



MARNMP

Maltese Association of Radiologists
and Nuclear Medicine Physicians

Computed Tomography Colonography

What is computed tomography colonography (CTC)?

Computed tomography colonography is a specialised CT scan that looks at the large bowel (colon) and abdomen. Sometimes CT Colonography is called 'Virtual Colonoscopy'.

What is the difference between a standard optical colonoscopy and a computed tomography colonography?

Both standard optical colonoscopy and CTC are tests used to examine the colon.

In an optical colonoscopy a tube with a camera on the end – a colonoscope – is passed into the back passage and moved up and around the large bowel allowing the physician to examine the bowel as well as perform a biopsy if needed.

In CT colonography, the CT scanner scans the abdomen in thin sections producing a 3D image of the entire colon.

What happens on the day of the scan?

The radiographer performing the scan will check your details and ask if you have any allergies, or suffer from diabetes or any heart problems. Please inform us if you have had a severe allergic reaction to contrast agent (dye) in the past, as we may need to give you an alternative preparation.

We will then ask you to change into a hospital gown.



MARNMP

Maltese Association of Radiologists
and Nuclear Medicine Physicians

An intravenous injection of the iodinated contrast agent (dye) and a bowel relaxant (Buscopan®) is given prior to starting the CT scan. Both allow better images to be obtained and allow us to get more information about the other organs shown in the scan.

First you will lie on your side on the scanner table. A trained member of staff will insert a small tube into your back passage and gas will be put through the tube to gently inflate the bowel and help create clearer images.

You will then lie on your front on the scanner table, which will be moved into the CT scanner and the first half of the scan performed. For the second half of the scan, you will turn over to lie on your back.

How do I prepare for the test?

The success of the examination depends on the bowel being as clear as possible. In order to achieve this you will need to follow a special diet and drink a special liquid called Gastrografin. This preparation is designed to prepare the bowel prior to the examination. Kindly note that Gastrografin contains iodine. Please contact the CT Room (2545 6703) if you are allergic to iodine or have difficulty swallowing liquids. Once you have taken the preparation, it is important to be close to a toilet as it often causes frequent loose bowel motions.

The Gastrografin bottle can be collected from the reception desk of the Medical Imaging Department of Mater Dei Hospital or Gozo General Hospital, between 8am-12pm, Monday to Friday.

If you take iron tablets please stop taking these seven days before your appointment



MARNMP

Maltese Association of Radiologists
and Nuclear Medicine Physicians

Two Days before the Examination:

Two days before the examination, start a fluid diet at noon. Examples of food you can eat include clear soups, clear liquids, plain jelly (without added fruit), fruit juice, bullion, coffee and tea. You may add sugar to your drink but do not add milk or cream. No cream soups are allowed.

The Day before the Examination:

Continue with the liquid diet with the following addition:

8am: Drink 1/3 (35ml) of the liquid in the Gastrografin bottle followed by a glass of water

12pm: Drink 1/3 (35ml) of the liquid in the Gastrografin bottle followed by a glass of water

4pm: Take the remaining Gastrografin liquid followed by a glass of water

After 4pm: Continue with the fluid diet e.g. clear soups, clear liquids, plain jelly (without added fruit), coffee or tea without milk.

The Day of the Examination:

Drink clear liquids only (you can drink tea or coffee without cream or milk).

Do not stop taking vital medication such as steroids, diabetic drugs or heart drugs.

Are there side effects or risks from the procedure?

CT scanning involves the use of x-rays. The amount of radiation used is more than that of an ordinary x-ray of the chest or body and is equal to the natural radiation we receive from the atmosphere over a period of approximately three years. The risk from this radiation dose is very low.



MARNMP

Maltese Association of Radiologists
and Nuclear Medicine Physicians

Female patients: If you suspect you might be pregnant, you must contact the radiology department in advance to rearrange your appointment.

Mild abdominal discomfort and bloating can occur when gas goes into the colon. We use carbon dioxide gas because the body quickly absorbs it. Any symptoms quickly pass off when the tubing is removed from the rectum and you have gone to the toilet.

Buscopan® (muscle relaxant) can make your mouth dry and your vision slightly blurred, which normally lasts for 15-20 minutes.

Perforation of the bowel can occur with this test but this is very rare (approximately 1 in 3000 tests). When it happens nearly all cases resolve without treatment, but it may require hospital admission and observation under the care of a surgeon in case an operation is needed.

Despite these small risks, your doctor believes it is advisable that you should have this examination. Do bear in mind that there are greater risks from missing a serious condition like bowel cancer by not having it. Please remember this test is safe - serious complications are rare.

After your test, how will I get my results?

You will not be given any results on the day of your test. The scan will be reported by a radiologist and sent to your caring consultant/specialist. You will be sent an appointment to attend the relevant clinic or contacted with the results.

Some patients may need to return for a colonoscopy appointment to look at the large bowel and take biopsies to check areas we have highlighted on the CT scan. Your doctor will tell you if this is required and explain the test to you.



MARNMP

Maltese Association of Radiologists
and Nuclear Medicine Physicians

Can I eat normally after the test?

Yes, you can eat normally after the test. It is advised to drink plenty of fluid for the next day or so as you may still be dehydrated.

What should I do if I develop new symptoms after my scan?

Most patients' bowel habits return to normal within 24 hours of the scan. Complications from CT colonography are very unusual after you have left the radiology department.

Abdominal pain, bloating and distension, vomiting or constipation in the initial days following your CT Colonography examination could be a sign that a perforation of the bowel has occurred. If you do start to feel unwell in the days after the scan please contact your GP or the emergency department.

Compiled by Dr Lara Sammut and Dr Kristian Micallef