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Report Affirms Lifesaving Role of Colonoscopy

By DENISE GRADY

Correction Appended

A new study provides what independent researchers call the best evidence yet that **colonoscopy** — perhaps the most unloved **cancer** screening test — prevents deaths. Although many people have assumed that colonoscopy must save lives because it is so often recommended, strong evidence has been lacking until now.

In patients tracked for as long as 20 years, the death rate from **colorectal cancer** was cut by 53 percent in those who had the test and whose doctors removed precancerous growths, known as adenomatous polyps, **researchers reported** on Wednesday in The New England Journal of Medicine. The test examines the inside of the intestine with a camera-tipped tube.

“For any cancer screening test, reduction of cancer-related mortality is the holy grail,” said Dr. Gina Vaccaro, a gastrointestinal oncologist at the Knight Cancer Institute at Oregon Health and Science University who was not involved in the research. “This study does show that mortality is reduced if polyps are removed, and 53 percent is a very robust reduction.”

Colorectal **tumors** are a major cause of cancer death in the United States and one of the few cancers that can be prevented with screening. This year, more than 143,000 new cases and 51,000 deaths are expected. Incidence and death rates have been declining for about 20 years, probably because of increased use of screening tests and better treatments. But only about 6 in 10 adults are up to date on getting screened for colorectal cancer, according to federal estimates.

Cancer screening tests have come in for greater scrutiny recently. A government panel recommended in October that men no longer get the **P.S.A.** blood screening test for **prostate cancer** after concluding it did not save lives. The new study on colonoscopy has

limitations — it is not a randomized clinical trial — but some experts say it nonetheless was well done and helps answer questions about the effectiveness of the procedure.

Earlier research had proved that removing precancerous polyps could greatly reduce the incidence of colorectal cancer. But a major question remained: Did removing the polyps really save lives? In theory, it was possible that doctors were finding growths that would not have killed the patient, or missing ones that could be fatal.

“This study puts that argument to rest,” said Dr. David A. Rothenberger, a professor and deputy chairman of surgery at the University of Minnesota Masonic Cancer Center. He was not part of the study.

Robert A. Smith, the senior director for cancer control at the American Cancer Society, said, “This is a very big deal.”

A team of researchers led by Dr. Sidney J. Winawer, a gastroenterologist at [Memorial Sloan-Kettering Cancer Center](#) in New York City, followed 2,602 patients who had adenomatous polyps removed during colonoscopies from 1980 to 1990. Doctors compared their death rate from colorectal cancer with that of the general population, where 25.4 deaths from the disease would have been expected in a group the same size. But among the polyp group, there were only 12 deaths from colorectal cancer, which translates into a 53 percent reduction in the death rate.

The new study did not compare colonoscopy with other ways of screening for colorectal cancer and so does not fully resolve a longstanding medical debate about which method is best. Tests other than colonoscopy look for blood in the stool or use different techniques to examine the intestine. All the tests are unpleasant, and people are often reluctant to have them.

Although doctors have differed about which method is best, they agree that it is important to get over the squeamishness and have some type of test, usually starting at age 50. Screening is worthwhile because colorectal cancer is one of the few types of cancer (cervical and [skin cancer](#) are others) in which premalignant growths have been identified and the disease can be prevented if those growths are detected and cut out. Research indicates that not every polyp turns into cancer, but that nearly every colorectal [tumor](#) starts out as an adenomatous polyp.

Even if intestinal cancer has already developed, it can still be cured if it is found early and treated.

“Not all adenomas become cancers, and not all cancers cause death,” said Ann Zauber, the lead author of the study and a statistician at Sloan-Kettering. But in many cases, she said, “we have gotten those that would have had the potential to go on and cause a cancer death.”

Dr. Smith, at the American Cancer Society, said the new study on colonoscopy was well done, and noted that changes in death rates can be difficult to measure because they require long-term studies like this one.

But Dr. Harold C. Sox, an emeritus professor of medicine at Dartmouth Medical School and former editor of a leading medical journal, Annals of Internal Medicine, cautioned that the new study was not the last word. He said it was not clear that the same reduction in the death rate found in the study would occur in the general population.

Nonetheless, he said, “I suspect that removing polyps does reduce colorectal cancer mortality.”

The type of evidence in this study, based on looking back at patient records, is not considered as reliable as that from a randomized controlled study, in which groups of patients are picked at random to have one treatment or another and then compared over time.

Dr. Sox also said that because all of the patients in the study had adenomatous polyps, it is not certain that the findings would apply exactly to the general population, in which this type of polyp is found in about 15 percent of women and 25 percent of men.

In addition, Dr. Sox said, the people with polyps were part of a study that provided high-quality colonoscopy, so they may not have been comparable to the general population.

Other studies have found that doctors vary in their ability to find polyps, that certain types of polyps are hard to detect and that colonoscopy is better at finding polyps in the lower part of the intestine than in its upper reaches.

Other screening tests look for blood in the stool, and if it is found, the patient is advised to have a colonoscopy. Another test, sigmoidoscopy, examines only the lower part of the

colon. Barium enemas with X-rays can also show some abnormal growths. But sigmoidoscopy and barium enemas are not used much anymore in the United States.

Stool tests need to be done once a year; many people do not comply. In fact, [a study from Spain](#) in the same issue of the journal as Dr. Winawer's article found that when people were offered a stool test, only 34.2 percent took it. The figure for colonoscopy was even worse: 24.6 percent.

Colonoscopy does not have to be done every year: If there are no polyps, it is recommended just once every 10 years. People with polyps are usually told to have the test every three years.

But colonoscopy is expensive, costing hundreds or thousands of dollars, depending on whether polyps are removed and on the part of the country where it is done. It also carries small risks of bleeding or perforation of the intestine. And it nearly always requires sedation as well as strong, foul-tasting laxatives to clean out the intestines so that the doctor can look for polyps.

“Any screening is better than none,” Dr. Winawer said. “The best test is the one that gets done, and that gets done well.”

His study was paid for by the National Cancer Institute, Memorial Sloan-Kettering Cancer Center and private foundations dedicated to [colon cancer](#).

Correction: February 27, 2012