



AGA Clinical Guideline: Colorectal Cancer Screening 2021

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Introduction

- **70%** of sporadic colorectal cancers (CRCs) develop from adenomas, **25-30%** from sessile serrated lesions (SSLs)
- CRC screening – goal to remove adenomas and SSLs, detect early stage CRC
- **One step screening test** – colonoscopy
- **Two step screening tests** – require colonoscopy if positive
- Best screening test – ***ultimately the one that gets done!***

Quality Metrics in Screening Colonoscopy

- Colonoscopists should measure:
 - **Cecal intubation rate** - goal of at least **95%**
 - **Adenoma detection rate (ADR)**
 - Minimum threshold of **30% in men, 20% in women**
 - Should strive for ADRs in the range of 45–50% for a mixed-gender population
 - **Withdrawal time** - spend at least **6 minutes** during withdrawal
 - 2 forward views in cecum/ascending colon equivalent to retroflexion in cecum

When to screen?

- **Start screening at age 45 rather than 50**
 - Official American Cancer Society and USPSTF Recommendation
 - CRC incidence has doubled in 20-49 age group
 - Increased cost effectiveness
- **When to stop?**
 - Limited benefit if not expected to live for at least 7–10 years
 - Increase in competing causes of death
 - Increased odds of procedural / periprocedural risks (altering anticoagulants, bleeding, perforation, cardiac events)
 - **Age 76–85 years**, the decision to screen for CRC **should be individualized**
 - **Age 86 years and above** - screening is **not recommended**

Aspirin chemoprevention

- Low dose ASA recommended in individuals 50–69 years old with a cardiovascular disease risk of >10%, who are not an increased risk for bleeding, and willing to take aspirin **for at least 10 years**
- Reduction in CRC risk with **prolonged ASA use** only

Family History

- CRC or 1 advanced adenoma in first degree relative (**FDR**) >**60**, then if normal index screening colon can **resume average risk screening recs** (q10 yr screening colon)
- **CRC in 1 FDR < 60**, 2 FDR > 60, advanced polyp in 1 FDR < 60 or 2 FDRs at any age – cont. high intensity screening colonoscopy **every 5 yrs**

Performance Characteristics for Colorectal Cancer Screening Tests



| | Performance characteristics | Pros | Cons |
|---------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <u>Stool/blood-based tests</u> | | | |
| FIT | - 79% sensitivity, 94% specificity for CRC | - Non-invasive - Can be done at home - Programmatic screening possible | - Repeat annually - Low sensitivity for advanced adenomas ; does <u>not detect serrated lesions</u> |
| Multitarget stool DNA test | - 92% sensitivity, 87% specificity for CRC - Long term reduction in CRC incidence unknown | - Non-invasive - Can be done at home - Better sensitivity for advanced adenomas and large SSLs than FIT | - Proposed 3 year screening interval - Expensive - Concern for overtesting after (+) test and (-) colonoscopy |
| Septin 9 | 48% sensitivity, 91% specificity for CRC | - Can be added to routine blood draw | - Low sensitivity for CRC - Repeat interval unknown |
| <u>Direct visualization</u> | | | |
| Colonoscopy | - 100 detection rate for CRC - Long term reduction in CRC incidence of 31-71%, mortality 65-88% | - Diagnostic and therapeutic! - Can detect cancers and precursor polyps - Infrequent screening (q10yrs) possible | - Operator dependent - Requires bowel prep and sedation - Risk of complications – 4-8/10,000 |
| Flexible sigmoidoscopy | - 90-100% sensitivity for distal CRC - Long term reduction in CRC incidence 21%, mortality 26% | - Less invasive, lower risk of complications than colonoscopy | - Positive result (i.e. adenoma, cancer) requires complete colonoscopy - Repeat q5-10 yrs - Requires enema prep |
| CT colonography | - 90-100 sensitivity for CRC - Poor sensitivity for flat lesions or SSLs | - Less invasive, no sedation - Low risk of complication | - Still requires bowel prep - Limited availability of trained radiologists |
| Colon capsule | - 81% sensitivity, 93% specificity for polyps >6mm | - Minimally invasive - Newer tests can be done at home | - Requires bowel prep - Repeat interval after negative study unknown |