Patient Information Leaflet

York and Scarborough Teaching Hospitals NHS Foundation Trust

CT Coronary Angiography (Computerised Tomography)

Information for patients, relatives and carers

ⓘ For more information, please contact: Radiology Department, York Hospital, Wigginton Road, York, YO31

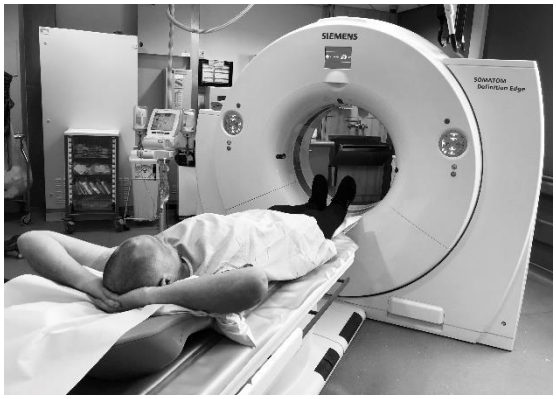
About this leaflet

In this leaflet, we tell you about the procedure known as CT coronary angiography or Cardiac CT scan. We explain what is involved and what the possible risks are. The information is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such a discussion.

What is a CT Coronary Angiography?

CT Coronary angiography is a CT (Computerised Tomography) scan of your heart and coronary arteries, it allows us to see any narrowing or blockage of the arteries around your heart.

A CT scan is a type of x-ray examination, which captures cross sectional images of parts of your body. The CT scanner consists of a doughnut shaped gantry and a scanner table. X-rays pass through the part of the body being scanned and are collected by the detectors. Computers then convert this information into scan images.



Who makes the decision?

The doctors in charge of your care have recommended that this is the best test for you. If, after a full discussion, you do not wish to proceed, then you can decide against it.

Are there any alternatives?

CT Coronary angiography is a relatively simple procedure which provides maximum information whilst reducing the risk of complications compared with other tests. Other tests including MRI (magnetic resonance imaging) and echo scans provide information on how well your heart is functioning, but only CT Coronary Angiography scan gives us enough information about the blood vessels. An alternative is a catheter Angiogram where a catheter is introduced into your body and an x-ray dye is used to look at the blood vessels of the heart, this is more invasive and comes with increased risks.

What happens before the CT Coronary Angiogram?

If you are or think you might be pregnant

This examination is not advisable for pregnant women. Please contact the Radiology Appointments Clerk. If your appointment is in York, please call us 01904 72 59 36.

Preparation

Many patients will require a prescription of beta blockers, these will have been prescribed by the doctor from clinic. If you have not received a prescription, please phone your Cardiology consultants Secretary. Take the beta blockers prescribed by clinic three days before your scan, your last dose will be the morning of the scan.

To ensure a good examination the most important aspect of obtaining good images is to try and have a slow and steady heart rate.

On the day of your scan please avoid all stimulants such as tea, coffee, coke, chocolate, Viagra or recreational drugs.

Please have no food two hours prior to your scan.

You will be asked to change into a gown for your scan, so please wear clothes you can easily change in and out of.

Please take all medications as normal. If you are taking beta blockers to control blood pressure or to slow your heart, please continue to take these.

If you have a GTN spray prescribed to you, please bring this with you to your appointment.

Please complete your Patient checklist before you arrive.

Please be prepared to be in the department for up to two hours.

How to find the CT scanning department

We are located on the ground floor of York Hospital, off Junction 6 of the main corridor.

On the day of your scan, you should report to the receptionist in the main x-ray department. They will check your details and direct you to the correct waiting area.

If you are travelling by car, you should allow plenty of time to find a space in the multi-storey car park. The car park is pay on exit so please bring change for the ticket machine. If the hospital car park is full, there is a public car park on Union Terrace, which is just on the city centre side of the hospital and within walking distance.
Disabled parking is available in front of the main entrance of the hospital.

There is also a park and ride facility running from Rawcliffe Bar.

What happens during the CT Coronary Angiogram?

We will first undertake a checklist to ensure we are safe to proceed.

We will then take a set of observations to check your heart rate and blood pressure. Once on the scanner a cannula will be inserted into your arm so that we can administer x-ray dye. Electrodes (small sticky patches attached to leads) will be placed on your chest. The electrodes monitor your heart rhythm and the electrical activity of your heart.

If your heart is beating too fast for the scanner to get good images, we may need to give you further medication (beta blockers), these can be given through the cannula already in your arm. We may also give you a spray under your tongue of GTN (Glyceryl Trinitrate) to expand the blood vessels slightly. These both will both improve the quality of the images.

Throughout the scan you will be asked to hold your breath for a few seconds. The radiographer will discuss this with you before the scan, so you know exactly what to do.

The scan itself is very quick, around five to ten minutes but the whole process can take 30minutes.

What happens after the CT Coronary Angiography?

The cannula will stay in place for 30 minutes following the end of the examination, as any possible side effects are most likely to occur within this period. The cannula will be removed before you leave the department.

We will take another set of observations before you leave.

A member of staff will explain the aftercare to you. When you feel ready, you will be able to leave the department.

Your scan will be reviewed and reported by a radiologist (a doctor trained in the interpretation of x-rays) and a cardiologist (a heart doctor) but not usually until after you have left the department.

The results will be sent to the doctor who referred you for the scan and they will contact you.

CT scans use x-rays, which are a type of radiation. The amount of radiation used is more than a standard x-ray, but we will use the minimum possible to get the images required.

Radiation can cause harm, including cancer, but the risks are low. 50% of the population are likely to develop cancer during their lifetime. Having your CT scan may increase the chances of this happening to you to 50.01%. The benefit of the information from the CT scan will be much greater than the risk.

Some patients may experience a headache or dizziness after they have had GTN spray. The beta blockers we inject can make you wheezy if asthmatic or can lower your blood pressure. In both cases you will be monitored closely during and after your scan until you feel better.

There is a slight risk of an allergic reaction to the contrast injection, which may lead to a skin rash or nausea (1). On rare occasions, more serious complications can occur. There is a theoretical risk of death, and this is estimated to be approximately 1:170,000(2).

Our doctors are on hand to deal with any complications. If you have had an allergic reaction to an injection of x-ray contrast in the past you must let the radiographer know before your scan.

Very rarely, delayed reactions (up to one hour after the injection) may occur, and for this reason, we advise you not to drive until an hour after the injection.

Overall CT Coronary Angiogram is very safe, and the small risks are outweighed by the benefits of having more accurate information about your heart. It is worth bearing in mind that many thousands of scans are carried out perfectly safely at our hospitals every year.

Finally?

If you have any problems or queries, please phone the CT appointments clerk on 01904 72 59 36 (York Hospital) before your appointment. If they are unable to help, they will transfer you to someone who can. Alternatively, you can speak to the CT staff on the day of your appointment.

References

1. Siddiqui N H. Contrast reactions. Medscape. Updated 22 July 2017. [accessed May 2019]
2. Morcos S K. Acute, serious and fatal reactions to contrast media. Our current understanding. BJR (2005) 78, 686-93. [accessed May]

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact: Gwen Haley, CT Radiographer Principal, York Hospital, Wigginton Road, York, YO31 8HE, telephone 01904 725937 or email gwen.haley@nhs.net

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email yhs-tr.patientexperienceteam@nhs.net

An answer phone is available out of hours.

Teaching, training and research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Leaflets in alternative languages or formats

If you would like this information in a different format, including braille or easy read, or translated into a different language, please speak to a member of staff in the ward or department providing your care.

Patient Information Leaflets can be accessed via the Trust's Patient Information Leaflet website: www.yorkhospitals.nhs.uk/your-visit/patient-information-leaflets/

Owner	Katy Hunt CT Cardiac Lead Radiographer
Date first issued	December 2021
Review Date	February 2028
Version	2 (issued April 2025)
Approved by	CT Modality meeting (clinical governance)
Document Reference	PIL 1733 v2