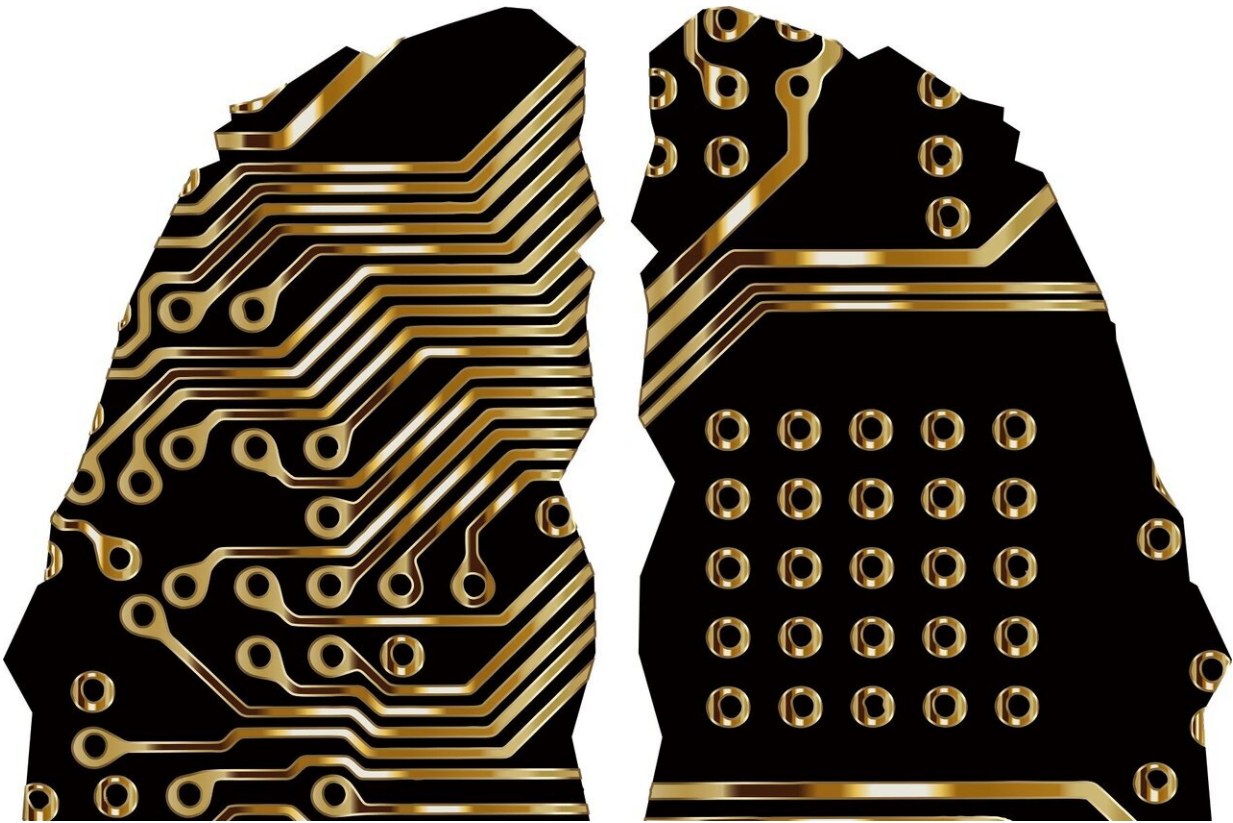


AI reduces miss rate of precancerous polyps in colorectal cancer screening

April 18 2022, by Rhoda Madson



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Artificial intelligence reduced by twofold the rate at which precancerous polyps were missed in colorectal cancer screening, reported a team of international researchers led by Mayo Clinic. The study is published in

Gastroenterology.

Most [colon polyps](#) are harmless, but some over time develop into colon or rectal cancer, which can be fatal if found in its later stages. Colorectal cancer is the second most deadly cancer in the world, with an estimated 1.9 million cases and 916,000 deaths worldwide in 2020, according to the World Health Organization. A colonoscopy is an exam used to detect changes or abnormalities in the large intestine (colon) and rectum.

Between February 2020 and May 2021, 230 study participants each underwent two back-to-back colonoscopies on the same day at eight hospitals and community clinics in the U.S., U.K. and Italy. One colonoscopy used AI; the other, a standard colonoscopy, did not.

The rate at which precancerous colorectal polyps is missed has been estimated to be 25%. In this study, the miss rate was 15.5% in the group that had the AI colonoscopy first. The miss rate was 32.4 % in the group that had standard colonoscopy first. The AI colonoscopy detected more polyps that were smaller, flatter and in the proximal and distal colon.

"Colorectal cancer is almost entirely preventable with proper screening," says senior author Michael B. Wallace, M.D., division chair of gastroenterology and hepatology at Sheikh Shakhboub Medical City in Abu Dhabi, United Arab Emirates and the Fred C. Andersen Professor of Medicine at Mayo Clinic in Jacksonville, Fla. "Using [artificial intelligence](#) to detect colon polyps and potentially save lives is welcome and promising news for patients and their families."

In addition, false negative rates were 6.8% in the group that had the AI colonoscopy first. It was 29.6% in the group that had standard [colonoscopy](#) first. A false-negative result indicates that you do not have a particular condition, when in fact you do.

More information: Micheal B. Wallace et al, Impact of Artificial Intelligence on Miss Rate of Colorectal Neoplasia, *Gastroenterology* (2022). [DOI: 10.1053/j.gastro.2022.03.007](https://doi.org/10.1053/j.gastro.2022.03.007)

Provided by Mayo Clinic

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