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Long-Term Colorectal Cancer Incidence and Mortality After a Single Negative Screening Colonoscopy

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Author, Article and Disclosure Information

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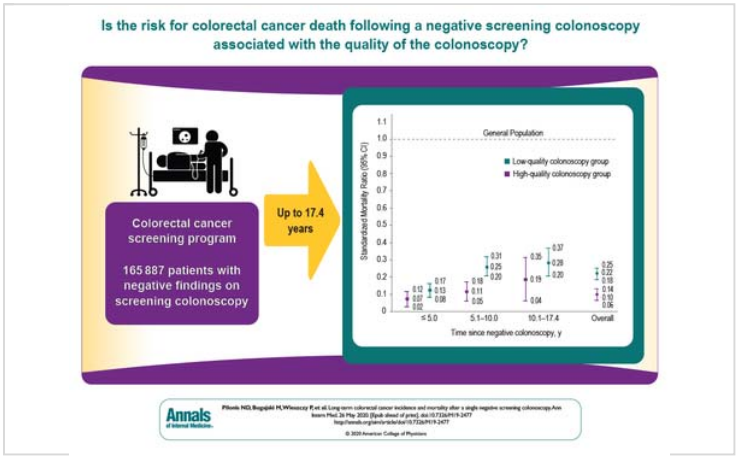
Eligible for CME Point-of-Care



Visual Abstract. Long-Term CRC Incidence and Mortality After Negative Screening Colonoscopy

The current colorectal cancer screening guidelines recommend colonoscopy every 10 years for average risk population. However, this recommendation of a 10-year interval is based on limited indirect evidence. The objective of the current study was to quantify the long-term risk of colorectal cancer incidence and mortality following a single negative screening colonoscopy. It also evaluated the associations between the quality of the baseline colonoscopy and the subsequent risk of colorectal cancer incidence and mortality.

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Background:

Latest

KEYWORDS

Colonoscopy | Intubation | Colorectal cancer screening | Colon | Lesions | Databases | Adenomas | Screening guidelines | Colorectal cancer | Death rates

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Current guidelines recommend a 10-year interval between screening colonoscopies, but evidence is limited.

Objective:

To assess the long-term risk for colorectal cancer (CRC) and death from CRC after a high- and low-quality single negative screening colonoscopy.

Design:

Observational study.

Setting:

Polish Colonoscopy Screening Program.

Participants:

Average-risk individuals aged 50 to 66 years who had a single negative colonoscopy (no neoplastic findings).

Measurements:

Standardized incidence ratios (SIRs) and standardized mortality ratios (SMRs) of CRC after high- and low-quality single negative screening colonoscopy. High-quality colonoscopy included a complete examination, with adequate bowel preparation, performed by endoscopists with an adenoma detection rate of 20% or greater.

Results:

Among 165 887 individuals followed for up to 17.4 years, CRC incidence (0.28 [95% CI, 0.25 to 0.30]) and mortality (0.19 [CI, 0.16 to 0.21]) were 72% and 81% lower, respectively, than in the general population. High-quality examination resulted in 2-fold lower CRC incidence (SIR, 0.16 [CI, 0.13 to 0.20]) and mortality (SMR, 0.10 [CI, 0.06 to 0.14]) than low-quality examination (SIR, 0.32 [CI, 0.29 to 0.35]; SMR, 0.22 [CI, 0.18 to 0.25]). In multivariable analysis, the hazard ratios for CRC incidence after high-quality versus low-quality colonoscopy were 0.55 (CI, 0.35 to 0.86) for 0 to 5 years, 0.54 (CI, 0.38 to 0.77) for 5.1 to 10 years, and 0.46 (CI, 0.25 to 0.86) for 10 to 17.4 years. Only after high-quality colonoscopy did the SIR and SMR for 10.1 to 17.4 years of follow-up not differ compared with earlier observation periods.

Limitation:

The general population was used as comparison group.

History:

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Colonoscopy
Colorectal cancer
Colon
Death rates
Adenomas
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Screening guidelines

Conclusion:

A single negative screening colonoscopy was associated with reduced CRC incidence and mortality for up to 17.4 years. Only high-quality colonoscopy yielded profound and stable reductions in CRC incidence and mortality throughout the entire follow-up.

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