

**MASSACHUSETTS GENERAL HOSPITAL  
DEPARTMENT OF RADIOLOGY**

**CT COLONOGRAPHY SCREENING**

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**Why is getting a colon screening exam important?**

- Each year, approximately 150,000 Americans are diagnosed with a very common and serious disease - colon cancer.
- Colon cancer usually develops within benign growths called polyps, which arise from the colon wall. If polyps are detected early, removing them stops development of the cancer. The current gold-standard technique for finding and removing polyps is endoscopy, a procedure in which a long, flexible tube is inserted into the colon, allowing a doctor to search for and remove polyps. Unfortunately, many people are either unwilling or unable to undergo endoscopy and are therefore not screened for polyps.

**What is CTC?**

- CT Colonography (CTC), sometimes called "Virtual Colonoscopy," is a new non-invasive and easily tolerated technique by which patients receive a special CT (or "CAT") scan. A CT scan is an X-ray test that creates special images of the body. The images from the CT scan are transferred to a computer, which creates a detailed picture of the inside of the colon. A radiologist (a doctor who specializes in medical imaging) is then able to evaluate the colon on the computer, looking for the same polyps that can be seen with conventional endoscopy.

- Studies performed at several university hospitals around the country indicate that CTC is a safe exam that is very sensitive for detecting colon polyps. Recent data from a large screening trial indicate that CTC is as effective as conventional colonoscopy for the detection of polyps.

### **What should I expect?**

- CTC is designed to be easily tolerated by patients. The exam can be completed within twenty minutes, and most patients report that it causes little or no discomfort.
- To begin, you will lie comfortably on the CT scanner table. A very small, flexible tube is inserted into the rectum and some air is gently blown into the colon to hold it open. After the tube is inserted, your privacy will be maintained and you will be in control of the amount of air. You may experience a sense of fullness, but nearly all patients report that the air insufflation is not painful.
- It takes about two minutes to perform the actual CT scan. The first series of pictures will be taken with you lying on your stomach, followed by another set lying on your back. After the pictures are taken, the tube is removed and you will be free to go.
- Because no sedation is required for the test, you can drive or return to work after the exam is completed. After you leave, an MGH radiologist will interpret the pictures and report the results directly to your doctor.
- Most people don't have polyps, but the smaller percentage of people who do should have them removed. If we detect a polyp on your CTC, we will inform your doctor, and he or she will likely recommend a follow-up endoscopy to have the polyp removed.

### **How do I prepare for my CTC exam?**

- The bowel preparation that you take the night before your appointment is essential for a good exam. The colon needs to be prepared so that the radiologist can clearly see if any polyps are present. The special liquid that you drink passes through you and is not absorbed by your body. Because the liquid is not absorbed, it causes most people to have diarrhea on that evening only. On the morning of the exam, you should strictly limit your diet to clear liquids, such as tea or apple juice. Immediately following the exam, you may resume your regular diet.

## **Is CTC safe?**

- To date, there have been no reports of any serious complications with CTC at any of the places performing the technique, including MGH. Because the test requires that only air be instilled into the colon, there is little risk that the colon will be injured. CTC does involve the use of X-rays; however, the amount of X-ray for CTC is very low, less than the amount used for other common X-ray examinations such as barium enema.
- Because CTC uses CT scan technology, we will also be able to evaluate the other organs of the abdomen and pelvis. Occasionally, important abnormalities are detected on CTC that would otherwise not have been noted. If we observe an important abnormality, we will report it to your doctor.

## **How Often Should CTC be repeated?**

- A polyp can form at any time throughout life, but most commonly occurs in people over the age of 50. Most polyps grow slowly, and the risk that cancer will be found in a polyp is substantial only for polyps at least one half-inch (1 cm) in size. If your CTC shows no polyps, we will usually recommend that you wait five years before having another CTC. As more information about CTC becomes available, it is possible that this recommended follow-up interval will become longer.

## **Is CTC covered by my insurance?**

- Because CTC is a new test, most insurance companies do not yet cover CTC for screening. If you are having this test because of symptoms related to your colon, your insurance may cover the exam. For people without symptoms, you should expect to pay for the exam at the time of service.