

Bowel cancer screening: having a CT colonography (CTC) scan

This information tells you about having a CTC scan as part of NHS bowel cancer screening. Your local x-ray department will give you more detailed information.

Public Health England (PHE) created this information on behalf of the NHS. In it, the word 'we' refers to the NHS service that provides screening.

CTC

CT colonography is a computed tomography (CT) examination to look at the large bowel (colon). It is a method of diagnosing bowel cancer when it is still at an early stage.

A CT machine uses x-rays and advanced computers to create detailed images. We then examine these images to check the health of your bowel.

Why we have offered you a scan

We have offered you a CTC scan for one of 2 reasons. It is either because:

- you had a colonoscopy, but we could not see the whole length of your large bowel, or
- you were told that colonoscopy was not suitable for you

Before your CTC scan

It is very important that you have a well-prepared bowel so that we can take good quality images.

We will send you a list of foods to avoid and a bowel preparation medicine before you attend for your scan. Please follow the instructions you are given very carefully.

If you are diabetic, please contact the x-ray department at least 3 days before the date of your investigation as you may need different dietary instructions.

During the scan

The staff will look after you. They will explain the process and ask you to change into a hospital gown.

We may put a small cannula (needle) into a vein in your arm. Someone will help you onto the scanner table and ask you to roll onto your side.

A thin flexible tube will gently be inserted into your bottom. Some carbon dioxide gas will pass through the tube to gently inflate your large bowel. Additional gas is then introduced when necessary to keep your bowel inflated. We may give you a muscle relaxant through the cannula to reduce any discomfort.

The radiographer will help you into the correct position for the first scan. The radiography staff will briefly leave the room, but they will be observing you closely through the scanner room window. You will be able to talk to them using an intercom system. When the scan starts you will be asked to hold your breath for a few seconds, and you will feel the scanner table moving slowly.

The radiographer will then ask you to turn over into the next position (this may be onto your front or side) and they will repeat the scan. They will then check the quality of the images. Occasionally, we may need further scans to look more closely at an area that has not shown up clearly. We may use a dye during x-rays (called a 'contrast agent') given through the cannula to improve scan detail.

At the end of the scan, we gently remove the tube from your bottom and ask you to go to the toilet before getting dressed. The whole investigation takes no more than 30 minutes. You may wish to rest at home for the remainder of the day, although most people are able to resume their normal daily activities.

Your scan results

A specialist will review your scan and send a report to your consultant or specialist screening practitioner. An appointment will then be arranged for you to discuss the results.

Risks of CTC

Radiation dose

A CTC investigation uses x-rays to produce the images. Medical radiation does carry a very small health risk.

The radiation that you receive during a CTC scan is about the same as few years of natural background radiation (from your surroundings). The risk of this is considered to be low. See: www.gov.uk/government/publications/ionising-radiation-from-medical-imaging-examinations-safety-advice

The CT department monitors radiation doses very carefully and always uses the lowest dose needed to gain good quality images.

Expected side effects

Minor side effects may include:

- dehydration caused by the bowel preparation medicine – you will need to drink plenty of fluids before and after your scan
- a dry mouth and blurred vision caused by the muscle relaxant injection (if given) – this should wear off within 30 minutes, but please do not drive until your vision is back to normal
- a feeling of warmth and an occasional strange metallic taste with a feeling as if you have passed urine for a few moments, caused by the contrast agent injection (x-ray dye) if given
- bloating in your abdomen (tummy) during and after the procedure caused by the gas used to inflate your bowel – this soon wears off once you have been to the toilet and passed wind
- haematoma (bruising) where the injection was given

Rare complications

More serious complications are rare, but the radiography staff are well prepared to manage them.

Before sending you home, they will make sure you do not:

- feel faint following injection of the muscle relaxant (if given)
- have severe abdominal pain
- have a perforation of the bowel (a small hole in the bowel wall)
- have a painful eye caused by the muscle relaxant (if given) – this is rare but if it happens you need to attend a hospital emergency department for an urgent eye assessment

If you need further investigations or treatment

Following your CTC scan, you may be invited to attend for other investigations. This will be discussed in detail with your specialist screening practitioner (nurse) or your consultant. If treatment is needed, you will be able to discuss this with a team of specialists.

CTC scans are generally accurate at detecting cancer and large polyps, but no screening test is completely effective and there is a small chance that a CTC can miss a cancer or polyp that could later turn into a cancer.

Summary

To help you decide whether or not you want to have the CTC scan, the possible benefits and risks are outlined here. A CT scan:

- can detect cancer and polyps at an early stage, improving your chances of successful treatment and survival
- is generally considered less invasive than colonoscopy
- has some common, minor side effects, and some very rare but more serious risks such as perforation of the bowel

- delivers a dose of radiation, but this carries a very low risk
- may miss a polyp or a cancer (the same as with colonoscopy)

A bowel perforation is very rare, and only happens in about one in every 3,000 cases.

See: pubmed.ncbi.nlm.nih.gov/24816935/

Most perforations will heal without treatment, although an overnight hospital stay and antibiotics may be recommended.

More information

The NHS Screening Programmes use personal information from your NHS records to invite you for screening at the right time. Public Health England also uses your information to ensure you receive high quality care and to improve the screening programmes. Find out more about how your information is used and protected, and your options at www.gov.uk/phe/screening-data.

Find out how to opt out of screening at www.gov.uk/phe/screening-opt-out.

PHE created this information on behalf of the NHS. It was developed by the University of Salford in collaboration with the National Coordinating Group for Quality Assurance of Radiology (NHS Bowel Cancer Screening Programme).

© Crown copyright 2021

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit www.nationalarchives.gov.uk/doc/open-government-licence/version/3/. Where we have identified any third-party copyright information you will need to obtain permission from the copyright holders concerned.

Published January 2021

PHE supports the UN Sustainable Development Goals