

Could Blood-Based Testing Improve Colorectal Cancer Screening Barriers?

Researchers are testing the reliability of a blood-based test, a preferable screening method for a variety of preventive tests.

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Despite the current methods that exist for people to receive preventative screenings, colorectal cancer (CRC) screening rates remain below the 80% national goal. Since the utilization of the current testing methods are subpar among average-risk adults in America, researchers are testing the reliability of a blood-based test, which remains a preferable screening method for a variety of preventive tests in the general population. The hope is that a preferred screening method would improve screening rates for CRC among average-risk adults.

Testing the Reliability and Validity of a Blood-Based Test

The [ECLIPSE clinical trial](#) evaluated the performance of a cell-free DNA blood-based CRC screening test. Individuals who were average-risk (those with no identifiable risk factors or abnormal predispositions to being diagnosed with CRC), 45 years of age or older, and presenting for colonoscopy screening were recruited from 265 U.S. clinical sites between October 2019 and September 2022. This population was diverse, which makes the findings generalizable:

- 54% female
- 7% Asian
- 12% Black/African-American
- 79% white
- 12% Hispanic/Latino

Prior to their colonoscopy, participants provided whole blood samples. In doing so, researchers were able to compare the validity of the blood-based tests when compared to the actual results that were obtained from the colonoscopy procedures.

The trial found that the blood test was:

- 90% sensitive to detecting Stage I – III CRC
- 100% sensitive to detecting Stage IV CRC
- 90% specific

In [another study](#), researchers retrospectively analyzed blood samples of 425 individuals who were to undergo a colonoscopy. The blood samples were tested for specific genetic and epigenetic changes and these were then correlated with the individual's colonoscopy results.

Here's a [fun video](#) that explains what genetic and epigenetic changes are.

The test was found to be:

- 82% sensitive for CRC
- 90% specific

Overall, the researchers concluded that this test provides clinically meaningful performance and has utility for CRC screening. A limitation of the specificity/sensitivity study was the utilization of an older version of the assay. However, should the results of up-to-date versions of the assay remain statistically significant, blood-based screening could be a very effective and preferable CRC screening method.

Both these studies demonstrate the effectiveness of blood-based tests, which will hopefully improve the rate at which people get their preventative testing for CRC.

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