

Increased use of colonoscopy screening could explain decrease in colorectal cancer rates

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Use of colonoscopy for colorectal cancer screening could explain a significant decrease in the cancer's incidence over the past decade, according to a new study from researchers at the Stanford University School of Medicine. Although colonoscopy is now the most common colorectal cancer screening method, there has been conflicting evidence as to its effectiveness compared with sigmoidoscopy, a method that examines only a portion of the colon.

The team scrutinized data collected from more than 2 million patients over the past 20 years, and found that a drop in colorectal [cancer incidence](#) correlated with Medicare's extension of colonoscopy coverage in 2001.

"Widespread colonoscopy screening may actually be having an impact in the risk of [colon cancer](#) at the level of the general population," said Uri Ladabaum, MD, MS, associate professor of gastroenterology and hepatology and senior investigator for the study. The results will be published online Oct. 23 in *Gastroenterology*.

Colorectal cancer is the second-leading cause of cancer-related deaths in the United States, according to the federal [Centers for Disease Control and Prevention](#). The [American Cancer Society](#) and other groups recommend [colorectal cancer screening](#) for people at average risk beginning at age 50. Colonoscopies are recommended once every 10 years for average-risk adults, and more often in those found to have precancerous lesions known as polyps.

Several methods are currently available for the screening. Less-invasive methods, such as stool sample analysis, cause minimal discomfort but some patients consider them a hassle, and the tests need to be performed regularly to be effective. And although these methods occasionally detect precancerous polyps, their primary purpose is detecting early stage cancers.

Colonoscopy and sigmoidoscopy are endoscopic screening methods used both for early [cancer detection](#) and for precancerous polyp removal. Sigmoidoscopy only extends into the lower (or distal) part of the colorectum, while colonoscopy extends beyond the lower colorectum and into the upper (or proximal) colon. Although sigmoidoscopy has demonstrated clear benefits in preventing cancers in the lower colorectum, U.S. doctors have increasingly relied on colonoscopy and have made it the most common method of colon cancer screening.

"The faith for a long time has been that looking more deeply into the colon must be better because we're looking at more of the colon," said Ladabaum. Despite the presumed benefits of colonoscopy, the actual superiority of the procedure as compared with sigmoidoscopy has been the subject of conflicting studies.

With the hope of shedding some light on this murky issue, Ladabaum's team examined available data on the surgery rates for colorectal cancer, and interpreted these in light of the dramatic rise in the use of colonoscopy that began more than a decade ago. The researchers analyzed data from more than 2 million patients collected from the Nationwide Inpatient Sample, a large database that includes more than 1,000 hospitals. Ladabaum and colleagues looked for trends in colorectal cancer surgery, which reflect cancer incidence. They also specifically looked for differences in rates of cancer in the lower versus the upper colon, as colonoscopy is hoped to have a benefit in preventing cancers in both areas due to its extended reach.

The results of the study suggest that increased use of colonoscopy may explain the decrease in incidence of upper colon cancer—through the identification, and removal, of precancerous polyps—in the last decade. The overall rate for removing, or resecting, colorectal cancer dropped from 71.1 to 47.3 per 100,000 persons between 1993 and 2009. Resection rates for lower colorectal cancer decreased gradually (at a rate of about 1.2 percent per year) from 1993 to 1999, and then dropped more steeply (to a rate of 3.8 percent per year) from 1999 to 2009. In contrast, the resection rate for upper colon cancer remained steady until 2002, and then started dropping at a rate of 3.1 percent per year until 2009.

These results support the idea that the drop in the incidence of lower colorectal cancer might be associated with screening in general, since some patients were already undergoing stool tests and sigmoidoscopy in the early 1990s, whereas the reduction in upper colon cancer incidence might be specifically associated with colonoscopy, Ladabaum said.

Interestingly, the drop in upper colon cancer incidence was seen not only for people within the suggested screening ages, but also for those over age 75. Currently, there is no consensus on whether to screen people older than 75, Ladabaum said. While some of these older patients may opt to get colonoscopies, he said he thinks these results could mean that [colonoscopy](#) screening at an earlier age prevents colorectal cancer later in life.

The availability of a screening technique that effectively detects and removes [precancerous lesions](#) makes colorectal cancer a uniquely preventable cancer, he added. "We really do have an opportunity to find the pre-cancers, before there is even a [cancer](#) there," said Ladabaum.

Provided by Stanford University Medical Center

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