做程序前会先为患者检查肾功能。如有需要；在扫描前会以**静脉导管（IV）**输液。

如何做 CT 引导的活检？

- 首先、放射科护士会为患者在手上或手臂上置入一个静脉输液的细导管。在活检过程中可能通过静脉导管为患者输液。在做穿刺前也可能给一些温和的镇静剂（帮助放松的药物）。
- CT 的技师会协助患者躺上 CT 台。用枕头来保持患者在扫描过程中的正确位置。
- 我们将先做几次扫描以确认活检区、及进入该部位最安全的角度。
- 我们会在皮肤上、在针插入的部位做一个标记。然后将入针部位周边的皮肤擦洗及消毒、并盖上无菌布巾。

- 我们会在针插入的部位先注射局部**麻醉药**（麻木药）。如此这部位就会麻木、不会感受到切口或穿刺针。
- 然后、在患者的皮肤上做一个小切口。活检针就通过此切口插入。
- 请在整个过程中不要移动或咳嗽。在不同的时间我们会请患者屏住呼吸。屏住呼吸是非常重要的、这样可确保活检针是在正确的部位取得组织。
- 医生在 CT 造影引导下将针到达正确的部位、并取出少量的组织。必要时可能需要取数个组织样本。
- 取集所需的组织样本后即将针取出。
- 当伤口部位任何出血状况停止后、即以胶布覆盖。出血量会很少、也不需要缝合。
- 活检后、会送患者到短期观察的病房。在那里会有护士照顾、确认没有任何并发症。大多数患者在这里观察 4 小时就可回家。

在做这医疗过程中会有什么感觉？

- 当注射局部麻醉针时、患者会感到轻微针刺的疼痛。
- 当注入麻药并开始生效时、可能会有灼痛感。在短时间内这部位就变得麻木了。
- 患者可能会感到医生的手或活检针的一些压力。
- 在活检针进入肺部时、可能感到要咳嗽、也可能会吐一些血。这是正常的、通常是不会痛的。几分钟后它就会停止了。

做这医疗程序后该注意些什么呢？

- 一般而言、在活检后第二天即可取下胶布。
- 在活检后第二天可以照常洗澡或淋浴。
- 在活检后 24 小时内**切勿**作剧烈的活动如提拿重物、爬很多楼梯、或体育活动。
- 在活检两天后、如觉得体力可以的话、就可回复正常的活动。
- 如计划在活检后 24 小时内坐飞机旅行、则请先与放射科医生讨论。
- 当局部的麻药消失后、伤口处可能会感到有些微痛、但术后 12-48 小时就会缓解。
- 也可能会咳出一点血。如在活检的过程中没有咳血、那现在有些咳血也因该是很轻微的。这现象在活检后 12 至 48 小时就会缓解。

在何种情况需要呼救？

以穿刺做肺活检后可能会发生肺塌陷。其症状包括：

- 呼吸急促
- 上气不接下气
- 脉搏加速（心率）
- 呼吸时胸口或肩头会感到刺痛
- 皮肤苍白

如有上述任何症状、请**即刻**到临近的急诊室或打 911、尽快与医生联系。

由谁来解释结果、如何取得报告？

可能几天到一个星期左右、放射科医生会将详细的报告传给转介做活检的医生。转介的医生或护士会与患者解说结果。

患者也可以在 MyChart 页面上阅读结果。如需要造影的光盘，请致电 206.598.6206。

患者及其医疗提供者将根据需要决定下一步的方案，如治疗计划。

您有疑问吗？

我们很重视您的提问、您有疑问或顾虑时、请联系您的医生或医护人员

- UWMC- Montlake Imaging Services:** 华大医疗中心蒙特湖院区:造影科 206.598.6200
- UW Roosevelt Radiology:** 华大罗斯福路放射科 206.598.6868
- Harborview Imaging Services:** 海港医疗中心造影科 206.744.3105
- UWMC - Northwest Imaging Services CT:** 大医疗中心-西北造影科：206.668.2061

CT: Guided Lung Biopsy

About your procedure

This handout explains a CT-guided biopsy of the lungs. It includes how to prepare for it, what to expect during and after your procedure, and how to get your results.

What is a CT-guided lung biopsy?

CT stands for *computed tomography*. A CT scan uses a special X-ray machine to take detailed pictures of the body's organs and tissues.

In a *biopsy*, a small piece of tissue is removed from your body. This tissue sample is then examined in the lab.

A *needle biopsy* is the safest and easiest way to remove this tissue safely from the body. To do a needle biopsy, the radiologist will insert a needle through your skin and into your tissue. A syringe or an automated needle may be used to take the tissue sample.

How does it work?

You will lie inside the CT machine for the scan. Many X-ray beams will be passed through your body as the X-ray tube revolves around you.

The machine will take pictures from many angles, forming cross-section images (*slices*) of the area. Your doctor will view the pictures on a computer.

During a CT-guided biopsy, you will need to hold still on the CT table for up to 1 hour or more.

How should I prepare?

- If you have diabetes and take insulin, talk with the provider who manages your diabetes. You may need to adjust your insulin since you will not be able to eat for 6 hours before the scan.



A CT technologist will help you get into position on the CT table.

- If you normally take aspirin or other *anticoagulant* medicine (blood thinners), follow the instructions for **not** taking it that the Imaging Services scheduling staff gave you. They have checked with our clinic doctors about taking blood thinners before your biopsy.
- Plan for a responsible adult to drive you home after your procedure.
- *Women:* Tell your provider if you are pregnant.

On the Day of Your Procedure

At Home

- Eat your usual diet up until 6 hours before your scan.
- Except for insulin and blood thinners, take your other regular medicines as prescribed, unless your provider or the radiology clinic staff has told you otherwise.
- Check with your driver. Make sure they can take you home after your procedure.

At the Hospital

- We will ask you to change into a hospital gown for your procedure. All of your belongings will stay with you during your visit.
- You may be asked to remove hairpins, jewelry, eyeglasses, hearing aids, and any removable dental work that could affect the images.
- *Women:* If there is any chance you may be pregnant, tell the radiologist or CT technologist **before** the scan begins.
- The radiologist who does the procedure, or an assistant, will explain this procedure to you in detail before your biopsy begins. They will describe how the biopsy is done, explain possible problems, and give you instructions and self-care tips for after your procedure. Be sure to ask all the questions you may have.
- You will need to sign a consent form that says you understand what you talked about and that you agree to have this procedure.
- We will check your kidney function before your procedure. If needed, you will receive fluids through the *intravenous* (IV) line that was started before your scan.

How is the CT-guided biopsy done?

- First, the Radiology nurse will insert an IV line into a vein in your hand or arm. You may receive fluids or medicine through the IV during your procedure. We may also give you a mild *sedative* (medicine to help you relax) through your IV before your biopsy.

- The CT technologist will help place you on the CT table. We will place pillows to help you hold the correct position during your scan.
- We will use the first few scans to confirm the biopsy area and the safest way for us to reach this area.
- We will then mark the needle insertion site on your skin. We will scrub and disinfect your skin around the insertion site, and put a sterile drape over the area.
- Then we will inject a local *anesthetic* (numbing medicine) at the insertion site. This will numb the area so you do not feel the incision or the biopsy needle.
- Then, a small incision will be made in your skin. The biopsy needle will be inserted through this incision.
- You will be asked not to move or cough during your procedure. You will also be asked to hold your breath at different times. You must try to hold your breath each time you are asked to. It will ensure that the needle is getting tissue from the right area.
- Your doctor will use the CT image to guide the needle to the correct site and remove a small amount of tissue. Several tissue samples may be needed.
- After all the samples are taken, the needle will be removed.
- After any bleeding has stopped at the incision site, we will place a bandage over it. Bleeding will be minor and you will not need stitches.
- After your biopsy, you will go to the limited-stay area. There, you will be monitored to make sure there are no problems. Most patients are monitored here for 4 or more hours before they leave.

What will I feel during the procedure?

- When you receive the local anesthetic, you will feel a slight pin prick from the needle.
- You may feel a burning sensation as the medicine is injected and takes effect. The area will become numb in a short time.
- You may feel some pressure from the doctor's hands or from the biopsy needle itself.
- When the needle enters your lung, you may need to start coughing and some blood may come out of your mouth. This is normal, and usually it is not painful. It should stop after a few minutes.

What should I expect after the procedure?

- Most times, you may remove your bandage the day after your biopsy.
- You may also bathe or shower as normal the day after your biopsy.
- For 24 hours after your biopsy, do **not** do heavy physical exercise such as heavy lifting, a lot of stair climbing, or sports.
- You may return to your normal activities 2 days after your biopsy, if you feel up to it.
- If you plan to travel by air within 24 hours after your biopsy, talk with your radiologist.
- Your biopsy site may be sore as the local anesthesia wears off, but it should get better 12 to 48 hours after your procedure.
- You may also cough up a little blood. This should be very minor if you did not cough up blood during your biopsy. This symptom will slowly ease 12 to 48 hours after your procedure.

When to Call for Help

A collapsed lung can occur after a needle biopsy. Symptoms include:

- Shortness of breath
- Problems catching your breath
- Rapid pulse (heart rate)
- Sharp chest or shoulder pain with breathing
- Pale skin

If you have any of these symptoms, go to the nearest Emergency Room or call 911 **right away**. Call your doctor as soon as you can.

Who interprets the results and how do I get them?

The radiologist will send a detailed report to the provider who referred you for the biopsy. It may take a few days to a week, or more, for your provider to get these results. Your referring provider or nurse will talk with you about your results.

You may also read your results on your MyChart page. If you need copies of your images on disc, call 206.598.6206.

You and your provider will decide the next step, such as treatment for a problem, as needed.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

- UWMC - Montlake Imaging Services: 206.598.6200
- UW Roosevelt Radiology: 206.598.6868
- Harborview Imaging Services: 206.744.3105
- UWMC - Northwest Imaging Services CT: 206.668.2061