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NEWS

# RSNA Press Release

## Virtual Colonoscopy Effective in Preventing Colorectal Cancer

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### At A Glance

- 3-D virtual colonoscopy provides an accurate, less invasive colorectal cancer screening alternative to optical colonoscopy.
- Patient demand for virtual colonoscopy was strong in the first study where the procedure was covered by insurance.
- Only 6.4 percent of patients screened with virtual colonoscopy required a subsequent optical colonoscopy.
- Colorectal cancer is the second leading cause of cancer mortality in the U.S.

OAK BROOK, Ill. (Oct. 17, 2006) — Three-dimensional computed tomography (CT) colonography, also known as virtual colonoscopy, is an accurate screening method for colorectal cancer, according to a study published in the November issue of the journal *Radiology*. In addition, when covered by third-party payers, virtual colonoscopy may entice more people to be screened.

"Our positive experience with virtual colonoscopy screening covered by health insurance demonstrates its enormous potential for increasing compliance for colorectal cancer prevention and screening," said lead author Perry J. Pickhardt, M.D., associate professor of radiology at The University of Wisconsin Medical School in Madison. "In addition, recent technical improvements have resulted in even better performance results."

Colorectal cancer remains the second leading cause of cancer mortality in the United States, and the American Cancer Society (ACS) estimates that there will be 148,610 new cases diagnosed in 2006 and 55,170 deaths. The disease is largely preventable through screening for colon polyps, which are benign growths that may develop into cancer if not removed. ACS recommends that people at average risk for colorectal cancer begin regular colorectal cancer screening at age 50, but current compliance with this recommendation remains well below 50 percent. Many people resist screening because of the discomfort and inconvenience caused by the standard optical colonoscopy test.

"Our goal is not to take patients away from existing strategies like optical colonoscopy, but rather to attract those who are currently not being screened at all," Dr. Pickhardt said.

Virtual colonoscopy is less invasive than optical colonoscopy and produces precise and detailed 3-D "fly-through" images of the entire colon's interior without having to insert a scope. With virtual colonoscopy screening, there is essentially no risk of bleeding or of


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perforating the colon. There is no need for intravenous sedation, and the procedure is less costly than conventional colonoscopy. It also is more convenient, typically taking 10 minutes or less, because patients need not recover from sedation.

"Both virtual colonoscopy and optical colonoscopy are excellent screening tests," Dr. Pickhardt said. "The advantages of virtual colonoscopy over optical colonoscopy at our institution are that it is safer, faster, less costly, more convenient, involves an easier bowel prep, and yet is just as effective for detecting important polyps and cancers."

In April 2004, local third-party insurance coverage was initiated for virtual colonoscopy screening by the major managed care providers in the Madison area. Over a one-year period, the researchers performed virtual colonoscopy screening exams on 1,110 asymptomatic adults, consisting of 585 women and 525 men with a mean age of 58.1 years.

Large (10 millimeters [mm] or more) colorectal polyps were identified in 43 (3.9 percent) of patients. Medium-sized lesions (6 mm - 9 mm) were identified in 77 (6.9 percent) patients. Patients without polyps 6 mm or larger were advised to follow a routine screening interval of five years. Most patients with medium-sized lesions chose to undergo follow-up with virtual colonoscopy. If all the patients with either a polyp larger than 6 mm or a nondiagnostic segment had undergone subsequent optical colonoscopy, the maximum referral rate would have been 11.9 percent.

Seventy-one of the 1,110 patients (6.4 percent) underwent subsequent optical colonoscopy. Sixty-one of these procedures were performed on the same day as virtual colonoscopy to avoid the need for repeat bowel preparation. The optical colonoscopy findings were in agreement with the virtual colonoscopy findings in 65 of the 71 patients.

The high rate of accuracy coupled with the low necessity for subsequent optical colonoscopy show virtual colonoscopy to be an attractive screening tool for colorectal cancer.

"In our experience, providing a less invasive, yet equally effective screening option like virtual colonoscopy has drawn many adults off the sidelines," Dr. Pickhardt said. "Since colorectal cancer is uniquely preventable, widespread virtual colonoscopy screening could lead to a significant reduction in mortality from this deadly disease."

Dr. Pickhardt anticipates that the positive clinical results of this study will lead to further acceptance from the medical community and that insurance coverage on the national level should start to take place within the next one to two years.

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"Colorectal Neoplasia Screening with CT Colonography." Collaborating with Dr. Pickhardt on this paper were


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