

High-definition colonoscopy detects more polyps

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High-definition (HD) colonoscopy is much more sensitive than standard colonoscopy in finding polyps that could morph into cancer, say researchers at the Mayo Clinic campus in Florida.

They say their findings, presented today at the annual meeting of the American College of Gastroenterology in San Diego, Calif., are not only important because a large group (2,430) of patients participated, but they resulted from the only study to date that has compared these two methods in a general clinical practice setting, among all the patients who needed a colonoscopy and with all the physicians who performed it.

"There hasn't been a definitive trial to see whether high-definition colonoscopy detects more polyps or not, and this was a natural experiment, designed to ask if use of one endoscope or another makes a difference in day-to-day clinical practice," says the study's senior investigator, gastroenterologist Michael Wallace, M.D., a professor of medicine at the College of Medicine, Mayo Clinic.

"Based on these results, it appears that high-definition colonoscopy detects more precancerous polyps," he says. The findings are being presented by Anna Buchner, M.D., who led the research during a fellowship at Mayo Clinic in Florida. She is now at the University of Pennsylvania.

This study was conducted between September 2006 and December 2007 when Mayo Clinic in Florida was switching its six colonoscopy

procedure rooms from standard [colonoscopy](#) endoscopes to high-definition endoscopes.

An endoscope is the lighted tube inserted into the colon and rectum to look for, and remove, polyps. A high-definition endoscope uses both a high-definition video chip and HD monitors (like HD television) that increase the resolution of the image, Dr. Wallace says.

Patients were not assigned to one scope or the other. Instead, they were placed in whatever room was available and assigned a gastroenterologist who was on duty at the time. "So there was a natural randomization of patients to either standard or high-definition endoscopes, and physicians were not able to cherry-pick their patients," Dr. Wallace says. "No doctors used high definition more than any other and, in this way, you can eliminate most of the variables that can bias results of a clinical trial."

Researchers found that the rate of detection of adenomas — [polyps](#) that are likely to become cancerous — was 29 percent among patients who were scanned with high-definition endoscopes, versus 24 percent for those in which standard endoscopes were used.

"That is an increase of 20 percent," Dr. Wallace says. "While that may seem small, in light of the 14 million colonoscopies that are performed each year, even small differences add up to important improvements."

All three Mayo Clinic sites (Florida, Minnesota, and Arizona) now only use high-definition endoscopes to perform colonoscopies, Dr. Wallace says. Many clinics in the country have both kinds of [endoscopes](#) "so it will not be that hard to move to the newer, and better, technology," he says.

The study was funded by Mayo Clinic, and the authors declare no

conflict of interest nor do they endorse the products mentioned in the study. Dr. Wallace did not receive any funds for this study from the company that produced the products evaluated.

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