

Cardiac CT scan



What is a CT Coronary angiogram?

CT stands for Computed Tomography and is a special type of scan that uses X-rays.

The information from the scan is recorded in a series of slice pictures. These slice pictures give detailed information about the blood vessels around your heart.

What are the benefits of a CT scan?

This type of scan is quick and painless. Unlike a catheter coronary angiogram we do not need to pass wires directly up to the heart and coronary arteries, and therefore you do not need to be admitted to hospital.

Are there any alternatives?

Catheter angiogram, as described above, is a very good test but your doctor has decided a CT cardiac scan is better for you in this instance. Various other tests include MRI and nuclear medicine scans but CT is the best test for your current circumstances.

Are there any risks?

CT scanners are designed to keep the radiation dose to you as low as possible. If your doctor has asked for a scan, he or she will have decided that the benefit of having the scan, and the information that it gives, is greater than the risk of the small radiation dose. It is one of the lowest dose scans we perform.

For this examination you will be given an injection of an X-ray dye (contrast agent).

As with any injection there is a small chance of an allergic reaction. If this happens it is usually mild and very rarely serious. However, with certain types of kidney problems, the contrast may occasionally cause the kidney function to deteriorate. If your doctor thinks you may be at risk of this happening, you will be offered fluid via a drip before the scan to help prevent it.

Remember, contrast only rarely causes a problem. Without contrast certain types of scan cannot be performed. Your doctor has decided that the benefits significantly outweigh the risks described here.

Please note if we need to give you a contrast injection for your CT scan, we will require an up to date blood test which shows us your kidney function. If you have not had a recent up to date blood test we will ask you to arrange one with your GP before having your CT scan. Please be aware that without this you may not be able to have your scan.

What happens if I don't have this scan?

If you do not have this scan your doctor will have less information to diagnose and/or assess your health problems. This will make it harder for us to give you the best treatment for your condition.

How do I prepare for my scan?

Please avoid caffeine 12 hours prior to your scan. If you smoke, please refrain from smoking for 2 hours before your appointment. Please continue all medications as normal unless you have been instructed to stop any in your appointment letter, or by your doctor. If you are taking oral beta blocker or have been prescribed oral beta blocker for this examination, it is important you continue taking these as prescribed. You **must** bring a list of medications you are on to your scan appointment.

If possible, wear loose clothing with no metal buttons, fastenings or zips. If you don't have suitable clothing, please don't worry.

What if I am diabetic?

If you are taking a medication called Metformin, please let us know when you come for your scan.

What happens during the scan?

A radiographer or imaging assistant will escort you into the preparation or scan room, and explain what will happen during the scan. This is an ideal time for you to ask any questions you may have.

If required we may get you changed into a hospital gown. You will be asked to lie flat on the scanning table.

The scanner looks like a large doughnut. You will not be shut in, and you will not have to lie in a tunnel. The scan will take between 10 and 30 minutes and we will be monitoring your heart rate with a special machine (ECG). You will be asked to hold your breath at times during the scan, this should be for no more than 25 seconds.

You may be given two injections as part of the scan, so you will need to have a cannula (small plastic tube) inserted into a vein in your arm. The first medicine is a beta-blocker. This medicine will reduce your heart rate to about the same level as when you are sleeping – between 50-70 beats per minute. This drug is very fast and short acting, so the effects will have largely worn off by the time you leave the department. The type of beta blocker used for patients having cardiac CT scans (Intravenous Metoprolol) will peak inside your body 20 minutes after the injection. The levels in your blood stream then fall and on average half of the injected dose will have disappeared by 3-7 hours and it will have completely gone by 12-18 hours. In the vast majority of cases you will not feel any different following the injection of beta blocker however some people say they feel a bit tired for the rest of the day following the injection. Rarely beta blockers can make asthma worse and this will be discussed with you at the time of your scan if you are asthmatic. The radiographer or doctor, at the start of the test, will discuss this injection with you.

The second injection is X-ray dye and allows your blood vessels to be seen more clearly. You may get a warm feeling and an odd taste in your mouth for a few moments, but this is normal and will quickly wear off.

If you know that you have an allergy to X-ray dye, please telephone the CT department before your appointment.

Finally you will be given GTN spray under your tongue. This makes the blood vessels around your heart easier to see and clearer on the scan pictures. This can give you a temporary headache. Again this will be discussed with you at the time of your procedure.

Please note that as we are part of a busy hospital, occasionally there may be unavoidable delays due to emergency scans. We will try to keep any delays to a minimum and keep you informed.

Will I have any pain or discomfort?

The test is not painful, you may just feel a warm flush when we give you the contrast injection.

What happens afterwards?

As you will have had an injection of X-ray dye and possibly a beta blocker you will be asked to wait in the department for 25 minutes after your examination. After this time you will be allowed to leave the department. If you have been given beta blocker we advise you to not drive until the effects of the injection have completely worn off, which could be up to an hour.

When will I get my results?

A radiologist or a cardiologist will look at your scan images and write a report, which will be sent to the person who referred you. You should receive an appointment to see your referring doctor again, if you do not already have one.

What if I can't attend my appointment?

If you are unable to attend your appointment, please tell us as soon as possible so we can arrange another appointment, if required.

About your consent

Before we carry out any examination or treatment we will need your permission - this is known as consent. Before the examination starts we will explain what is involved and what we hope to gain from it. We will then ask for your consent to continue.

If you change your mind about having the examination or treatment, you can withdraw your consent at any time no matter how you gave it. Everything discussed between you and the member of staff will remain confidential.

If you would like further information about consent or confidentiality, please read our information leaflet outlining consent.

Contact us

If you have any questions about your scan, please do not hesitate to contact us:

CT Scanning Department
Directorate of Clinical Imaging
Royal Cornwall Hospital
Truro TR1 3LJ
Tel: 01872 252290

For frequently asked questions please visit:

www.royalcornwallhospitals.nhs.uk/services/clinical-imaging/

If you would like this leaflet in large print, braille, audio version or in another language, please contact the General Office on 01872 252690

