

Screening with flexible sigmoidoscopy reduces mortality risk, reanalysis concludes

By **Annals Of Internal**,
gastroenterology.acponline.org
August 25th, 2017

A reanalysis of the data used to develop colorectal cancer screening recommendations found that flexible sigmoidoscopy reduces all-cause risk for death more than a decade after screening.

The 2016 U.S. Preventive Services Task Force guidelines for colorectal cancer screening, which concluded that no colorectal cancer screening methods reduced all-cause mortality, could be reassessed based on a different analysis of the data, according to a letter published online Aug. 22 by .

The Task Force recommendations were based on a meta-analysis of four randomized trials that compared flexible sigmoidoscopy screening with no screening. That meta-analysis aggregated results from the two age cohorts of one of the trials, the Norwegian Colorectal Cancer Prevention (NORCCAP) study. Researchers conducting this reanalysis noted that aggregation of groups with markedly different event rates, screening-control ratios, or both can create a “Simpson paradox,” where a finding exists in individual data groups that is absent or opposite when the groups are combined.

They reassessed results of the NORCCAP study by analyzing the age cohorts as individual trials and found that the relative risk (RR) for all-cause mortality favoring screening in the younger cohort (ages 50 to 54 years) was 0.96 (95% CI, 0.87 to 1.06). For the older cohort (ages 55 to 64 years), the RR for all-cause mortality was 0.98 (95% CI, 0.94 to 1.03). The RR for the combined summary estimate of these two cohorts was 0.98 (95% CI, 0.94 to 1.02). However, because the original analysis aggregated the cohorts into a single group rather than combining them meta-analytically as two separate groups, it found the RR for all-cause mortality was 1.07 (95% CI, 1.02 to 1.12), which favored no screening.

Meta-analysis of all of the flexible sigmoidoscopy trials using the individual NORCCAP study cohorts shows that flexible sigmoidoscopy reduces all-cause mortality (RR, 0.975; 95% CI, 0.959 to 0.992; $P=0.004$) at 11 to 12 years. Researchers calculated that based on the risk for death in the U.S. population ages 50 to 74 years, the absolute risk reduction is 3.0 deaths per 1,000 persons invited to screening (95% CI, 1.0 to 4.9) after 11.5 years of follow-up.

“More than 50 years after the announcement of the first clinical trial of cancer screening, a screening method has shown a reduction in the risk for death compared with no screening,” the authors wrote. “If the primary goal of screening is to reduce the risk for death, then the evidence supporting flexible sigmoidoscopy is substantially stronger than that of other screening methods. We believe that colorectal cancer screening guidelines warrant reassessment to incorporate this evidence.”