The FIT Home Test For Colorectal Cancer Can Help Combat Decreased Screening Due to COVID-19

FIT (fecal immunochemical testing), which tests for hidden blood in the stool, is an inexpensive home health test that has an overall 95% diagnostic accuracy for colorectal cancer.

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Around this time in 2020, the novel coronavirus reared its ugly head. In response to the COVID-19 pandemic, all non-urgent surgical and medical procedures—including screening colonoscopies—were delayed, as recommended by The Centers for Medicare & Medicaid Services (CMS). This postponement resulted in a 90% decrease in colorectal cancer (CRC) screenings, a 32% decrease in CRC diagnoses, and a 53% decline in CRC surgical procedures in mid-April 2020 as compared to mid-April 2019, according to a new study published on *JAMA Network Open.*

According to the study, the decrease in CRC screening has potentially nefarious consequences, such as CRC diagnosis delays and increased CRC mortality. Though colonoscopy is the primary CRC screening method in the U.S., many countries utilize fecal immunochemical testing (FIT), which tests for hidden blood in the stool, as their primary screening method. FIT is an inexpensive home health test that has an overall 95% diagnostic accuracy for CRC. Increasing FIT use in the U.S. can potentially "limit the deleterious public health consequences of COVID-19 on CRC mortality," according to the study's researchers.

The researchers estimated the three-year CRC outcomes for average-risk individuals by creating a simulation model with publicly available data. Using pre-COVID facts and figures from the American Cancer Society, they modeled the percentage of the U.S. population that was estimated to complete CRC screening by colonoscopy or FIT. Four CRC screening scenarios were considered, all of which varied with respect to two dimensions: the COVID-19 dispersion profile and the collective response to improving CRC screening. The COVID-19 dispersion profile refers to whether or not elective medical procedures were delayed due to national or local guidance, and the collective response refers to the effort (or lack thereof) to expand FIT screening due to decreased colonoscopy screening.

The four scenarios are as follows:

- Scenario 1:

    - 3 months of normal screening (pre-COVID)
    - 3 months without any screening (peak of COVID)
    - 9 months where screenings would be 50% of pre-pandemic volume
    - 21 months where screenings would be 75% of pre-pandemic volume
- Scenario 2:
    - Assumed a similar reduction in screening like Scenario 1
    - 18 months where screenings would be 50% of pre-pandemic volume
    - 12 months where screenings would be 75% of pre-pandemic volume
- Scenario 3:
    - Mirrored Scenario 1, but included FIT-based screenings to account for the decrease in colonoscopy screenings
- Scenario 4:
    - Mirrored Scenario 2, but included FIT-based screenings to account for the decrease in colonoscopy screenings

The estimated results were compared to a baseline and varied by scenario:

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Percent of patients who completed CRC screening compared to baseline	-37.6%	-42.9%	-25.1%	-29.0%
Percent of CRC cancer diagnosis compared to baseline	-32.6%	-37.6%	-24.3%	-29.7%
Percent of CRC cases detected by screening	92.3%	90.7%	89.9%	91.9%
Percent of CRC cases detected by symptoms	7.7%	9.3%	10.1%	8.1%

In regard to Scenario 3, increasing FIT-based screening is estimated to increase participation in CRC screening by 20% and cause an additional 12.3% increase in CRC diagnoses as compared to Scenario 1. In regard to Scenario 4, increasing FIT-based screening is estimated to increase participation in CRC screening by 24.5% and cause an additional 12.7% increase in CRC diagnoses as compared to Scenario 2.

As a whole, this simulation model showed that 43% of eligible adults could remain unscreened for CRC due to the COVID-19 pandemic. However, by incorporating screening via FIT, the percentage of unscreened, eligible adults could be reduced to 29%. Therefore, it can be said that increased use of FIT can potentially alleviate the negative effects that the pandemic had on CRC screening. FIT is affordable, accessible, and widely scalable, and using FIT as a screening method could

increase CRC screening, detection, and prevention even beyond the COVID-19 pandemic.

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