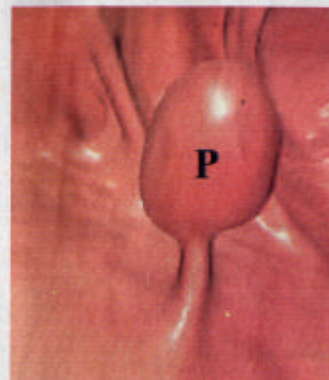


The New York Times

A Gentler Type of Colonoscopy Is Found Effective



Left, a diagram of an air-filled colon generated from a virtual colonoscopy. Right, a polyp as seen during a traditional colonoscopy. Far right, a polyp as seen during a virtual procedure.



Dr. Perry J. Pickhardt/The New England Journal of Medicine

By GINA KOLATA

A new study finds that virtual colonoscopy, a method that uses a C.T. scanner for colon cancer screening, can be just as effective as traditional colonoscopy in finding polyps, the mushroomlike growths from which most cancers arise.

Patients having the 15-minute virtual screening test simply lie down and hold their breath for about 10 seconds, exhale, then hold their breath again while a C.T. scanner X-rays their colons, creating detailed, three-dimensional images of the walls. With traditional colonoscopy, patients are sedated while a doctor threads a long flexible tube into the colon, spending half an hour viewing its walls in much the same sort of detail. Then they wait in a recovery room for about an hour as the sedative wears off.

With virtual colonoscopy, said Dr. Perry J. Pickhardt, a radiology professor at the University of Wisconsin and director of the new study, "it is as though you are flying through this virtual reality." As the doctor watches the screen, "the polyps pop up," he said. "It's as though you're doing a regular colonoscopy."

The study included 1,233 people ages 50 to 79 who agreed to have a virtual colonoscopy and then, immediately afterward, a traditional one for comparison. The doctors doing the traditional colonoscopies did not know what the virtual ones had found.

Each method, the investigators report, found more than 90 percent of polyps at least 8 millimeters in diameter and about 88 percent of those at least 6 millimeters across.

The study, which will be published in Thursday's issue of the New England Journal of Medicine, was released yesterday because it is being presented at a meeting of the Radiological Society of North America.

Medical experts praised the results. "It puts virtual colonoscopy right up there with the gold standard, optical colonoscopy," said Dr. J. Thomas Lamont, who is chief of gastroenterology at Beth Israel Medical School. Dr. Lamont wrote an editorial accompanying the paper.

Choosing a Colorectal Cancer Test

Colon cancer screening is unlike most cancer screening tests, which look for early cancers that may be more easily treated. With colon cancer screening, the goal is to find growths that may, if left alone, turn into cancer. Most of these growths, known as polyps, are harmless. But since no one can say for sure which polyps will become cancers and which will not, doctors simply cut most of them out. In this way, they can prevent most colon cancer.

Experts recommend regular screening for anyone older than 50, using any of four traditional methods to search for polyps.

COLONOSCOPY is considered the most accurate, but it is invasive and costly at about \$2,000 a procedure. It requires sedation and thorough preparation of the colon, and should be repeated every 10 years.

SIGMOIDOSCOPY examines the lower half of the colon, where most cancers occur, and therefore would not detect any polyps in the upper part of the colon. It costs a few hundred dollars and does not require sedation. Patients should undergo the procedure every five years.

BARIUM ENEMAS are not as effective in finding polyps. There is no sedation, but other procedures are required if the tests show abnormalities. They cost several hundred dollars and must be repeated every five years.

FECAL OCCULT BLOOD TEST, which costs about \$20 and looks for traces of blood in stool that can arise when polyps ooze blood. Since it misses many polyps, the fecal test must be repeated every year or two. And a colonoscopy may be necessary if abnormalities are found.

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Virtual colonoscopy has been around for nearly a decade, but it has never been on the recommended list of screening tests. In previous studies it missed as many as half of even the large polyps that are most worrisome. The difference this time, said Dr. Pickhardt, is in the method.

The study researchers used a computer program that revealed the colon in three dimensions. Most other virtual colonoscopy has involved two-dimensional slices created

from C.T. scan images. The patients in the new study also drank a fluid that labeled fecal material so doctors did not confuse it with polyps.

"It really matters what method you're using and how you prepare the colon," Dr. Pickhardt said.

But, he cautioned, virtual colonoscopy patients still must undergo the onerous process of cleansing their colons of fecal material before the test and they must insert a small tube into their rectums and pump air



InsideView3D s.r.l

Strada Maggiore 77 - 40125 Bologna - tel. 051/307215 fax 051/390033

<http://www.insideview3d.it> - e-mail: segreteria@insideview3d.it