

Computed Tomography: Frequently Asked Questions**What is a CT scan?**

A CT (computed tomography) scan, also known as a “CAT” scan, uses x-rays to form pictures of the inside of the body.

How is CT different from a regular x-ray?

During a regular x-ray procedure, a stationary machine sends x-rays through the body to make a single “shadow” picture. In CT, the x-ray machine rotates around the body, taking multiple pictures at different angles that allow a computer to make a detailed image of the patient’s anatomy. This 3-D imaging system provides much more information than a regular x-ray.

What are the benefits of CT?

Your doctor will use the results to better diagnose and manage your condition. CT may be used to check for many diseases or causes of pain, such as a blood clot in the lungs, appendicitis or tissue swelling. The ability to accurately diagnose and treat these conditions in a timely manner will, in many cases, improve the effectiveness of your care.

What are the risks of CT?

CT uses x-rays (a form of ionizing radiation) which may pose a very small risk of causing cancer many years after the scan. To put this in perspective, all of us are exposed to ionizing radiation every day, mainly from naturally occurring radioactive material in the air, water and ground as well as radiation from our sun and deep space. The amount of radiation received during a typical body CT scan is equivalent to about 3 years of background radiation. The risk of getting a fatal cancer from this amount of radiation is thought to be approximately 1 in 2000, a relatively low risk considering all of us have a 1 in 5 lifetime risk of dying from cancer.

How can the risk of cancer be reduced?

Within the UC Davis Health System, our CT scanners feature the latest technology and imaging protocols, allowing us to use the lowest possible amount of radiation needed for each CT procedure.

Are there alternatives to CT?

In an emergency or serious situation, the benefits of CT clearly outweigh the risks and CT is usually the best option. However, in other situations you may wish to discuss with your referring doctor the pros and cons of alternatives to CT such as ultrasound or MRI which do not use ionizing radiation.

If my CT is normal, does that mean it should not have been done?

A normal CT provides valuable information and does not mean the test was unnecessary. It is important for your doctor to know what you do not have, as well as what you do have. In some cases the CT exam can provide the information your doctor needs thus avoiding alternative procedures, such as surgery, that have higher risks.

What if I might be pregnant?

It is very important that you tell the Radiology staff if there is even the slightest possibility that you may be pregnant, since at higher doses x-rays can be harmful to the developing baby. Alternatives may include postponing the exam, using ultrasound or MRI, or modifying the CT exam to reduce the exposure to the fetus. You can discuss these options with either your referring doctor or with the staff of the Radiology Department.

What can I expect before my CT scan?

You will be asked to remove any metallic items and ALL jewelry that might interfere with the scan.

What can I expect during my CT scan?

Your CT scan takes about 15 minutes, during which you will be lying on a padded table. You may be asked to lie on your stomach, back or side, and to hold your breath for a few seconds or stay very still. During the study, you may hear humming noises or feel the table move slowly through the CT scanner. For certain exams a contrast dye will be used. In that case, further information will be given to you prior to the exam.

What if I still have questions or concerns about my CT scan?

You should discuss any remaining questions or concerns with either your referring doctor or with the staff of the Radiology Department.