Home-Based Screening Reduced Colorectal Cancer Mortality

The guaiac fecal occult blood test (gFOBT), done every one or two years, was particularly effective at reducing colorectal cancer in men.

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Several screening options are available for colorectal cancer (CRC), such as stool-based tests like the guaiac fecal occult blood test (gFOBT), fecal immunochemical test (FIT), and the multi-targeted stool DNA test (FIT-DNA). Visual screenings are also available in the form of colonoscopy. The FOBT is done every one to two years. While annual testing is common in the U.S., European countries and Canada opt for biennial testing. In the past, using FOBT screenings has shown reductions in CRC mortality, but the trials did not have sufficient evidence to also study all-cause mortality. However, these studies did not account for compliance adjustments and the effects of screening on varied ages and sex.

A recent study published in Clinical Gastroenterology and Hepatology evaluated the long-term reductions in all-cause and CRC mortality amongst those who comply with screenings offered when adjusted for compliance, age, and sex. Biennial screening groups in the 50-80 years age range were compared to control groups in the same age range. Funen Fecal Occult Blood Trial and the Minnesota Colon Cancer Control Study with sample sizes of 61,993 and 46,551 individuals, respectively, were used to assess the long-term effects of FOBT screenings on CRC and all-cause mortality.

The 30-year follow-up period saw 33,478 and 33,479 total deaths, with 1,023 and 1,146 CRC-related deaths in the screening and control groups, respectively. The statistical findings showed a 16% reduction in CRC mortality and a 2% reduction in all-cause mortality among those who complied with FOBT screenings. In addition, men who complied with screenings had a higher reduction in CRC mortality compared to women. Significant reductions in CRC mortality were observed among compliant men, especially those in the 60-69 years age group, and among women 70 years and older.

The findings from this study support that CRC screening programs should emphasize FOBT compliance to decrease CRC mortality and all-cause mortality in the long term. Individuals who comply may also engage in overall healthier behavior, such as being non-smokers and healthy eaters. These individuals are also more likely to make healthy lifestyle choices, contributing to an overall lower risk of death. Those who comply with screenings are more likely to utilize the

healthcare system, leading to better health outcomes. Though the study could not directly answer why compliant groups had lower all-cause mortality than the control group, it is worth reinforcing 100% compliance among screening individuals.

Overall, this study demonstrates a need for continued research to study the effects of screening on reducing mortality in the long term. The study did have some limitations, such as not being able to follow up on the patients' screening behaviors once the trial ended. Compliant individuals may have stopped screenings after the trial ended, while non-compliant individuals may have initiated screening, impacting the mortality rates. The long-term effects of screening on mortality should remain an area of active research as there are newer, more accurate screenings now available, which may continue improving CRC mortality outcomes.

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