A chest CT scan uses a special X-ray machine to take detailed pictures of the body. Read this handout to learn more about how a chest CT works, how to prepare for it, how it is done, what to expect during the scan, and how to get your results.

What is a chest CT scan?
CT (computed tomography, or CAT scan) of the chest uses a special X-ray machine to take detailed pictures of the organs and tissues of the chest. CT pictures are far more detailed than a standard chest X-ray. CT is useful because it can show many types of tissue (lungs, heart, bones, soft tissues, muscle, and blood vessels) at the same time.

CT scans create cross-sectional pictures (slices) of the area. The pictures are then reviewed on a computer screen.

How does the scan work?
Unlike standard X-rays, which produce pictures of the shadows cast by body structures of varying thickness, CT scanning uses X-rays in a much different way. Many X-ray beams are passed through the chest at many angles, and special detectors measure the amount of radiation absorbed by different tissues. The X-ray tube revolves around you, and sends and records data from many angles, forming cross-sectional pictures (slices) of the area.

Modern CT units produce higher-quality pictures in a shorter time, an important feature for children and patients who are elderly or critically ill, as well as for those who cannot hold their breath for a long time. Today’s scanners can image large regions of the body, during a single 20-second breath-hold.
Imaging Services
Chest CT Scan

How should I prepare for the CT scan?

- Dress comfortably, but avoid any tops with a zipper, snaps, or jewelry, since metal objects may affect the scan.

- If you will receive contrast material before your CT scan, you MAY be asked not to eat anything for 4 hours before your scan. Contrast is a dye that makes tissues and blood vessels easy to see in the CT pictures.

- You may still drink clear liquids (water, clear juices, and coffee or tea without milk) until your scan. It is important to drink a lot of fluids before and after your scan to help flush the contrast from your kidneys.

- Keep taking your regular medicines prescribed by your doctor. If you take medicines for diabetes, you might have to stop taking them if you are asked not to eat before your scan. Please talk with your doctor who manages your diabetes.

- Tell your doctor or the CT technologist if there is any chance you are pregnant.

- For certain reasons, such as checking blood vessels, you will have contrast material injected into a vein shortly before scanning begins. If this is the case, the CT technologist will ask if you have any allergies to medicines or iodine (part of many contrast materials) and if you have a history of asthma, diabetes, a heart problem, multiple myeloma, or kidney disease. These health problems may point to a greater risk of an adverse reaction to contrast material. Kidney disease makes it harder to get rid of contrast material from the bloodstream.

How is the scan done?

1. The CT technologist will place you on the CT table, using pillows to help you maintain the correct position during the scan.

2. For the first few scans, the table will move quickly through the scanner to check the correct starting position. The rest of the scans are made as the table moves more slowly through the hole in the scanner.

3. The best chest CT scans result when you can hold your breath. If you can’t hold your breath, you will be asked to breathe quietly and regularly.

4. If contrast material is needed for your scan, a small needle connected to an IV line is placed in your arm or hand vein. The contrast material will be sent through this line.
Questions?

Call 206-598-6200

Your questions are important. Call your doctor or health care provider if you have questions or concerns. Clinic staff are also available to help.

UWMC Imaging Services: 206-598-6200

Harborview Imaging Services: 206-744-3105

What will I feel during the scan?

• CT is painless, though you may feel some discomfort from staying still.

• If a contrast injection is needed, you may feel discomfort at the injection site.

• You may notice a warm, flushed sensation during the injection of contrast material. You may also notice a metallic taste in your mouth that lasts for about 2 minutes. These reactions are normal, and go away within 1 to 2 minutes.

• Once in a while, a patient will develop itching and hives for up to a few hours after the injection. This can be relieved with medication. If you become light-headed or short of breath, you may be having a more severe allergic reaction. A doctor or nurse will be nearby during the exam to help you, if needed.

• Because CT uses X-rays, you may not have a family member or friend in the CT room during the exam.

Who interprets the results and how do I get them?

A radiologist skilled in CT scanning will review and interpret the CT findings and will send a detailed report to your primary care or referring doctor, who will give you the results. The radiologist will not discuss the results with you.

5. You will be alone during the scan, but the technologist can see and hear you, and can speak to you at any time from the control room. The exam usually takes 15 to 30 minutes, including preparation time. The actual scan time is less than 30 seconds.

6. After the CT exam is done, you may have to wait a short time while the radiologist checks the scans for quality. A few more scans may be done as needed.