



# Steinberg Diagnostic Medical Imaging Centers

*"Where Imaging Revolves Around You"™*

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## CT

### **Patient information guide :**

Thank you for choosing **Steinberg Diagnostic Medical Imaging Centers** to perform your **CT Scan**. We realize you probably have questions regarding your upcoming exam and hope this information will help explain the procedure to you. If you have further questions, feel free to call our office at 732 - 6000.

### **What is Computed Axial Tomography ("CT" or "CAT" scan)?**

Computed Axial Tomography ("CT" or "CAT" scan) is a way of looking inside your body using a special camera. The images (or pictures) produced are cross - sectional, like the slices in a loaf of bread. During a CT exam the scanner takes multiple cross-sectional pictures of you. These pictures are created with the help of a computer and are capable of depicting various internal body parts in much greater detail than standard X-ray films. This greatly enhances the doctor's ability to diagnose a medical condition.

### **Common uses of this procedure.**

In cancer detection, computed tomography is used to scan for abnormal masses which might be malignant tumors (cancers). CT scans can show the size and shape of a tumor, its precise location in the body and whether it's solid or hollow. Although a CT scan sometimes is able to tell the difference between a benign (noncancerous) or malignant (cancerous) tumor, the final diagnosis is made by a biopsy or other test. When a needle biopsy is performed for cancer diagnosis, CT scanning also can be used to guide the insertion of the biopsy needle into precisely the right location for sampling a tumor.

In addition to cancer detection, CT scans have many other uses, including the detection of abscesses, strokes, head injuries and bleeding inside the skull.

In obese patients, CT scanning may be more useful than ultrasound, since large amounts of body fat can interfere with ultrasound waves.

### **How does it work?**

The CT scanner contains a large donut-shaped ring that your body slowly passes through on a moveable table. As you pass through the ring, the scanner takes a complete 360- degree picture of you that is sent to its computer. Then the mechanical table moves a small distance - less than half-an-inch - positioning you for the next picture. These pictures can then be reconstructed by the computer to form a complete image of your internal anatomy.

To make a clearer picture of certain parts of your body, some CT scans require the use of contrast materials, which are substances showing up as pure white on the X-ray. Two types of contrast materials used are barium, which you usually drink, and iodine, which is usually injected by means of an I.V.(intravenous line).

## Benefits VS Risks of CT

BENEFITS	RISKS
Viewing a CT scan, an experienced radiologist can diagnose many causes of abdominal pain with nearly 100 percent accuracy, enabling faster treatment and often eliminating the need for additional, more invasive diagnostic procedures.	CT does involve exposure to radiation in the form of x-ray , but the benefit of an accurate diagnosis far outweighs the risk. The typical radiation dose from a CT exam is equivalent to the amount of natural background radiation received over a year's time. Among all radiological procedures, radiation exposure from CT of the body is intermediate.
Unlike other imaging methods, CT scanning offers detailed views of many types of tissue, including the lung, bones, soft tissues and blood vessels.	Special care is taken during x-ray examinations to ensure maximum safety for the patient by shielding the abdomen and pelvis with a lead apron, with the exception of those examinations in which the abdomen and pelvis are being imaged. Women should always inform their doctor or x-ray technologist if there is any possibility that they are pregnant.
CT scanning can identify both normal and abnormal structures, making it a useful tool to guide radiotherapy, needle biopsies and other minimally invasive procedures.	Nursing mothers should wait for 24 hours after contrast material injection before resuming breast feeding.
CT scanning is painless, noninvasive and accurate.	The risk of serious allergic reaction to iodine-containing contrast material is rare, and radiology departments are well-equipped to deal with them.
The exam shows changes in bone better than any other imaging method.	If a large amount of x-ray contrast leaks out under the skin where the IV is placed, skin damage can result. If you feel any pain in this area during contrast injection, you should immediately inform the technologist.
CT Angiography can be used to examine blood vessels in many key areas of the body including the brain, kidneys, pelvis, and the arteries serving the lungs. The procedure is able to detect narrowing of arteries in time for corrective surgery to be done.	CT Angiography should be avoided in patients with kidney disease or severe diabetes because x-ray contrast material can further harm kidney function.

## **Patient Comfort**

The test itself is completely painless. You will be asked to lie quietly on the CT scanner's "patient couch" during the study. Depending on the type of study being done, you may be injected with, or be asked to drink, contrast material.

Because contrast agents contain iodine, which causes an allergic reaction in some individuals, be sure to tell the technologist, nurse or radiologist if you have had an allergic reaction to these agents before, or if you have any other allergies. You may have been given contrast material earlier as part of a CT scan, a kidney x-ray (also called an IVP), or a heart or blood vessel catheterization (also called an angiogram). We use nonionic contrast exclusively which is less risk to the patients.

## **Preparation Required**

You will be asked to change into a gown for most procedures. Metal objects can affect the image, so avoid clothing with zippers and snaps. You may be asked to remove hairpins, jewelry, eyeglasses, hearing aids and any removable dental work that could obscure the images. You also may be asked to refrain from eating or drinking anything for an 3 hours before the exam. Women should always inform their doctor or X-Ray technologist if there is any possibility that they are pregnant.

## **After the test**

Most patients are able to return to normal activities immediately following the scan.

## **Results of the test**

At SDMI, we have a radiologist on site at all times. Your exam will be read and a report will be phoned, faxed or mailed to your physician promptly. He/she will share the results with you.

## **I am ready to schedule an appointment (requirements for appointment)**

To schedule a CT Scan Exam, Please call 732 - 6000