

Computed Tomography (CT)



CT is a computerized imaging technique that uses electromagnetic waves to depict anatomy

at varying depths within the body. In this procedure an X-ray source rotates around the patient and captures anatomical detail from many angles. A computer stacks the individual images to create a composite image. Often a contrast agent is used to highlight specific organs or blood vessels.

CTA (Computed Tomography Angiography) uses X-rays to image blood flow in arterial vessels (arteries that deliver blood to the brain, lungs, kidneys and extremities). Compared to catheter angiography, which involves placement of a catheter and contrast agent into an artery, CTA is less invasive and more patient-friendly. Contrast agent is injected into a peripheral vein rather than the artery itself.

Common uses of CT

CT provides a direct image of soft tissue structures such as the liver, lung, spleen, pancreas, lymph nodes and fatty tissues. CT is also good for identifying and tracking large abnormalities such as tumors.

CT of the head can be used to evaluate strokes, tumors, bleeding and injuries. CT performs well in providing images of bony structures (spine, facial bones, sinuses, skull and long bones) to reveal fractures, tumors or infection.

How to prepare for your CT

- If an oral contrast agent will be administered as part of your test, you will be asked to refrain from eating or drinking for four hours before the oral contrast agent is given. If you will receive a contrast agent intravenously, you will be asked to refrain from eating or drinking for four hours before the scan begins.
- If you are taking Metformin (Glucophage[®], Glucovance[™], Glucophage[®] XR, Avandament[™] or Metaglip[™]) you must not take that medication 48 hours after any procedure using IV contrast agent (except MRI).
- You may go about your normal routine at home or work. Take your medications according to your normal schedule, and do not change or restrict your diet unless otherwise notified.
- Our business office will probably call the day before your exam to obtain insurance and other information so that

your paperwork will be ready for your signature when you arrive. You may be asked to pay a portion of the cost on the day of your exam. Feel free to discuss any payment questions with the business office representative who contacts you.

What to expect during your CT

You may be asked to put on an exam gown. You will be helped onto the scanning bed and positioned comfortably with pillows under your legs and head. Depending on the area being examined, movements of the scanning bed may be so small that they are almost undetectable, or large enough that you feel the sensation of motion.

A CT examination often requires the use of different contrast materials to enhance the visibility of certain tissues or blood vessels. The contrast material may be injected through an IV directly into the bloodstream or swallowed, depending on the type of exam.

Once you are in position, you will lie on a narrow table that gently slides through a large cylinder called the gantry. While you are in the gantry, an X-ray tube travels around you, creating the computerized CT images. Most exams take 15 to 30 minutes.

CT is offered at the following ETMC Outpatient Imaging facilities in Tyler:

- Outpatient Imaging Center at the Olympic Plaza
- Outpatient Imaging Center at 5th Street
- Radiology Department in ETMC Tyler Hospital
- ETMC First Physicians Clinic at South Broadway



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