

## CT Colonography (CTC) examination

### What is CT Colonography?

CT Colonography (CTC) is an advanced type of x-ray exam that uses computer tomography (CT) scanning to obtain an interior view of the colon (the large intestine) that can ordinarily only be seen with an endoscope inserted into the rectum. This new minimally invasive test provides three-dimensional images that can depict many polyps and other lesions as clearly as when they are directly seen by colonoscopy.

### What are some common uses of the procedure?

The major reason for performing CT Colonography is to look for polyps in the colon (large intestine). Polyps are benign growths that arise from the inner lining of the intestine. Some polyps may grow and turn into cancers. The aim is to detect these growths in their early stages, so that they can be removed before cancer has had a chance to develop.

Most doctors agree that everyone older than 50 years should be screened for polyps. Screening is especially important if you are at increased risk of developing colon cancer. This is the case if you have had polyps, have a family history of colon cancer, or have blood in your stool.

- CT Colonography is a less invasive option for patients who wish not to have colonoscopy, inserting a flexible telescope into the colon to view the bowel wall.
- CT Colonography is an excellent alternative for patients with an increased risk of complications from colonoscopy, such as treatment with a blood thinner or a severe breathing problem.
- Elderly patients, especially those who are frail or ill, will tolerate CT Colonography better than conventional colonoscopy, although a GI protocol CT may be an alternative.
- If conventional colonoscopy cannot reach the full length of the colon—which

occurs up to 10 percent of the time—CT Colonography can be performed on the same day because the colon has already been cleansed.

### **How should I prepare for the procedure?**

It is very important to clean out your bowel the night before your CT Colonography examination so that Dr Ian McCafferty can clearly see any polyps that might be present. On the day before the procedure you will likely be asked not to eat, and to drink only clear liquids like water, black tea & coffee, cola and to avoid dairy products. After midnight, you should not eat or drink anything. You will be given 2 sachets of laxative (usually picolax) to be taken the day before the procedure. Just follow the detailed instructions from the radiology department. You can take your usual prescribed oral medications with limited amounts of water. Sometimes you may be asked to drink a special liquid several times before the examination (tagging), which helps Dr Ian McCafferty interpret the images more accurately. Full instructions will be given to you by the radiology department.

You may be asked to remove some or all of your clothes and to wear a gown during the exam. You may also be asked to remove jewellery, eye glasses and any metal objects or clothing that might interfere with the x-ray images.

If you do take insulin or tablets you need to make sure you have enough to eat on the day before your appointment to prevent low blood sugars and you should follow the advice given by the Radiology Department (usually in a special accompanying leaflet).

Women should always inform the radiographer if there is any possibility that you could be pregnant. Many imaging tests are not performed during pregnancy because radiation can be harmful to the foetus.

### **How is the procedure performed?**

Following bowel cleansing the evening before, you will lie down on your stomach or on your side on the scanner table. A very small, flexible tube will be passed two inches into your rectum to allow air to be gently pumped into the colon using a hand-held squeeze bulb. Sometimes an electronic pump is used to deliver carbon dioxide gas into the colon. In either case, you will be able to control the amount of air or gas passing into the colon.

The purpose of the gas is to distend the colon a little to eliminate any folds or wrinkles that might obscure any polyps that are there. As the table moves through the scanner, you will be asked to hold your breath for about 15 seconds. A second pass is made through the scanner after you have turned onto your back, to make sure that all sections of the colon are air-filled. In some centres the sequence of positions may be the opposite: facing upward first and then facing down. Once the scan is done, the tube is removed and you are free to leave.

### **What will I experience during the procedure?**

The vast majority of patients who have CT Colonography report a feeling of fullness during the exam, as if they need to pass gas, when the colon is inflated. Significant pain is uncommon, however, occurring in fewer than 5 percent of patients. A muscle-relaxing drug is usually injected intravenously to lessen discomfort. After the tube is inserted, your privacy will be respected. The scanning procedure itself causes no pain or other symptoms. You will be alone in the examining room during CT, but a radiographer will be in the adjacent control room and is able to see and hear you, and can speak to you at any time. The entire examination can be completed within 30 minutes.

### **Who interprets the results and how do I get them?**

Dr Ian McCafferty, a radiologist, specifically trained to supervise and interpret radiology examinations, will analyze the images and send a signed report to your doctor. Dr Ian McCafferty may discuss preliminary results with you at the conclusion of your examination

### **What are the benefits vs. risks?**

#### Benefits:

- CT Colonography is a minimally invasive procedure. The risk of perforating the colon is lower than with conventional colonoscopy. Most of those examined do not have *polyps*, and can be spared having to undergo a full colonoscopy.

- In ~5 percent of patients, CT Colonography shows abnormalities outside the colon, which would be otherwise missed, because colonoscopy only looks at the interior surfaces. Occasionally these are important discoveries.
- CT Colonography is tolerated well. Sedation and pain-relievers are not needed, so there is no recovery period. You will be free to resume your usual activities immediately after the exam

#### Risks:

- There is a very small risk that inflating the colon with air could injure or perforate the bowel.
- CT Colonography does require exposure to x-rays, but the radiation dose is very low.

#### **What are the limitations of CT Colonography?**

- CT Colonography provides a black-and-white picture of the bowel wall. The lack of true-colour images makes it more difficult to assess lesions
- CT Colonography is strictly a diagnostic procedure. If any significant polyps are found, they will have to be removed by conventional colonoscopy

#### **If you have a query?**

If you have a query about having the CT, please ring the Radiology Department between 9am and 5pm, Monday to Friday & 9am and 12pm Saturday.