

Single flexible sigmoidoscopy screening associated with reduced colorectal cancer

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A single flexible sigmoidoscopy screening between the ages of 55-64 years is associated with a lower level of colorectal cancer (CRC) incidence and mortality, according to a study published online August 18 in the *Journal of the National Cancer Institute*.

Multiple [randomized controlled trials](#) have shown that fecal [occult blood testing](#) (FOBT) in CRC screening can reduce the [mortality](#) rate of patients diagnosed with CRC. Observational studies and a prior, randomized trial from the U.K., known as SCORE have shown a reduction in incidence and mortality for cancer in the rectum and sigmoid colon (distal CRC) among patients who had undergone endoscopy, suggesting that the removal of [adenomas](#) at screening can provide long-term protection against the development of distal CRC.

To determine if single [flexible sigmoidoscopy](#) is a good preventative measure in CRC screening, the researchers, coordinated by Nereo Segnan, M.D., of the Epidemiology Unit at S. Giovanni University Hospital in Turin, Italy, mailed a questionnaire investigating about subject's interest in FS screening to a random population sample of men and women between the ages of 55-64 years. Eligible interested responders were randomly assigned to either the control group (N= 17148 - no further contact) or intervention group (N=17144 - invitation for flexible sigmoidoscopy)

Flexible sigmoidoscopy was performed on 9,911 subjects, and of those, 9,387 (94.71%) were discharged, 55 (0.55%) were referred for surgery,

395 for follow-up surveillance colonoscopy, and the remaining 74 patients did not comply with the recommended total colonoscopy assessment.

The median follow-up period was 10.5 years for CRC incidence and 11.4 years for all-cause and CRC-specific mortality. During this period 557 people (including those detected at initial screening) were diagnosed with a CRC and 148 died of the disease.

The researchers found that in the intent-to-treat analysis, CRC incidence and mortality were reduced by 18% and 22%, respectively. CRC incidence was reduced by 31% among those who were screened (per –protocol analysis), and by 46% for advanced CRC cases.

Furthermore, CRC mortality was statistically significantly reduced by 38% in screened subjects compared to the control group.

The authors write that the reported findings, which are consistent with the observed reduction of CRC incidence and mortality among people screened in the recently published UK Flexible Sigmoidoscopy Screening Trial, support the hypothesis that "Flexible sigmoidoscopy screening offered just once represents a safe and effective method for CRC screening and ensures a long lasting reduction of CRC risk." According to the researchers, "A longer follow-up is needed to fully assess the impact on mortality and to estimate the duration of the protective effect."

In an accompanying editorial, Timothy R. Church, Ph.D., of the University of Minnesota, writes about what the best approach to CRC screenings may be. Underlying the three main CRC tests (flexible sigmoidoscopy, FOBT, and [colonoscopy](#)), Church mentions that a cost-effective analysis is an important factor in determining the best available method, stating, "these costs are driven by not only the up-front

infrastructure costs for laboratories, equipment, endoscopy facilities, training, and manufacturing but also by the rates of false-positive results."

Church argues that since none of the standard three approaches to CRC screening is more effective than the other, until more substantial evidence is collected, endorsing all three methods is the best way to attack CRC. In the event of conflicting results from the tests, Church writes: "Any concerns about the potential confusion that arises from multiple approaches may be balanced by the advantages of tailoring screening to the preferences of the patient."

Provided by Journal of the National Cancer Institute

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