

About CT Coronary Angiography (CTCA)

CTCA is the most sensitive non-invasive test for detecting Coronary Artery Disease, using an X-ray technique Computed Tomography (CT) to look at blood vessels that supply the heart muscle, or “coronary arteries”.

It is a fast way to allow your doctor to see whether or not plaque has developed in the coronary arteries that may result in blockages, potentially causing symptoms or increasing your risk of heart attack. It is especially useful to decide whether or not the coronary arteries are the cause of symptoms such as current chest discomfort or shortness of breath.

The Benefits of CTCA at QCG

Radiation dosage varies between different sites and CT scanners. Our premium scanner uses more advanced technology than most on the market. This allows CTCA at QCG to be performed for the lowest possible radiation dose – one of the lowest in Queensland – significantly lower than other tests and other CT sites.

Our CT scanner is conveniently located within our Spring Hill rooms, making it easier for you to see one of our cardiologists at the same location and on the same day as your scan.

Our scanner emits up to 5 times lower radiation dose than having an invasive Coronary Angiography and up to 10 times lower than a Nuclear Myocardial Perfusion Scan.

Scans are supervised and reported by cardiologists who are leading experts in their field and who have trained specifically in multimodality cardiac imaging.

Preparation

Pre-appointment Preparation

You must not consume any stimulants or products containing caffeine for at least 4 hours prior to your CT. This includes coffee, tea (including herbal tea), chocolate, soft drinks and energy drinks. The aim of this is to keep your heart rate low.

You are required to fast for 2 hours prior to your CT, but please continue to drink water and keep well hydrated.

Do not take any medication for erectile dysfunction for 72 hours prior to your CT. This includes viagra, sildenafil, cialis, levitra. These medications can have an

interaction with the medication used during the CT. If you are unsure please check with us or your GP.

Continue to take all of your normal medication on the day of the scan, unless you have been advised otherwise.

Do not exercise or perform strenuous activity for 2 hours prior to your CT.

Please advise our staff when making your appointment if you are pregnant, have a pacemaker, coronary artery bypass grafts, an irregular heart rhythm, or have had an allergic reaction to contrast agents (dye) in the past.

Please ensure you have had a blood test to check your kidney function in the 6 months prior to your CT. If you require a blood test we can organize a pathology request form or you can contact your GP.

Prior to the Scan

Before having the procedure, you will be asked about your medical history (the problems or symptoms that led you to being referred for the test by your GP or specialist).

You will change into a gown and have your heart rate checked by having an ECG and have your blood pressure taken.

The cardiologist supervising your procedure will review the results of your ECG and your blood pressure. CT images are clearer if your heart rate is slow, so you might be given some oral medication called a beta-blocker or ivabradine before the test to ensure a low and regular heart rate.

You will have an intravenous (IV) cannula inserted into one of your veins, usually on the front of your elbow at the skin crease, and ECG leads placed on your chest. You will then be taken into the CT scanner room.

Procedure

You will lie on a bed and nitroglycerin (GTN) will be sprayed under your tongue in order to expand and relax your coronary arteries, helping us to obtain the best images possible. This can cause a transient headache or mild light-headedness, if you do not normally take nitroglycerin or use nitroglycerin patches for prevention or treatment of angina (heart muscle-related chest pain).

While you are on the bed, you will be given a rapid IV injection of iodine contrast agent through the cannula. This is often referred to as X-ray 'dye', but it is a clear and colourless fluid. You may notice a warm sensation and a metallic taste in your mouth during the contrast injection. This is normal. When the iodine contrast reaches the heart through the veins, the scan is started.

The CT scan equipment is a large square machine with a large circular hole, sometimes described as looking like a donut. You will hear the CT machine rotating around you, and the bed will slide in and out of the scanner while images of your heart are taken. Only your chest will be in the scanner, your head and legs will remain free during the test. It is important not to move during the scan, as it will affect the quality of the images.

For some scans you will be asked to hold your breath for up to 15 seconds while images are taken.

The images are analysed by a cardiologist and the CT technicians who carry out the scan using complex computer programs. Information can be obtained about coronary artery blockages, heart muscle changes, the inside of the four heart chambers, the valves, the membranes that surround the heart (the pericardium) and the rest of the chest outside the heart if it is included in the scan.

Recovery

Once all the scans have been taken (around 20 minutes), you will be taken to a recovery area for observation and the IV cannula will be removed before you are allowed to go home. If you have had medication to lower your heart rate, you might be asked to stay until the effects have worn off. You will be fine to drive after this time.

Results

The time that it takes your referring doctor to receive a written report on the test or procedure you have had will vary, depending on:

- the urgency with which the result is needed;
- the complexity of the examination;
- whether more information is needed from your doctor before the examination can be interpreted by the cardiologist;
- whether you have had previous X-rays or other medical imaging that need to be compared with this new test or procedure (this is commonly the case if you have a disease or condition that is being followed to assess your progress).

Please feel free to ask when your referring doctor is likely to have the written report. Most tests are reported and forwarded to the referring doctor electronically within 48 hours.

It is important that you discuss the results with your referring doctor so that they can explain what the results mean for you and if any follow-up treatment or testing is required.