



UW Medicine

## CT 引导的肺活检

### 有关此医疗程序的解说

本讲义为您解说 CT-引导的肺活检过程。它包括如何做准备、等待期间和之后的过程, 及如何取得结果。

### 什么是 CT 引导的肺活检?

电脑断层扫描 (CT) 使用一个特殊的 X 光射线机做扫描、可拍摄到体内的器官及组织的详细图片。

做活检、是从您体内取出小量组织。然后将此组织样本送到化验室检查。

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。做活检时、放射科医生先用针穿过您的皮肤到您体内的组织、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、您会躺在 CT 机内。因为有 X 射线管围绕着您、就有许多 X 射线通过您的身体。机器将从多个角度拍摄图片、形成区域的横截面图像 (片)。您的医生会从电脑上查看这些造影。

做 CT 引导的活检、您必须静躺在 CT 台面 1 小时或更久。

### 我需要做什么准备?

- 如果您有糖尿病且使用胰岛素、请先与管理您糖尿病医生讨论。您可能需要调整胰岛素的剂量。因为 CT 扫描前 6 小时您不能进食。



有位 CT 技术人员会协助您调整您在 CT 台面上的位置。

- 如果您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要您停用此类药物的指示。他们已与诊所的医生查询过、在您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、可依照您日常的饮食进食。
- 除了胰岛素及血液稀释剂、您可照常服用其他的处方药物、除非您的医生或放射科诊所的工作人员给您其他不同的指示。
- 务必请人与您同来、以便在活检后开车载您回家。

### 在医院

- 做这医疗程序前我们需要您换上医院的袍子。留院期间您所物件都会随您一起。
- 需要您除去发夹、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。
- 在开始做活检之前、为您做医疗程序的放射科医生、或助手会为您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、并给您术后自我护理的指示。您有任何疑问都可在这时提问。
- 您需要签一份同意书、确认您明白、并同意做这医疗程序。
- 在做程序前会先为您检查肾功能。如果您有脱水的现象、在扫描前会通过静脉注射（IV）导管为您输液。
- *妇女*: 如果您认为可能怀孕了、请您告诉放射科医生或做扫描的技师。

## 如何做 CT 引导的活检?

- 首先、放射科护士会为您在手上或手臂上放置一个静脉输液的细针管。在进行活检过程中可能通过静脉导管为您输液。在做穿刺前也可能给您一些温和的镇静剂（药物、以帮助您放松）。
- CT 的技师会协助您躺上 CT 台。我们会用枕头来调整您在扫描过程中的正确位置。
- 我们将做几次扫描以确认活检区、及取样最安全的途径。
- 我们会在您的皮肤上、在进针部位做一个标记。然后在入针部位周边的皮肤擦洗及消毒、并盖上无菌布巾。
- 我们会在插针的部位先注射局部麻醉药（麻木药）。如此这部位就会麻木、您就不会感受到切口或穿刺针。

- 然后、在您的皮肤上开一个小切口。活检针就通过此切口插入。
- 请您在整个过程中不要移动或咳嗽。在不同的时间我们会请您屏住呼吸。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。
- 医生将使用 CT 造影引导针到正确的部位、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、就会用绷带覆盖。出血量会很少、也无需要缝针。
- 活检后、会送您去到短期观察的病房。在那里会有护士照顾您、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。

### 在做这医疗过程中我会有什么感觉？

- 当我们给您注射局部麻醉针时、您会感到轻微针刺的疼痛。
- 当药物注入并开始生效时、您可能会有灼痛感。在短时间内这部位就变得麻木了。
- 您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、您可能需要开始咳嗽、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。

### 做这医疗程序后我该注意些什么呢？

- 一般而言、在活检后第二天您可以将胶布取下。
- 在活检后第二天您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、或锻炼。
- 在活检两天后、您如觉得体力可以的话、就可回复您正常的活动。
- 在活检后 24 小时内您要坐飞机旅行、则请您先与放射科医生讨论。
- 当局部的麻药消失后、可能在伤口处会感到有些微痛、但术后 12-48 小时就会缓解。
- 您也可能会咳出一点血。如在活检的过程中没有咳血、那现在也因该是很轻微的。这现象在活检后 12 至 48 小时就会缓解。

## 在何种情况需要协助？

以穿刺做肺活检后可能会发生肺塌陷的症状包括：

- 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

如您有上述任何症状、请即刻到临近的急诊室或打 **911**、尽快与您的医生联系。

## 由谁来解释结果、我如何取得报告？

可能需要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您来做活检的医生。您的医生或护士会和您谈谈您的结果。

### 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 Imaging Services:**  
华大医疗中心:造影科  
206.598.6200
- UW Roosevelt Radiology:**  
华大罗斯福路放射科  
206.598.6868
- Harborview Imaging Services:**  
海景医疗中心造影科  
206.744.3105

UW Medicine

## **CT: Guided Biopsy of Organs and Lymph Nodes**

*About your procedure*

*This handout explains a CT-guided biopsy of organs and lymph nodes. 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 biopsy of organs and lymph nodes?**

A *computed tomography* (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 from your 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?**

During the scan, you will lie inside the CT machine. 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 these images 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.



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

## How should I prepare?

- If you have diabetes and take insulin, talk with your doctor who manages your diabetes. You may need to adjust your insulin since you will not be able to eat for 6 hours before the CT scan.
- 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 whether you should stop taking the blood thinners before your biopsy.

## On the Day of Your Procedure

### At Home

- Eat your regular diet until 6 hours before your scan.
- You may take your other regular medicines (besides insulin and blood thinners) as prescribed by your doctor, unless your doctor or the radiology clinic staff has told you otherwise.
- Make sure you bring someone to drive 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.
- 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 complications, 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 you are dehydrated, you will receive fluids through the *intravenous* (IV) line that was started before your scan.
- *Women:* Tell your radiologist or the CT technologist if there is any chance you may be pregnant.

## 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. You may also be given a mild *sedative* (medicine to help you relax) through your IV before your biopsy.

- The CT technologist will help you get into position on the CT table. Pillows will be used to help you hold the right 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. It is very important that you 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, a bandage will be placed over it. Bleeding will be minor and you will not need stitches.
- After your biopsy, you will go to the limited-stay area. There, nurses will monitor you to make sure there are no complications. Most patients stay 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.

### **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 usual 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. It should feel better 12 to 48 hours after your procedure.

## When to Call for Help

Severe bleeding from a biopsy is rare. It occurs in less than 3% of patients (less than 3 out of 100 patients). Some symptoms that might be signs of bleeding are:

- Pain where the biopsy was taken
- Rapid pulse (heart rate)
- Overall weakness
- Pale skin

If you have any of these symptoms, go to the nearest Emergency Room or call 911. 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 your doctor who referred you for your biopsy. It may take a few days to a week, or more, for your doctor to get the results from your biopsy. Your referring doctor or nurse will talk with you the results.

### Questions?

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

- UWMC Imaging Services: 206.598.6200
- UW Roosevelt Radiology: 206.598.6868
- Harborview Imaging Services: 206.744.3105