

Computed Tomography (CT) Angiography (CTA)

Exam Duration: Approximately 20 minutes IV Required? Yes

Exam Preparation: Do not eat or drink 2 hours prior to the exam.

CT scans (or CAT scans) are quick, non-invasive diagnostic exams used to evaluate a wide variety of pathologies. CT may be used to diagnose or evaluate internal injuries from trauma, cancer, infectious disease, cardiovascular abnormalities, and a multitude of other conditions. The cross-sectional images provide a very detailed look at the internal anatomy of the body.

A CT angiogram is a specialized 3-dimensional study that is used to evaluate blood flow through the arteries in a specific area. IV contrast is infused at a rapid rate to ensure that the arteries are full of contrast and easily visualized when imaging takes place. From the patient's perspective, it is very similar to a standard CT with contrast.

Exam Procedure: Upon your arrival, a CT technologist will explain the exam in detail and ask questions about your relevant medical history. For exams ordered with IV contrast, an IV will be started in your arm if you do not already have one. You will lie on an imaging table on your back, with arms either over your head or down to your sides depending on the exam being performed. If the exam is of your head or neck, you may be asked to hold your head in a slightly uncomfortable position for a short time. The table will move in and out of the CT gantry as needed, giving instructions to hold your breath if needed. The entire exam generally takes 20 minutes.

IV Contrast Notes: Most CT exams can be ordered with or without IV contrast. If you have an iodine allergy, it is important to tell the technologist before your exam is performed. Most patients experience a warm flushed feeling when the contrast is administered along with a metallic taste. Patients may also experience a sensation like they have to urinate, but this is merely a side effect of the contrast and subsides quickly.

CTA exams require a larger IV (18-20 gauge) to be placed no lower than the bend of the elbow (specialized IV access such as PICC lines or ports are adequate as well so long as they are rated for power injection).

Important: Diabetic patients will need to stop taking oral medications containing metformin for a period of 48 hours following IV contrast injection. Other oral medications and insulin are not affected.

Additional Notes: Patients will need to remove metal objects from the area of interest prior to the scan, including hearing aids, necklaces, earrings, hair pins, underwire bras, piercings, and clothing with metal buttons or zippers. Current creatinine levels must be available for patients who are diabetic or over the age of 60 if IV contrast is to be administered; these labs are performed in the CT department if necessary.