Despite Advances in the Accuracy of CT Colonography in Detecting Polyps, Digestive Health Experts Urge Patients to Consider Risks and Realities

Bethesda, MD, September 17, 2008 – Findings from a trial of the accuracy of CT colonography (CTC) compared to complete colonoscopy in detecting large pre-cancerous polyps and colorectal cancers, coordinated by the American College of Radiology Imaging Network (ACRIN), raise several important issues for the public about colorectal cancer screening using a CT scan of the abdomen: the potential need for follow-up with complete colonoscopy in many cases, the real risk of undetected and unreported smaller growths with pre-cancerous potential, the reality of radiation risks relating to CT scans, as well as questions regarding patient acceptability of this test.

“Today’s findings underscore the reality that many patients who have polyps detected by CT colonography will still have to undergo complete colonoscopy,” explained Dr. Amy Foxx-Orenstein, D.O., FACG, President of the American College of Gastroenterology. Researchers found that as many as 12 percent to 17 percent of study participants screened by CTC would have to be referred for complete colonoscopy depending on the size threshold for reporting lesions in the colon. Of more significant concern, is that the researchers only reported growths in the colon 5 mm or larger, leaving unreported and therefore undetected an untold number of potentially high risk pre-cancerous growths.

“The College sees significant strengths in the proven benefits of visualizing pre-cancerous growths and removing them in a single examination during colonoscopy,” commented Dr. Foxx-Orenstein. “There is a tremendous body of evidence that shows that clearing the colon of polyps, including small polyps, significantly reduces colorectal cancer mortality. Because of its excellent sensitivity in detecting polyps and its potential for removing them and breaking the sequence of polyp to cancer in a single diagnostic and therapeutic intervention, complete colonoscopy is one of the most powerful preventive tools in clinical medicine. Until a radiographic test can meet that standard, gastroenterologists will continue to champion the lifesaving potential of colonoscopy,” Foxx-Orenstein added.

Evaluating the Potential of CT Colonography – What Patients Should Know
When evaluating new potential screening technologies, including CT colonography, the ACG has focused its evaluation on several pieces of evidence including: sensitivity for identification of polyps of various sizes, standards for polyp removal, correlating patient risks (in this case from radiation exposure), frequency of exams and the economic impact to the healthcare system of separate diagnostic and therapeutic exams.

If all patients with a lesion measuring 5 mm or more on CT colonography in this study were referred for complete colonoscopy, the colonoscopy-referral rate would be 17 percent. In earlier findings by Dr. Pickhardt and his colleagues in 2004, at least 30 percent of patients undergoing virtual colonoscopy required conventional colonoscopy to remove polyps 6mm or larger.
Radiation Risk
The issue of radiation exposure risk are long-term and lifetime risks. The results of the impact of patients undergoing CT and other radiologic exams for a variety of reasons will not be known for some time. With a proposed screening schedule of five years or less for CTC, depending upon the findings, the cancer risks from the CTC test itself are not insignificant. Although it is a challenge to define precise risk estimates related to low doses of radiation exposure, the ionizing radiation exposure from a single abdominal or chest CT may be associated with elevated risk for DNA damage and cancer formation. X-rays used in medical diagnostic procedures is the largest man-made source of radiation exposure to the population contributing some 14 percent of the total annual exposure from all sources. The U.S. Food and Drug Administration considers x-ray as a carcinogen.

Patient Acceptability
Patient acceptance is another key factor in evaluating the promise of a new technology. ACG notes that the CTC technology requires the same bowel preparation as complete colonoscopy. There is also evidence that due to the insertion of a tube in the rectum and insufflation of the abdomen with air or gas, the patients, who are not sedated and awake, tend to feel discomfort.

“It is important for patients to understand that CT colonography does not at present represent a painless or risk-free procedure, nor does it eliminate the need for bowel cleansing which patients report as a barrier to screening,” explained Dr. Foxx-Orenstein.

Moreover, the American Cancer Society recently issued a Multi-Society Task Force Guideline on Colorectal Cancer which stated a preference for tests which prevent colorectal cancer. According to the American College of Gastroenterology, colonoscopy remains the preferred strategy for colorectal cancer screening and prevention. Three studies have shown that colonoscopy prevents about 80 percent of colorectal cancers from developing by removing pre-cancerous polyps.

“The public should recognize that there is no evidence that any radiographic test, including CT colonography, prevents the development of colorectal cancer,” said Dr. Foxx-Orenstein.

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