

CRC Screening: Blood Test Accuracy Compared to Colonoscopy

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The first prospective study to evaluate the accuracy of a blood test for people being screened for [colorectal cancer](#) (CRC) revealed a high sensitivity and specificity.

At 90% specificity, the blood assay (Guardant Health) was 100% sensitive for detecting CRC. At 95% specificity, sensitivity was 88%.

The blood assay detects circulating tumor DNA from cancer in the bloodstream, which is then analyzed for multiple factors, including cancer genetics and methylation.

Lead author Paloma Peinado, MD, a medical oncologist at HM Hospitales in Madrid, Spain, and colleagues, called the results similar to those seen with noninvasive, stool-based testing, noting that the "sensitivity and specificity of the blood-based test reach clinically significant thresholds."

"The reported performance, combined with a more acceptable mode of testing, suggests that this blood-based test may be a viable CRC screening option," they added.

"Our study is the first prospective real-world population study testing this assay," Peinado said. "It is promising to see that the performance in the screened cohort is consistent with previously reported data in case-cohort studies."

The study was presented May 21 at Digestive Disease Week (DDW) 2022, held virtually and in San Diego, California.

Peinado and colleagues studied 557 people who agreed to have blood drawn at the time of their [colonoscopy](#). They enrolled participants at four hospitals in Spain.

One third of participants (33%) who sought CRC screening were at average risk. Of the remainder, 49% were symptomatic, 11% had a positive family history of CRC, 6% had a positive stool-based test result, and 1% presented for colonoscopy for other reasons.

The prospective observational study included people age 45 to 84 years. The median age of participants was 55 years, and just over half (52%) were women.

The prevalence rate of colorectal adenocarcinoma was 2.6%. Eight patients had stage I cancer, three had stage II cancer, two had stage III cancer, and two had stage IV cancer.

The study was designed to follow patients for 1 year after screening. To date, 14% of participants have reached this point.

Not a General Population Screening Study

"We definitely we need more studies like this," said Barbara H. Jung, MD, chair of the Department of Medicine at the University of Washington in Seattle, when asked to comment on the study.

"We need to find other ways to detect colorectal cancer early, to enhance the screening, and to broaden it to a larger population who may not be amenable to the other techniques."

Jung added a caveat that the study population included people at a higher risk for CRC. Therefore, she said, it was a screening study but not a general population, average-risk screening study.

However, she said, "That does not mean that this could not be optimized in the future."

Ideally, we need tests for every application, including people who are asymptomatic, Jung said.

Peinado reports no relevant financial relationships. Some of the study authors are employees of Guardant Health. Jung reports no relevant financial relationships.

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