

CT COLONOGRAPHY FOR COLORECTAL CANCER SCREENING: AN UPDATE

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Editor's note: This summary is an update to the article "Colorectal Cancer Screening: How does CT Colonography Fit In" that Dr. Fearnow coauthored with Bruce Pokorney, MD in the inaugural issue of the Journal in 2006.¹

Since CT colonography was first implemented at LGH in May 2005, it has been used only in the following circumstances: a) conventional colonoscopy has failed, which is very rare; b) colonoscopy is unable to view the colon proximal to an obstructing lesion or stricture; c) the patient cannot tolerate conventional colonoscopy or sedation, such as an elderly or frail patient; d) the patient should not have anticoagulant therapy discontinued; e) the patient refuses conventional colonoscopy for other reasons; or e) there are conditions present under which conventional colonoscopy is anticipated to be difficult or dangerous.

Polyps found on CT colonography are often divided into three categories: 5 mm or smaller; 6 to 9 mm; and 1 cm or larger. Many practitioners agree that polyps 5 mm or smaller are insignificant, and, if found by CT colonography, may be followed over time. Radiologists and gastroenterologists who have developed the joint CT colonography guidelines at LGH concur that polyps 6 mm or larger that are found at CT colonography should be removed with colonoscopy.

CT colonography (CTC), also known as virtual colonoscopy, is effective, less invasive, and safer than standard colonoscopy for colon cancer screening, yet CT colonography is not widely used. The reason is that the US Preventive Services Task Force (USPSTF) has not endorsed *screening* CT colonography, and the Centers for Medicare & Medicaid Services (CMS) will not reimburse for the *screening* procedure although it does reimburse for *diagnostic* CTC.

A recent issue of the *Journal of the American College of Radiology* by Judy Yee, MD and Abraham H. Dachman, MD documented that existing peer-reviewed data support upgrading the USPSTF status of CT colonography along with Medicare's reimbursement for it.

There are a number of advantages of CT colonography over standard colonoscopy. CT colonography is

minimally invasive, making it an excellent alternative for patients who may not want to undergo standard colonoscopy. There is no need for sedation, making it suitable for an outpatient setting. Patients can return to normal activities immediately after a CTC. It is a safe procedure, with a very low risk for perforation (about 10-20 times lower than for standard colonoscopy). For those and other reasons, the American Cancer Society, the US Multi-Society Task Force on Colorectal Cancer, and the American College of Radiology endorsed CT colonography as an acceptable method to screen the colon for polyps and masses back in 2008.

Opponents to full acceptance of CT colonography raise a number of points, though. They argue that patients with polyps need to undergo standard colonoscopy for polyp biopsy or removal. However, it is estimated that fewer than 15 percent of patients having screening CT colonography will require standard colonoscopy because of polyps. Another argument against CT colonography is its lower sensitivity for small polyps and flat lesions. It should be noted that standard colonoscopy also has decreased detection ability for small and flat lesions. However, the chance of a small polyp harboring malignancy is extremely low.

Opponents note that CT colonography is able to evaluate structures in the entire abdomen, outside the colon, and a drawback is the economic impact of the supplementary cost of the further workup and treatment of incidentally found lesions. In fact, the majority of findings outside the colon that are identified by CT colonography will not require further workup. Furthermore, CT colonography has the potential to save lives by detecting life-threatening lesions in a pre-clinical stage.

Keep in mind that CT colonography is a low-radiation dose procedure and requires much lower dose than a routine CT scan. Also, methods to further

reduce CT radiation dose have become widely available, including at LGH, and those methods are used in CT colonography. Moreover, current CT colonography doses can now be used that are at or below the natural background radiation in the United States.

The USPSTF is currently evaluating colorectal cancer screening tests. CT colonography needs to be

a reimbursed colorectal cancer screening tool if it is to be a real option for those who do not want to undergo standard colonoscopy. Colorectal cancer most often starts in a polyp, and that is the target lesion for screening. CTC is a fast, safe, and effective method of screening for those polyps that are most likely to become malignant, and it can help to save lives.

REFERENCES

1. Pokorney, BH and Fearnow, EC. Colorectal Cancer Screening: How does CT Colonography Fit In? J Lanc Gen Hosp. 2006; 1: 24-27

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