
RSNA Press Release

Virtual Colonoscopy Shows Cancer Outside the Colon

Released: July 26, 2005

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OAK BROOK, Ill. - Computed tomographic colonography (CTC) depicts cancers and other clinically important conditions that would be missed with standard colonoscopy and at very little additional cost, according to a study in the August issue of *Radiology*.

"The chance of finding cancer outside the colon may be as significant as the chance of finding cancer inside the colon," said Judy Yee, M.D., Chief of Radiology at the Veterans Affairs Medical Center and associate professor and Vice Chair of radiology at University of California San Francisco School of Medicine.

CTC, also known as virtual colonoscopy, is a non-invasive screening method for colon cancer. Virtual colonoscopy uses a series of CT images to visually reconstruct the interior of the colon on a computer. Unlike standard colonoscopy—which explores only the interior of the colon—virtual colonoscopy depicts the surrounding areas as well.

"Using the same amount of radiation as a non-contrast CT scan of the abdomen/pelvis, you can do a virtual colonoscopy and screen the surrounding abdominal and pelvic area," Dr. Yee said.

To evaluate the prevalence of extracolonic findings at virtual colonoscopy and to determine the cost of follow-up testing, Dr. Yee and colleagues performed CTC on 500 men, including 194 (39 percent) considered average risk and 306 (61 percent) at high risk for colon cancer. The mean age of the men was 62.5. Of the 500 patients in the study, 315 (63 percent) had extracolonic findings. Forty-five (9 percent) patients had clinically important extracolonic findings.

Findings deemed clinically important included large aneurysms, suspicious lesions and masses in the solid organs of the abdomen, lymphadenopathy, pulmonary nodules and gallbladder wall thickening. The mean additional cost per CTC exam to work up the important findings was \$28.12.

At A Glance

- Colon cancer screening with virtual colonoscopy reveals important findings outside the colon.
- Virtual colonoscopy depicted clinically important extracolonic findings in 9 percent of patients.
- The additional cost to work up virtual colonoscopy findings is very low.
- Standard colonoscopy does not reveal irregularities outside the colon.

"The fact that the additional cost was so low indicates that this procedure is potentially cost effective, not only in regards to the colonoscopy but for other conditions as well," Dr. Yee said.

Dr. Yee's research represents the longest follow-up (3.6 years) of patients after CTC and is one of the first to include average-risk patients among the study cohort. There was no significant difference between the numbers of clinically important findings in average- and high-risk patients.

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Radiology is a monthly scientific journal devoted to clinical radiology and allied sciences. The journal is edited by Anthony V. Proto, M.D., School of Medicine, Virginia Commonwealth University, Richmond, Va. *Radiology* is owned and published by the Radiological Society of North America, Inc. (radiology.rsna.org)

The Radiological Society of North America (RSNA) is an association of more than 37,000 radiologists, radiation oncologists and related scientists committed to promoting excellence in radiology through education and by fostering research, with the ultimate goal of improving patient care. The Society is based in Oak Brook, Ill. (RSNA.org)

"Incidentally Discovered Extracolonic Abnormalities at CT Colonography in a Male Population." Naveen N. Kumar, M.D., Suchitra Godara, M.B.B.S., Janice Casamina, M.D., Robert Hom, M.D., Gregory Galdino, M.D., Peter Dell, M.D., and Darice Liu, M.D., collaborated with Dr. Yee on this paper.