

Updated Data Concerning Colonoscopy

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It is important to note that the reason most people have regular cancer screenings is because they have been told that doing so “saves lives.” But most people are not given accurate information BEFORE consenting to screening that provides data about what is most important to them – reducing the risk of death – not just from the type of cancer that the screening test is designed to detect, but also all-cause mortality. There are risks associated with cancer screening, which range from turning healthy people into sick patients, to diminished quality of life or even death from treatment. A 2016 analysis concluded that none of the most commonly recommended cancer screenings reduced all-cause mortality.¹ This type of information should be provided to all patients before they make decisions about cancer screening.

Until just recently, there were no randomized controlled trials evaluating the efficacy of population screening with colonoscopy for reducing the risk of colorectal cancer, death from colorectal cancer, or all-cause mortality. In spite of this, an incredibly invasive and risky procedure became a standard recommendation for all Americans ages 45 and older. The Canadian Task Force on Preventive Healthcare handled the lack of evidence differently. The Task Force updated its recommendations in 2016, advising against colonoscopy as a primary screening test for colon cancer due to lack of evidence.²

During the last 15 years, the US Preventive Services Task Force has increased the recommended options for colorectal screening to include fecal immunochemical tests (FITs) and blood-based cancer screening for methylated DNA.³ The USPSTF has also expanded the recommended ages for colorectal cancer screening to 45-70 years; previously it was ages 50-70 years.⁴

But a 2016 a USPSTF evidence report stated that there were no colorectal cancer screening methods that reduce all-cause mortality. However, a reanalysis showed that flexible sigmoidoscopy slightly reduced all-cause mortality by three deaths per 1000 persons screened.⁵

Another 2016 article concluded that while blood-based screening might result in more people being screened (adherence to both invasive and noninvasive tests is low), these tests have little utility. The manufacturer of one of the tests proposed including a warning with the test stating that a negative result “does not guarantee absence of cancer” and patients should still pursue other screening methods.⁶ Translation: this test is useless and should never have been approved.

Many patients are concerned about colorectal cancer screening and struggle to make good decisions about it, particularly since they are often pressured by healthcare professionals who do not seem to be bothered by the dearth of data concerning efficacy

and insist that colonoscopy is necessary. This decision should now be easier since the results of the first randomized controlled trial investigating colonoscopy are now available. Participants between the ages of 55 and 64 were randomized to either receive an invitation to colonoscopy (the invited group) or to receive no invitation or screening (the usual care group).

Follow-up data were available for over 84,000 subjects. The primary end point was the risk of colorectal cancer and related death. The secondary endpoint was all-cause mortality. The study was well-designed and resulted in almost complete long-term follow-up due to the use of unique personal identification numbers which were linked to cancer registries and cause of death registries for all participants in each country.

The conclusions:

Risk of colorectal cancer: In order to prevent just one case of colorectal cancer, 455 people have to be invited to screening.

Risk of death from colorectal cancer: The risk of death was 0.28% in the colonoscopy arm and 0.31% in the usual care arm, a difference of only 0.03%.

Risk of all-cause mortality (death from any cause): The risk in the colonoscopy arm was 11.03%; in the usual care arm it was 11.04%.

In other words, colonoscopy did not make a significant difference in outcomes.⁷

An intention to screen analysis concluded that the risk of colorectal cancer for the invited patients was 0.98% as compared to 1.20% in the usual care group, a risk reduction of 0.22%. But this small risk reduction is not realistically achievable since the assumption is that 100% of those invited to get a colonoscopy would do it. The compliance rate in the U.S. is only 70%.

Now we have data from a well-designed trial showing that colonoscopy does not significantly reduce the risk of colorectal cancer, death from colorectal cancer, or all-cause mortality. There are risks associated with the procedure that include perforation of the colon.⁸ Almost everyone agrees that the procedure is an unpleasant experience that involves drinking awful fluids to clean out the colon, taking time off from work or other activities for the procedure and recovery from it, and significant pain and discomfort.

Some important points to consider for the future:

- Well-designed Randomized Controlled Trials should be performed BEFORE screening programs are instituted.
- Screening often turns healthy people into patients who do not benefit from medical intervention, and risks outweigh benefits.

- The billions of dollars spent on cancer screening tests every year would be better spent on teaching people how to prevent cancer and other common degenerative diseases.

¹ Prasad V, Lenzer J, Newman DH. "Why cancer screening has never been shown to "save lives" – and what we can do about it." *BMJ* 2016;352:h6080

² <https://canadiantaskforce.ca/guidelines/published-guidelines/colorectal-cancer/>

³ Powell K, Prasad V. "Colorectal cancer screening at a younger age: pitfalls in the model-based recommendation of the USPSTF." *BMJ Evid Based Med* 2022 Aug;27(4):206-208

⁴ [https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening#:~:text=The%20USPSTF%20expanded%20the%20recommended,was%2050%20to%2075%20years\).](https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening#:~:text=The%20USPSTF%20expanded%20the%20recommended,was%2050%20to%2075%20years).)

⁵ Swartz AW, Eberth JM, Josey MJ, Strayer SM. "Reanalysis of All-cause Mortality in the U.S. Preventive Services Task Force 2016 Evidence Report on Colorectal Cancer Screening." *Ann Intern Med* 2017 Oct;167(8):602-603

⁶ Parikh RB, Prasad V. "Blood-Based Screening for Colon Cancer. A Disruptive Innovation or Simply a Disruption?" *JAMA* 2016 Jun;315(23):2519-2520

⁷ Bretthauer M, Loberg M, Wieszczy P et al. "Effect of Colonoscopy Screening on Risks of Colorectal Cancer and Related Death." *NEJM* <https://www.nejm.org/doi/full/10.1056/NEJMoa2208375>

⁸ Levin T, Zhao W, Conell C et al. "Complications of colonoscopy in an integrated health care delivery system." *Ann Intern Med* 2006 Dec 19;145(12):880-886