# Colorectal Cancer Screening

Average-risk and family-history-based screening, test performance, and quality metrics for CRC screening.

**2021 ACG Clinical Guideline**
Colorectal Cancer Screening 2021
Shaukat et al. · Am J Gastroenterol 2021;116:458-479

GRADE Strong Rec Conditional Rec

## 1 Who & When to Screen

| STATEMENT | GRADE |
|---|---|
| **Screen average-risk individuals ages 50–75** to reduce advanced adenoma, CRC incidence, and CRC mortality | 1 · Strong |
| **Screen average-risk individuals ages 45–49** for the same benefit | 2 · Conditional |
| **Continuing screening beyond age 75** should be individualized | 2 · Conditional |

## 2 Screening Modalities & Intervals

| STATEMENT | GRADE |
|---|---|
| **Colonoscopy and FIT** as the primary screening modalities | 1 · Strong |
| If unable/unwilling to have colonoscopy or FIT, consider: **flex sigmoidoscopy, mtsDNA, CT colonography, or colon capsule** | 2 · Conditional |
| **Against Septin 9** for CRC screening | 2 · Conditional |
| Intervals: **FIT every 1y**; **colonoscopy every 10y** | 1 · Strong |
| Intervals: **mtsDNA every 3y**; **flex sigmoidoscopy every 5–10y**; **CT colonography every 5y**; **colon capsule every 5y** | 2 · Conditional |

## 3 Screening Test Performance

| TEST | PERFORMANCE | KEY TRADE-OFF |
|---|---|---|
| **FIT** | 79% sens / 94% spec for CRC | Annual; low sensitivity for advanced adenomas |
| **mtsDNA** | 92% sens / 87% spec for CRC | Better for advanced adenomas/SSLs; more expensive; overtesting concern |
| **Colonoscopy** | 100% CRC detection; PCCRC 3%–9% | Diagnostic + therapeutic; bowel prep/sedation; complication 4–8/10,000 |
| **Flex sigmoidoscopy** | 90%–100% sens for distal colon CRC | Misses proximal lesions; enema prep |
| **CT colonography** | 90%–100% for CRC | Poor sensitivity for flat/serrated lesions; extracolonic follow-up |
| **Colon capsule** | 81% sens / 93% spec for polyps ≥6mm | Bowel prep required; positive results need colonoscopy |

## 4 Family History-Based Screening

| STATEMENT | GRADE |
|---|---|
| **1 FDR with CRC/advanced polyp <60y, or ≥2 FDR any age**: start colonoscopy at 40 (or 10y before youngest affected relative); repeat **every 5y** | 2 · Conditional |
| Consider **genetic evaluation** with higher familial burden (more relatives and/or younger onset) | 2 · Conditional |
| **1 FDR with CRC/advanced polyp ≥60y**: start at 40 (or 10y before), then resume average-risk intervals | 2 · Conditional |
| **1 SDR with CRC/advanced polyp**: follow average-risk screening recommendations | 2 · Conditional |

## 5 Colonoscopy Quality Metrics

| STATEMENT | GRADE |
|---|---|
| Endoscopists should **measure cecal intubation rate, adenoma detection rate (ADR), and withdrawal time** | 1 · Strong |
| Colonoscopists with **ADR <25%** should undertake remedial training | 2 · Conditional |
| Spend **at least 6 minutes** inspecting mucosa during withdrawal | 1 · Strong |
| Achieve a **cecal intubation rate of at least 95%** in screening subjects | 1 · Strong |

## 6 Aspirin & Adherence Strategies

| STATEMENT | GRADE |
|---|---|
| **Low-dose aspirin** in ages 50–69 with ≥10% 10-year CV risk, not at increased bleeding risk, willing to take ≥10 years, to reduce CRC risk | 2 · Conditional |
| **Against aspirin as a substitute** for CRC screening | 1 · Strong |
| **Organized screening programs** improve adherence vs opportunistic screening | 1 · Strong |
| Adherence strategies: **patient navigation, reminders, clinician interventions, provider recommendations, decision support tools** | 2 · Conditional |
| Positive-test follow-up adherence: **mail/phone reminders, patient navigation, provider interventions** | 2 · Conditional |

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