

Table 1. Comparison of Key Features of Screening Strategies.*

Strategy and Effect on Cancer Mortality†	Quality of Evidence	Interval	Cost-Effectiveness‡	Convenience and Requirements	Detection of Precancerous Neoplasia
Guaiac FOBT and FIT: 32% lower mortality	Multiple RCTs have shown a mortality benefit (reduction in mortality) for guaiac FOBT ^{7,7} ; although FIT is more accurate than guaiac FOBT, RCTs evaluating FIT are lacking	Annual	May be more effective and less expensive than no screening; total costs lower than no screening, because of the high expense of late-stage cancer treatment with biologic agents	Performed at home	Does not reliably detect precancerous neoplasia
Flexible sigmoidoscopy: 27% lower mortality	RCTs have shown a mortality benefit ^{8,9}	Every 5 yr	Cost-effective as compared with no screening and other strategies	Limited bowel preparation as compared with colonoscopy	Can detect precancerous neoplasia
Flexible sigmoidoscopy plus FIT: 38% lower mortality	A single RCT showed that flexible sigmoidoscopy plus FIT reduces cancer mortality more than sigmoidoscopy alone ¹⁰	Annual (FIT) and every 10 yr (sigmoidoscopy)	Cost-effective as compared with no screening and other strategies	Strategy that combines endoscopic and stool testing	Can detect precancerous neoplasia
FIT-DNA: unknown effect on mortality	Data from studies showing a mortality benefit are lacking; studies were limited to the detection of cancer and precancerous polyps by FIT-DNA as compared with colonoscopy ¹¹	Every 1 or 3 yr	Less effective and more costly than FOBT, FIT, or colonoscopy	Performed at home	Does not reliably detect precancerous neoplasia
Colonoscopy: 68% lower mortality	A prospective cohort study showed a mortality benefit ¹²	Every 10 yr	Cost-effective as compared with no screening and other strategies	Requires full bowel preparation; usually requires sedation and an escort	Can detect precancerous neoplasia
CT colonography: unknown effect on mortality	Data from studies showing a mortality benefit are lacking; studies were limited to the detection of cancer by CT colonography as compared with colonoscopy ¹³	Every 5 yr	Less effective and more costly than FOBT, FIT, or colonoscopy	No sedation required but requires bowel preparation	Can detect precancerous neoplasia
Circulating methylated SEPT9 DNA: unknown effect on mortality	Data from studies showing a mortality benefit are lacking; studies were limited to the detection of cancer by circulating methylated SEPT9 DNA as compared with colonoscopy ¹⁴	Unknown	Unknown	A blood test may be associated with greater adherence than that with other screening tests	Does not reliably detect precancerous neoplasia

* CT denotes computed tomography, FIT fecal immunochemical test, FIT-DNA fecal immunochemical test combined with stool DNA test, FOBT fecal occult blood test, and RCT randomized, controlled trial.

† The effect on mortality represents a comparison of the strategy with either no screening or other strategies.

‡ Cost-effectiveness was determined as the cost per quality-adjusted life-year gained.