

FAMILY MEDICINE UPDATE CME • APRIL 25, 2026

Updates on Colon Cancer Screening

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Disclosures

No financial relationships to disclose

Learning Objectives

- 01 Describe current colon cancer screening guidelines for average- and high-risk individuals.
- 02 Compare performance, cost, and role of FIT, mt-sDNA, cfDNA blood test (Shield), and colonoscopy.
- 03 Recognize patients who need an individualized high-risk pathway — family history, IBD, Lynch syndrome, early-onset CRC.
- 04 Apply 2020 USMSTF post-polypectomy surveillance intervals.
- 05 Use patient-centered strategies to improve CRC screening adherence and close equity gaps.

The Burden

Cancer statistics, risk factors, and the rise of early-onset CRC

CRC in the U.S (2025)

154,270

New CRC diagnoses / year

53,000

CRC deaths / year (~150/day)

#2

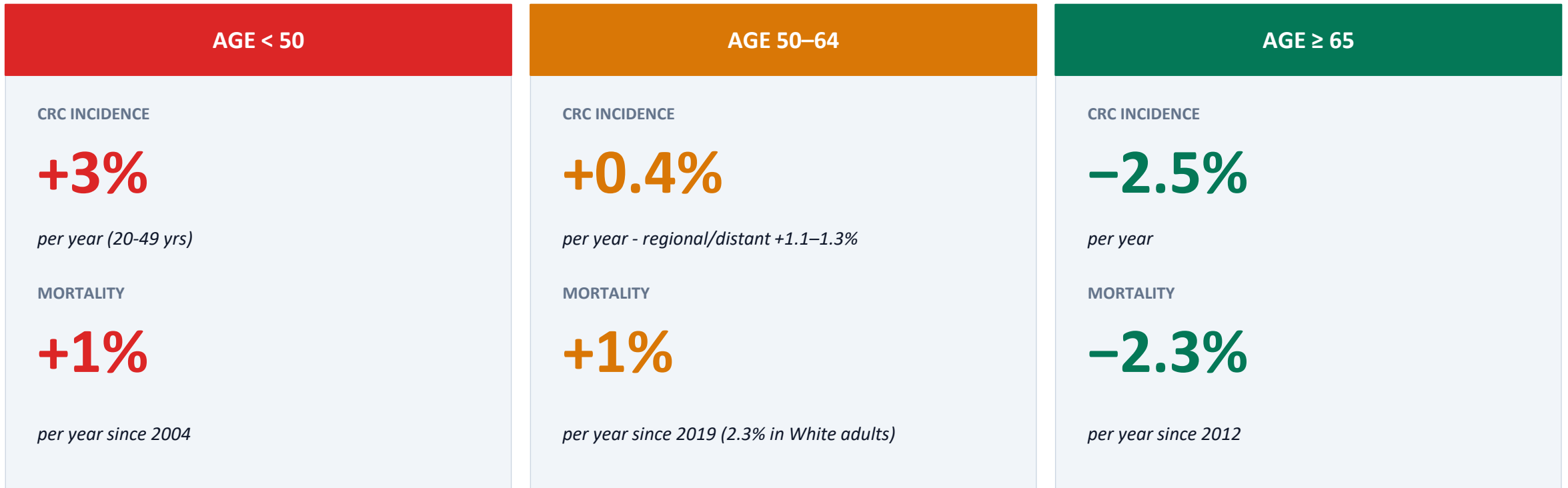
Leading cause of U.S. cancer death

\$23.4 B

Annual national expenditure

**CRC is the second most-diagnosed cancer in the U.S. and accounts for ~9% of all cancer deaths
1 in 5 diagnoses now occur before age 55.**

A Tale of Two Trends - *What's shifted in the last decade*



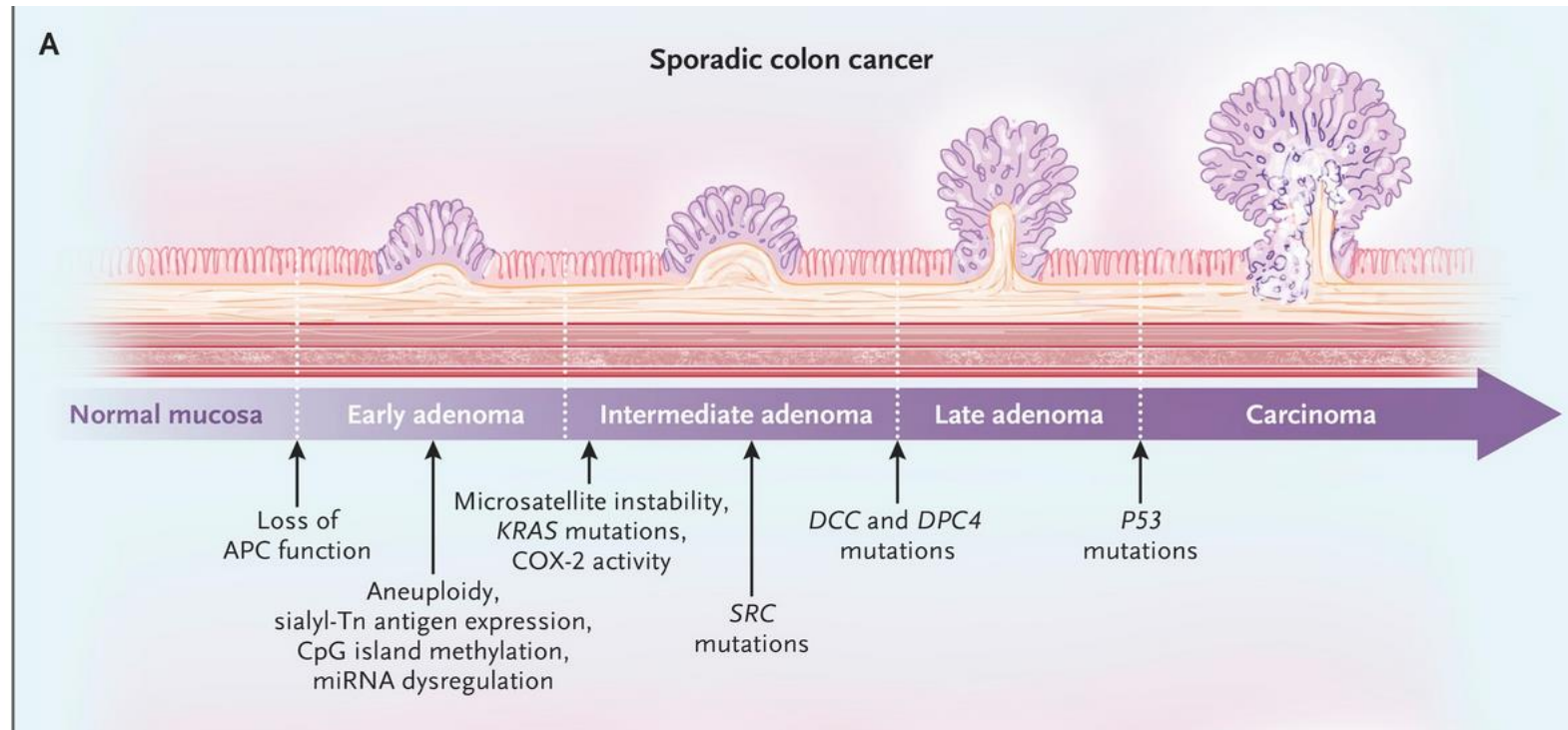
Overall CRC incidence & mortality have DECLINED in adults ≥ 50 — primarily due to screening.

Early-onset CRC (age < 50) is RISING ~1–2%/year.

Median age at diagnosis has dropped from 72 → 66.

Rectal cancer incidence is rising 1%/yr since 2018 and now accounts for 32% of all CRC (up from 27% in the mid-2000s).

The Adenoma–Carcinoma Sequence



Mean dwell time: 10–17 years

The Adenoma–Carcinoma Sequence

Most CRC is preventable because the precursor lesion grows over a decade before becoming malignant.



Nature Reviews | Disease Primers

68–90%

Reduction in CRC incidence
with colonoscopy + polypectomy

53%

Reduction in CRC mortality

22–33%

Reduction in CRC mortality
with FIT/gFOBT programs

Risk Factors for CRC

MODIFIABLE

■ Western diet

↑ *processed meats*, ↓ *fiber*, ↓ *whole grains*

■ Sugar-sweetened beverages

RR 2.18 (>2 drinks/day)

■ Alcohol

RR 1.41-1.71

■ Smoking

OR 1.39 (current smoker)

■ Obesity + sedentary lifestyle

BMI & inactivity

NON-MODIFIABLE

■ Age

Incidence rises steeply after 45

■ Personal history of IBD

OR 3.7-4.4

■ Family history of CRC

RR 4.2-5.9 (1st-degree relative)

■ Genetic CRC / polyposis syndromes

Lynch, FAP, MUTYH, Peutz-Jeghers

■ Ethnicity

↑ *incidence & mortality in Black & AI/AN adults*

DECREASED RISK - Screening • Aspirin (select patients) • Physical activity • Fiber-rich diet • Calcium / vit D

Colon cancer with screening is...

PREVENTABLE



Remove polyps before cancer develops

TREATABLE



Stage I 5-yr survival exceeds 90%

BEATABLE



if we screen on time

Guidelines 2021–2026

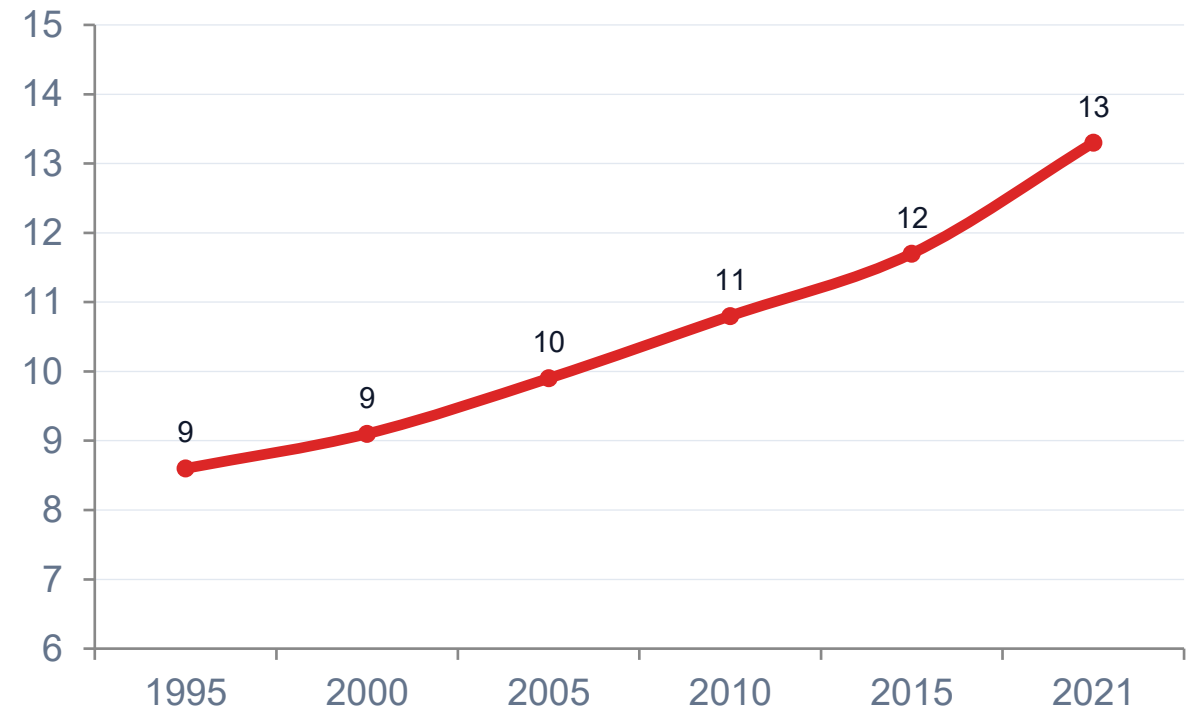
USPSTF, ACS, USMSTF, ACG — and what they mean for your panel

Early-Onset CRC Is Rising Fast

Under-50 CRC at a glance

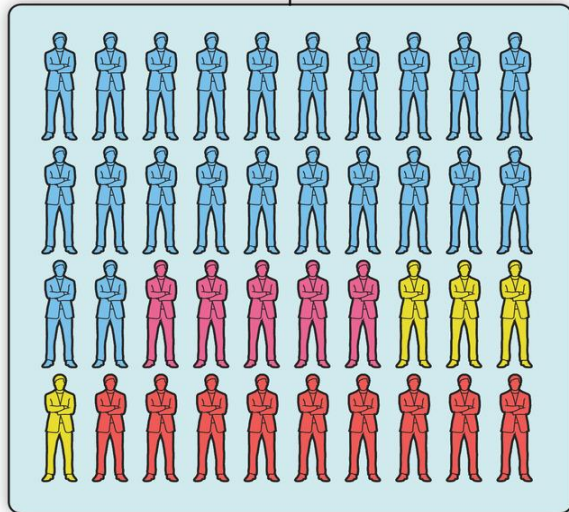
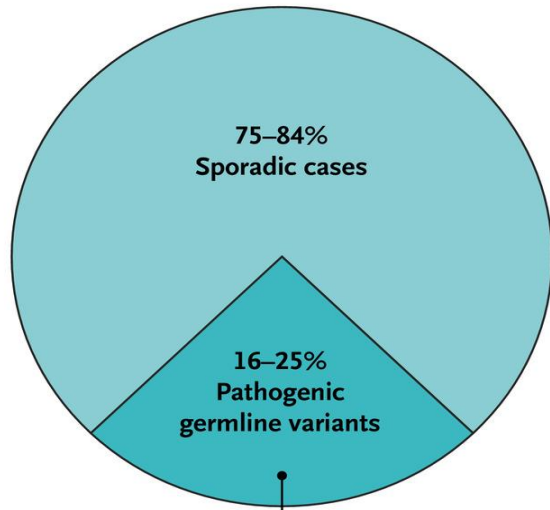
- Cases doubled globally: 107,310 (1990) → 211,890 (2021).
- 30% projected increase between 2019–2030.
- Incidence in age 45–49 is similar to 50-year-olds in 1992.
- Shift to LEFT colon / rectal and MORE advanced stage at diagnosis.
- By 2030: CRC = #1 cancer killer in men age 20–49.
- Increase seen across all racial and ethnic groups.

Early-onset CRC incidence (U.S.)

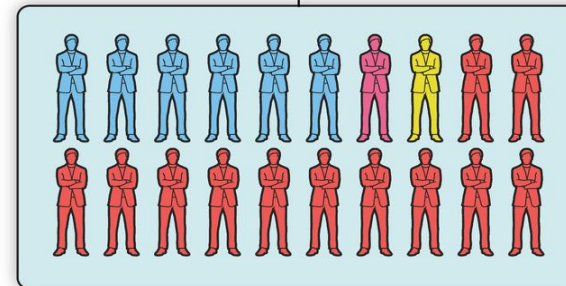
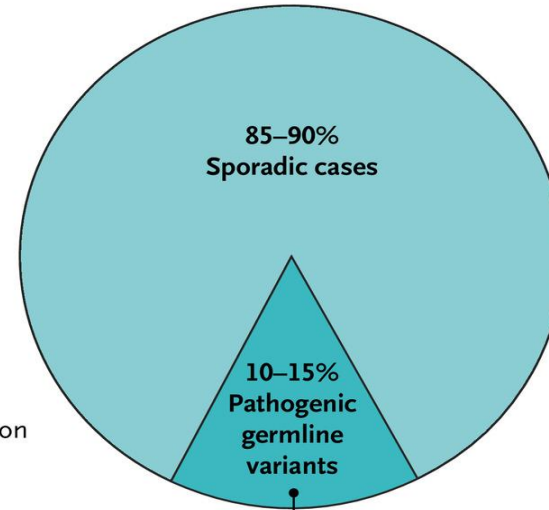


Don't attribute rectal bleeding in a young patient to hemorrhoids without examining and considering colonoscopy

CRC: Early onset



CRC: All ages



- Lynch syndrome
- APC mutation
- Biallelic *MUTYH* mutation
- Other mutations

USPSTF 2021: Screening Starting at Age 45



Grade B: 45–49	Grade A : 50–75	Grade C : 76–85	≥ 86
Offer screening; moderate net benefit. NEW in 2021 — driven by rising EOCRC.	Screen all average-risk adults. Substantial net benefit.	Individualize. Prior screening, life expectancy, preference.	Not recommended. Harms likely exceed benefits.

USPSTF does not prefer one modality — the best test is the one the patient will complete, on schedule.

Insurance impact: Grade B rating → screening 45–49 covered with no cost-sharing under the ACA.

How We Got to 45: Evolution of the Recommendation

Driver: rising CRC incidence in adults < 50 y — now the leading cause of cancer death in men and #2 in women under 50

2016

USPSTF

Grade A

Screen average-risk, asymptomatic adults 50-75
High certainty of substantial net benefit.

2018

ACS

Qualified rec

Screening starting at 45 for average-risk adults
Post-rec NHIS: screening among 45-49
MORE THAN DOUBLED (n≈5,800)

2021

USPSTF

Grade B

Screen 45–49; reaffirms Grade A at 50–75.
Triggers ACA insurance coverage - no cost-sharing.

Screening Modalities

Colonoscopy, Stool and blood-based tests - and how to choose

AVERAGE-RISK SCREENING

A 48-year-old healthy woman for annual visit. Never screened for CRC. No personal or family history. No IBD. No red-flag symptoms. BMI 27. Mother had breast cancer at 62. She asks: "Do I really need a colonoscopy? I heard there's a new blood test."

- At what age did she become eligible for screening?
- Which tests are appropriate to offer?
- How would you counsel her on Shield vs FIT vs Cologuard Plus vs colonoscopy?
- What factors change your recommendation (adherence, access, preferences)?







Stool based Screening Tests

Test	Sensitivity for CRC	Sensitivity for adv. Adenoma	Specificity for CRC	Positive Rate	False Positive Rate
High sensitivity gFOBT	50-75% ¹	6-17% ¹	96-98% ¹	5-8% ¹	2-4% ¹
FIT	74-81% ²	25-27% ²	95-96% ²	4-8% ²	4-5% ²
FIT-DNA 1.0 (Cologuard 1.0)	92% ³	42% ³	87% ³	16% ³	13% ³
FIT-DNA 2.0 (Cologuard 2.0)	95% ⁴	43% ⁴	91% ⁴	13% ⁴	9% ⁴
FIT-RNA (ColoSense)	93% ⁵	41% ⁵	86% ⁵	17% ⁵	14% ⁵
cf-DNA test (Shield)	83% ⁶	13% ⁶	90% ⁶	11% ⁶	10% ⁶
cf-DNA (Freename/Exact) (not yet FDA approved)	79% ⁷	13% ⁷	92% ⁷	9% ⁷	8% ⁷
Methylated septin9 (Epi proColon)	68% ⁸	11% ⁸	79% ⁸	15-20% ⁸	15-20% ⁸

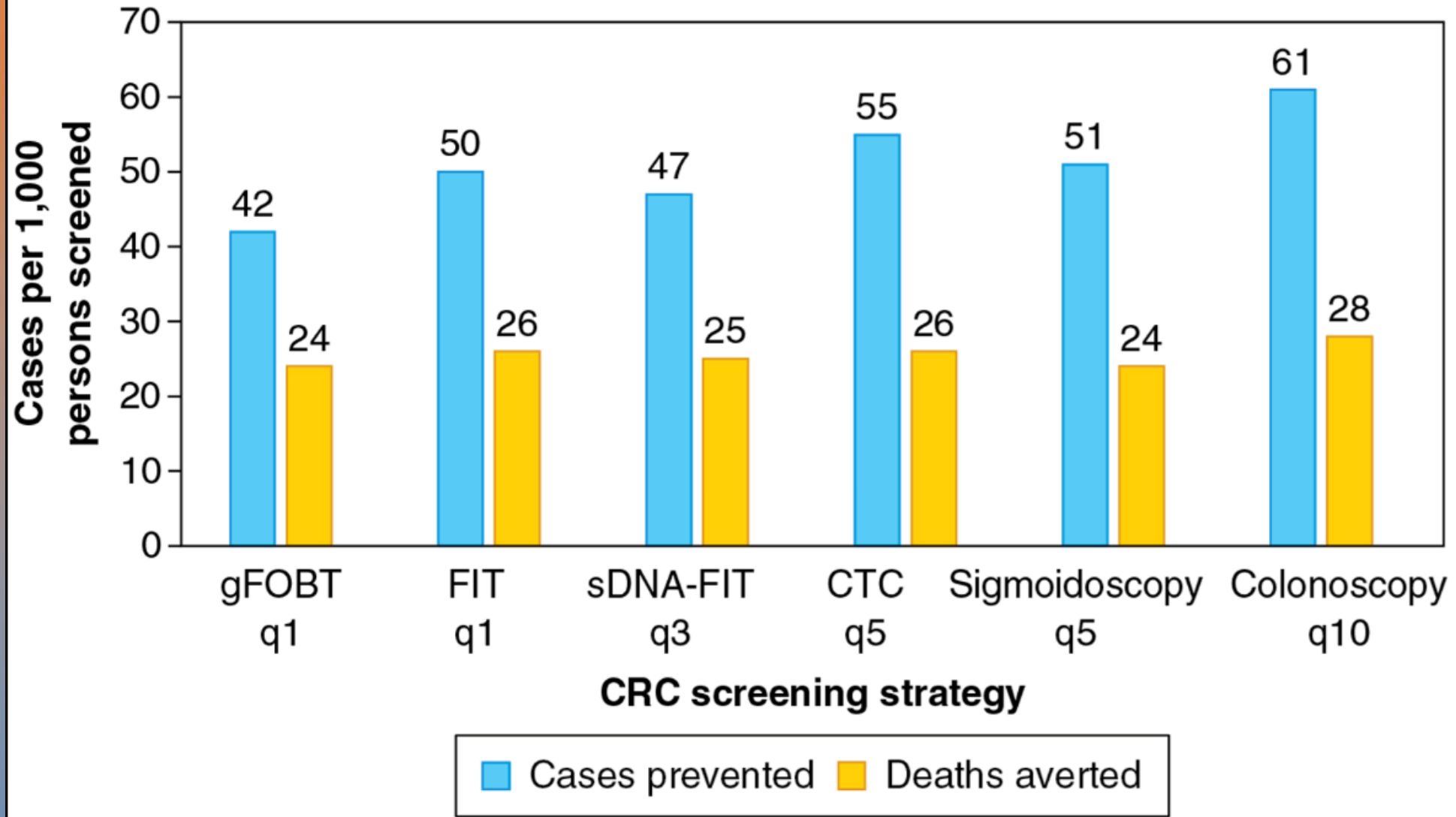
1. Lin JS, et al. *JAMA*. 2021;325(19): 1978-1998.
2. Gupta S. Screening for Colorectal Cancer. *Hematol Oncol Clin North Am*. 2022;36(3):393-414.
3. Cologuard Clinician Brochure. Exact Sciences Corporation. Madison, WI.
4. Cologuard Plus Clinician Brochure. Exact Sciences Corporation. Madison, WI.

5. ColoSense Clinician Brochure. Geneoscopy, Inc. St. Louis, MO.
6. Shield Provider Brochure. Guardant Health, Inc. Palo Alto, CA.
7. Shaukat A, Burke CA, Chan AT, et al. Clinical Validation of a Circulating Tumor DNA-Based Blood Test to Screen for Colorectal Cancer. *JAMA*. 2025;334(1):56-63.
8. Epi proColon Instructions for Use (IFU 0008) and Epigenomics data on file, P130001

Menu of Screening Tests in 2026

 Colonoscopy	Structural	Every 10 yr
 FIT	Stool	Every year
 mt-sDNA (Cologuard Plus)	Stool	Every 3 yr
 cfDNA blood test (Shield)	Blood	Every 3 yr
 CT Colonography	Structural	Every 5 yr
 Flex sigmoidoscopy ± FIT	Structural	Every 5–10 yr

A positive non-colonoscopy test mandates diagnostic colonoscopy — a stool/blood test is Step 1 of a two-step program



Colonoscopy: Still the Reference Standard

Strengths

- Direct visualization of entire colon + rectum
- Diagnostic AND therapeutic in same session (polypectomy)
- Longest interval: 10 yr if normal average-risk exam
- Required for high-risk patients & positive non-invasive tests

Limitations

- Prep burden - ~20% inadequate prep → repeat
- Sedation, time off work, procedural risks
- Perforation ~1/1000; bleeding ~1/200 post-polypectomy
- 6-12% miss rate for advanced adenomas (interval cancers)

Performance

76-90%

Reduction in CRC incidence

~95%

Sensitivity for CRC

88-98%

Sensitivity for advanced adenomas

10 yr

Interval after normal screening exam

Colonoscopy Quality: Metrics That Matter

Metric	Benchmark	Why it matters
Adenoma Detection Rate (ADR)	≥ 30% men / ≥ 20% women	<i>Every +1% ADR → -3% interval CRC risk</i>
Cecal intubation rate	≥ 95% screening exams	<i>Photo-documentation required</i>
Withdrawal time (neg exam)	≥ 6 min minimum; aim ≥ 9 min	<i>Longer withdrawal → higher ADR</i>
Bowel prep adequacy	≥ 85% of exams	<i>Split-dose prep; clear liquids day prior</i>
Serrated lesion detection	≥ 7% men / ≥ 5% women	<i>Right-sided SSLs historically under-detected</i>

ADR is the single most reliable quality metric

ADR-A: A More Precise Quality Metric

ADR based on ALL exams (ADR-A) vs. ADR based on screening-only exams (ADR-S) to predict post colonoscopy CRC

Post colonoscopy CRC HR vs. ADR-A < 23%

0.32 – 0.60

Across higher ADR-A categories (NHCR cohort)

HIGHEST QUARTILE

ADR-A ≥ 42%
≈
ADR-S ≥ 35%

Equivalent protection from post-colonoscopy CRC

ASPIRATIONAL TARGET

44%

ADR-A benchmark proposed by the authors

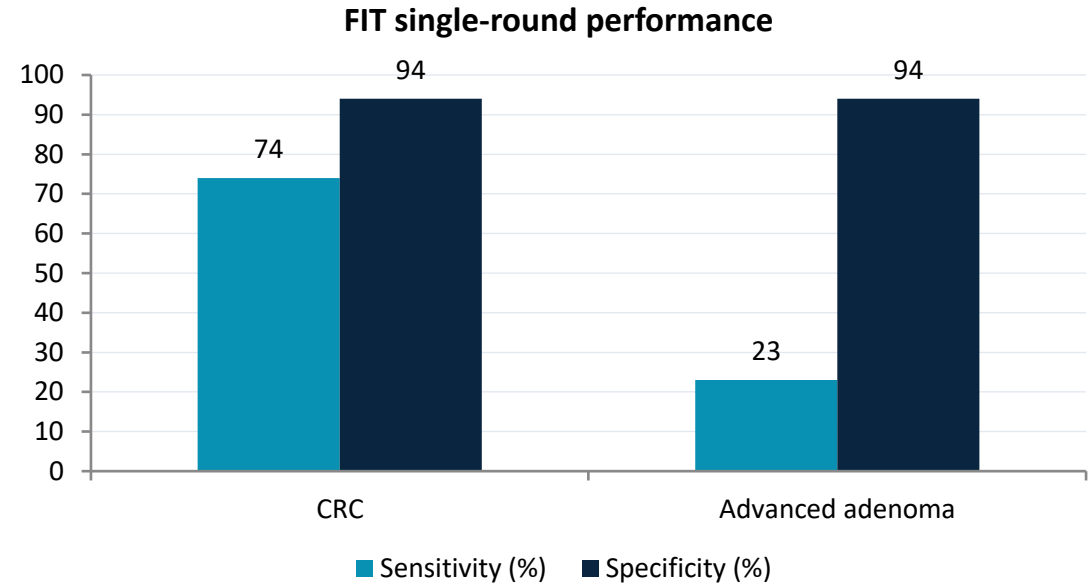
WHY ADR-A? Uses more of the endoscopist's volume → narrower 95% CIs → more precise quality measurement.

ADR-A predicts post-colonoscopy CRC as well as ADR-S with more precision. 44% is a reasonable aspirational target.

FIT: The Workhorse of Non-Invasive Screening

How it works

- Immunochemical detection of human globin in stool.
- Single sample — no diet or medication restrictions.
- Mail-in collection; ideal for population-health programs.
- ANNUAL testing to achieve modeled benefit.
- Positive FIT → colonoscopy (ideally within 1–3 months).



~\$24 / test • lowest-cost CRC screening option

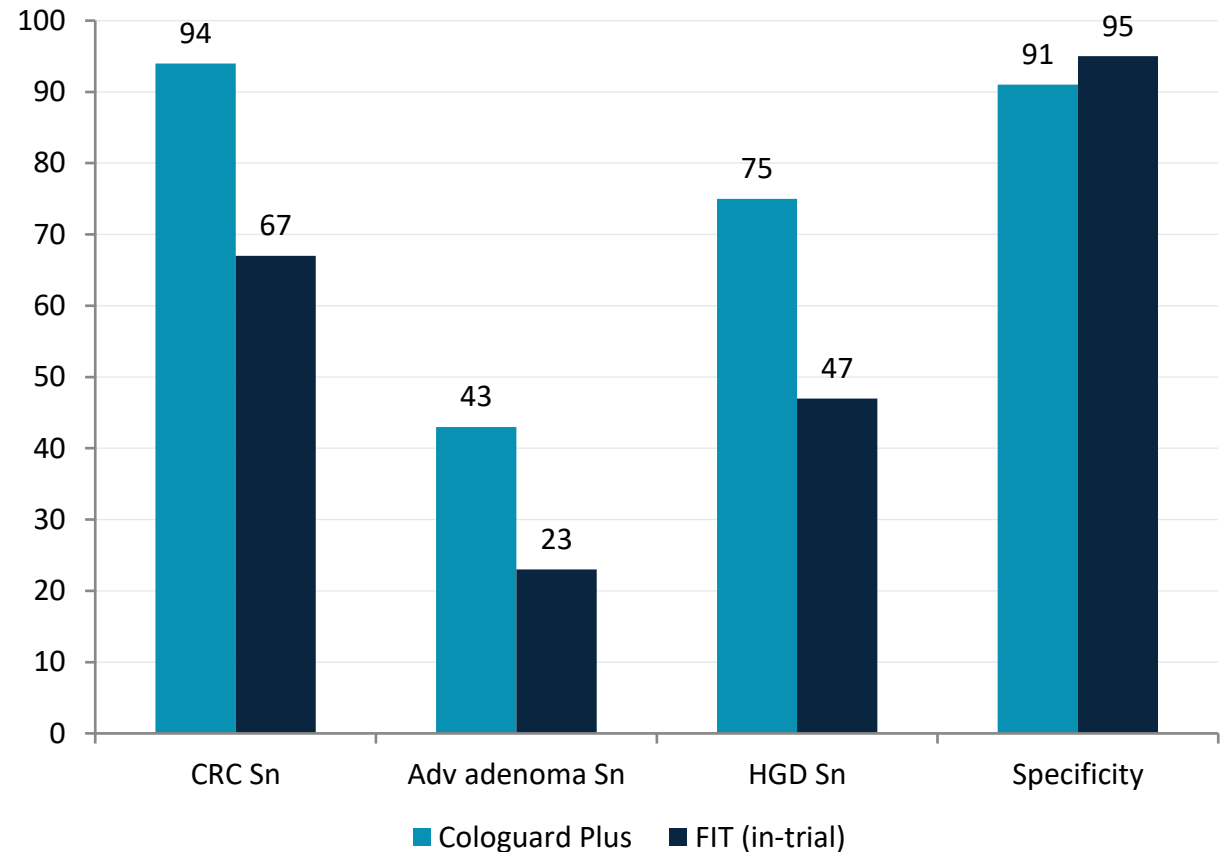
Annual FIT + diagnostic colonoscopy for positives ≈ colonoscopy for mortality reduction — IF patients adhere annually

Cologuard Plus: Next-Gen mt-sDNA (BLUE-C Trial 20,176 avg-risk adults)

What changed with Cologuard Plus

- FDA approved Oct 2024; replaces original Cologuard.
- DNA methylation markers + fecal hemoglobin.
- New biomarker panel + algorithm improves specificity.
- Q 3 years for avg-risk adults ≥ 45 .

BLUE-C: Cologuard Plus vs FIT (%)



Shield: First FDA-Approved Blood-Based CRC Screen

- Plasma cfDNA — methylation + mutation signals (Guardant).
- FDA approved July 2024 as PRIMARY screen.
- Every 3 years for avg-risk adults ≥ 45.
- Medicare reimbursement active since 2024.

ECLIPSE Trial (NEJM 2024)

Chung DC et al. ~8,000 avg-risk adults; Shield vs screening colonoscopy as reference. Funded by Guardant Health.

83%

Sensitivity for CRC

90%

Specificity

13%

Sensitivity for advanced adenomas

62%

Sensitivity for Stage I CRC

Limitations

- Only 13% sensitivity for advanced adenomas - misses most precursors
- Stage I CRC sensitivity 62% - lower than colonoscopy or mt-sDNA
- **Highest cost per QALY** gained of any screening test
- Reserve for patients who refuse all first-line options

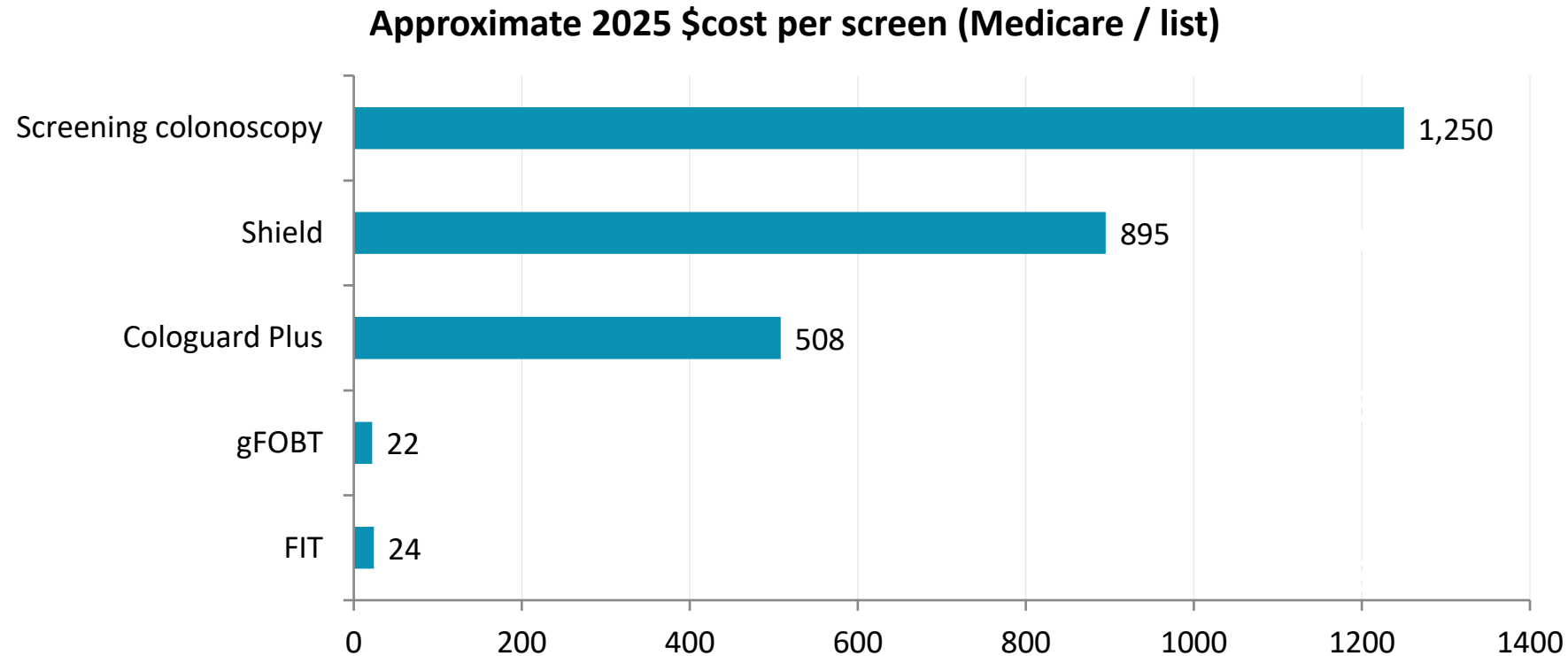
Test-by-Test Comparison

Test	CRC Sensitivity	Adv adenoma Sensitivity	Specificity	Interval	Positive →
Colonoscopy	~95%	88–98%	85–99%	10 yr	Biopsy / polypectomy
FIT (annual)	~74%	~23%	~94%	1 yr	Colonoscopy
Cologuard Plus	94%	43%	91%	3 yr	Colonoscopy
Shield (cfDNA)	83%	13%	90%	3 yr	Colonoscopy
CT Colonography	~89%	~78% ≥10 mm	~86%	5 yr	Colonoscopy

Colonoscopy and FIT are USMSTF Tier 1. Cologuard Plus has the best non-invasive adv-adenoma sensitivity. Shield finds cancer but misses most adenomas.

ALL positive non-colonoscopy tests require diagnostic colonoscopy

What Do These Tests Actually Cost?



Colonoscopy & FIT > 70% CRC reductions (first-line options)

Shield achieved ~42% incidence, 56% mortality reduction (Reserve for those who will not do first-line options)

What to do when colonoscopy is normal after positive non-invasive screening test?

ACG Clinical Guidelines: Colorectal Cancer Screening 2021

Aasma Shaukat, MD, MPH, FACG^{1,2}, Charles J. Kahi, MD, MSc, FACG³⁻⁷, Carol A. Burke, MD, FACG⁴, Linda Rabeneck, MD, MPH, MACG⁵, Bryan G. Sauer, MD, MSc, FACG (GRADE Methodologist)⁶ and Douglas K. Rex, MD, MACG³

On Positive FIT-DNA with Negative Colonoscopy

individuals with a positive mtsDNA test and a negative colonoscopy. This is discussed in the section on special considerations below. Based on the current available data (54,55) we recommend that asymptomatic individuals with a positive mtsDNA test and a negative high-quality colonoscopy not undergo additional testing, such as upper endoscopy, CT of the abdomen, or repeat colonoscopy at an interval shorter than the recommended repeat screening interval (unless indicated by other symptoms or laboratory testing). If the mtsDNA test is negative, the interval for a repeat mtsDNA test or transition to another screening test is 3 years as per manufacturer

NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)

Colorectal Cancer Screening

Version 2.2025 — June 24, 2025

"If the colonoscopy is negative after a positive FIT or mt-sDNA or mt-sRNA, no symptoms are present, and the colonoscopy was a high-quality examination, patients can return to average-risk screening intervals beginning at 10 years after the colonoscopy."

High-Risk Patients

Family history, IBD, Lynch, early-onset CRC — and the 2020 USMSTF intervals

FAMILY HISTORY — WHEN TO START

A 38-year-old man with no symptoms. His brother was just diagnosed with colon cancer at age 44. His father had an advanced adenoma removed at 58. No personal history of polyps or IBD. He asks whether he needs to be screened now.

- At what age should he be screened?
- What modality is appropriate?
- Does this constellation suggest Lynch? Who gets referred for genetic testing?
- What about his children and other siblings?

When Family History Changes the Plan

Family history	Start age	Test & interval
1 FDR with CRC or advanced adenoma age \geq 60	40 (or 10 yr before index dx)	Colonoscopy q10 yr
1 FDR with CRC / adv adenoma < 60, OR \geq 2 FDRs any age	40 (or 10 yr before youngest dx)	Colonoscopy q5 yr
1 second-degree relative with CRC	Average-risk pathway otherwise	Standard options
Known familial syndrome or multi-relative clusters	Refer for genetic testing	Hereditary pathway

Colonoscopy is the ONLY appropriate screening test for patients with a strong family history

Lynch Syndrome & Hereditary CRC

When to suspect hereditary CRC

- CRC at < age 50.
- ≥ 2 family members with CRC or Lynch-spectrum cancers (endometrial, ovarian, gastric, urothelial, small bowel).
- Synchronous / metachronous CRC in one patient.
- > 10 adenomas lifetime \rightarrow FAP, MAP, polymerase-proofreading syndromes.
- Tumor MSI-high or MMR-deficient (now standard on all CRC).

Confirmed Lynch — surveillance

- Colonoscopy q1–2 y starting age 20–25 (MLH1/MSH2) or 25–30 (MSH6/PMS2).
- Endometrial / ovarian screening (carriers with uterus).
- Aspirin chemoprophylaxis — CAPP2 trial.
- Upper endoscopy q3–5 y from age 40.
- Genetic counseling + cascade testing of relatives is essential.

IBD: Surveillance Rules Are Different

Scenario	Recommendation
UC pancolitis OR Crohn colitis \geq 1/3 colon	Begin 8 yr post-dx
Left-sided UC	Begin 8 yr post-dx
Ulcerative proctitis only	No elevated risk — average-risk screening
PSC + IBD	ANNUAL colonoscopy from IBD dx
Usual surveillance interval	q1–3 yr with targeted + random biopsies or chromoendoscopy

IBD + PSC is the highest-risk combination — annual colonoscopy from the day IBD is diagnosed.

Don't Miss the Young Patient with Red Flags

Red-flag symptoms - any age

- Hematochezia / rectal bleeding (don't default to hemorrhoids)
- Iron-deficiency anemia
- Change in bowel habits > 6 weeks
- Unintentional weight loss
- Persistent abdominal pain
- Family history of CRC / Lynch-spectrum cancers

Action when red flags present

- **DIAGNOSTIC colonoscopy — not screening, not FIT, not Cologuard.**
- CBC, iron studies, ferritin.
- Review prior labs - subtle anemia is often overlooked.
- Typical symptom-to-dx delay in young adults: 6–12 months.
- Every CRC dx < 50 → germline genetic testing.

When to Stop Screening?

Prevalence of adenomas increases with age in a linear fashion, incidence of CRC increases with age, but in a nonlinear fashion

Separation of these 2 curves in elderly suggests:

- More mutations
- Advanced lesions more likely to convert to cancer

Screening appropriate for previously unscreened elderly

Colonoscopy better test than sigmoidoscopy - CRC shift into proximal colon with age

Age becomes an increased risk factor for complications during procedures

When to Stop Screening?

Individualize between patient and physician

<https://eprognosis.ucsf.edu/cancer/partials/colorectal-cancer.php>

University of California San Francisco About UCSF Search UCSF

ePrognosis HOME ABOUT CALCULATORS CANCER SCREENING DECISION TOOLS COMMUNICATION

Cancer Screening: Lee Schonberg Index

- Population: Community dwelling adults aged 50 and older
- Outcome: All cause 10-year mortality
- Scroll to the bottom for more detailed information

Risk Calculator

1. How old is your patient? ≥ 85 years old

2. What is the sex of your patient? Female
 Male

3. What is your patient's BMI? < 25

4. Which best describes your patient's health in general? Excellent or Very Good

5. Does your patient have chronic lung disease, such as emphysema or chronic bronchitis? Yes
 No

6. Has your patient ever had cancer (excluding minor skin cancers)? Yes
 No

Cancer Screening: Lee Schonberg Index



RESULTS

SCREENING FOR COLORECTAL
CANCER IS MORE LIKELY TO HARM
THIS PERSON THAN TO HELP THEM.

THUS, SCREENING WOULD
GENERALLY NOT BE
RECOMMENDED.

VIEW HARMS

VIEW BENEFITS

PICKING THE RIGHT SURVEILLANCE INTERVAL

A 62-year-old man had his first screening colonoscopy. Pathology: 3 tubular adenomas, all < 5 mm, AND one 14 mm tubulovillous adenoma with low-grade dysplasia, resected en bloc. He is anxious: "My father died of colon cancer at 72." He asks when his next colonoscopy should be.

- Which finding drives the interval — the count or the advanced adenoma?
- What's the correct next interval?
- Does his father's history change anything?
- Can non-invasive tests be used for surveillance after polypectomy?

SURVEILLANCE INTERVALS

Post-Polypectomy Surveillance: 2020 USMSTF

Baseline finding	Next colonoscopy
Normal, OR 1–2 small hyperplastic (< 10 mm, rectosigmoid)	10 years
1–2 tubular adenomas < 10 mm	7-10 years
3–4 tubular adenomas < 10 mm	3-5 years
5–10 adenomas < 10 mm	3 years
Adenoma ≥ 10 mm, villous, or high-grade dysplasia	3 years
> 10 adenomas at one exam	1 year; work-up polyposis syndrome
Sessile serrated lesion < 10 mm without dysplasia	5-10 years
SSL ≥ 10 mm, SSL with dysplasia, or TSA	3 years
Piecemeal resection of lesion ≥ 20 mm	6 months

INDIVIDUALIZE — DON'T DEFAULT TO SURVEILLANCE

Among ≥ 75 with prior adenoma, **10-year non-CRC mortality tracks frailty, not polyp history**

Frailty category (VA Frailty Index)	10-yr non-CRC death	CRC at 10 yrs
Nonfrail (≤ 0.10)	34.2%	~ 1%
Prefrail (0.11–0.20)	intermediate	~ 1%
Mild frailty (0.21–0.30)	intermediate	~ 1%
Moderate frailty (0.31–0.40)	intermediate	~ 1%
Severe frailty (> 0.40)	82.0%	~ 1%

CONSIDER DEPRIORITIZING

Limited life expectancy • moderate-severe frailty • multiple competing conditions • patient prefers to focus on other health priorities

MAY STILL BENEFIT

Nonfrail • > 10 -yr life expectancy • high-risk lesion (advanced adenoma, SSL ≥ 10 mm) • shared decision-making favors continuation

"Older adults may consider deprioritizing surveillance colonoscopy relative to other health concerns"

VA COHORT ≥ 75 YRS — COMPETING-RISK ANALYSIS

When Should Surveillance Stop?

91,952 U.S. veterans (98% male; median 71 yr) with colonoscopy before age 75 — 27.8% with adenoma, 72.2% without 10-year follow-up. Retrospective cohort, 2006–2019.

CRC RISK AT 10 YEARS

PRIOR ADENOMA

1.1%

CRC incidence | 0.5% CRC death

NO ADENOMA

0.7%

CRC incidence | 0.4% CRC death

Statistically different ($P < .001$) but absolute risk is low in both groups.

COMPETING-RISK DEATH AT 10 YEARS

46.9% – 48.4%

NON-CRC DEATH

Similar in both adenoma and no-adenoma groups.

Competing risk death (~47%) was ~40-fold higher than CRC incidence (~1%) and ~100-fold higher than CRC death (~0.5%) at 10 years.

Uptake & Equity

80% by 2018 • Disparities • What works in primary care

USPSTF • ACS • USMSTF • ACG

Organization	Start	Stop	Preferred tests	Stance
USPSTF 2021	45 (B) 50 (A)	75 (A); 76–85 individualize	Colonoscopy, FIT, mt-sDNA, CTC, flex sig, Shield (2024 addendum)	No single preferred modality
ACS 2018 / 2024	45 (qualified) 50 (strong)	Up to 75; individualize 76–85	High-sensitivity stool tests yearly or colonoscopy q10	Led the lowering- of-age movement
USMSTF 2022	45	75; individualize 76–85	TIER 1: Colonoscopy q10 or FIT q1. TIER 2: mt- sDNA q3, CTC q5.	GI societies - explicit tiering
ACG 2021	45 (conditional) 50 (strong)	75; individualize	Primary: Colonoscopy & FIT. Second-line: mt- sDNA, flex sig, CTC, capsule	Recommends AGAINST Septin-9

All major U.S. guideline societies: screen average-risk adults starting at age 45. Colonoscopy and FIT remain first-line everywhere

Trade-offs of Screening at 45-49

+810

colonoscopies per 1,000

Added procedure volume

If screening ages 45–49 via colonoscopy. Substantial workforce & financial implications.

Perforation | Bleeding | Sedation

Procedural complications

~1/1,000 perforation; ~1/200 bleeding post-polypectomy. Scale with volume - not trivial in a younger, lower-risk cohort.

Overdetection

Low-risk adenomas in young patients

Many small tubular adenomas never progress. Detection commits to surveillance colonoscopies for decades.

Public uncertainty

Guideline fatigue

Repeated rec changes may erode trust and reduce impact of future updates. Be ready with a clear, consistent message.

Net benefit at 45–49 remains positive - but counseling should acknowledge capacity, complication, and over detection trade-offs.

The 80% Campaign: Big Goals, Big Impact

2018 Goal

80%

of age-appropriate adults screened for CRC

Today's goal: 80% in every community

Only 59% U.S. screened currently • FQHCs ~41%

Projected impact by 2030

20%

Reduction in CRC incidence

33%

Reduction in CRC mortality

277,000

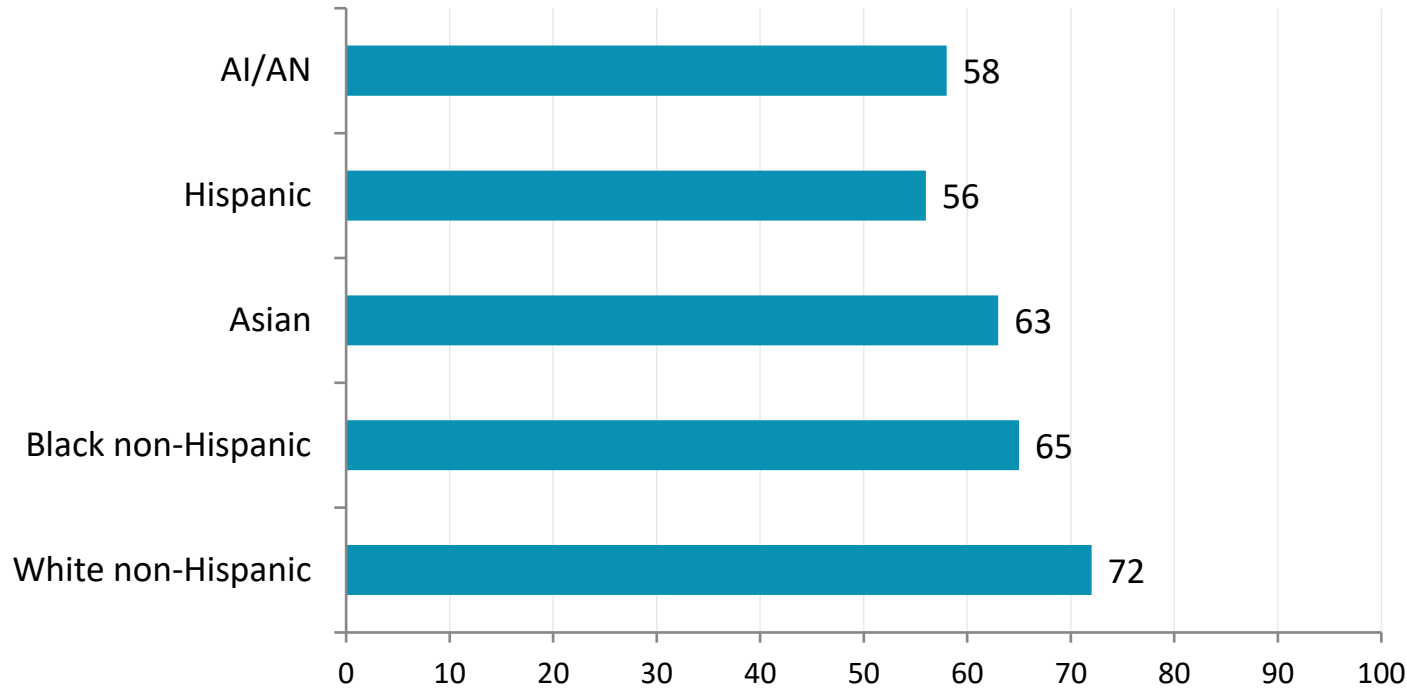
New cancers prevented (2013–2030)

203,000

Deaths prevented (201-2030)

Screening Disparities Are Real

CRC screening completion by race/ethnicity (U.S. 2022)



Mortality gaps

- Black adults: 20% higher CRC incidence; ~40% higher mortality.
- AI/AN adults: highest mortality of any U.S. group.
- Rural residents: lower colonoscopy access.
- Uninsured / Medicaid: lower completion.

Mailed FIT outreach closes 15-30 percentage points in screening completion for underserved populations — a true primary-care win.

Uptake After the 2021 USPSTF Recommendation

Study at a glance

- Blue Cross Blue Shield claims - 3.1–3.4 million covered lives (representative of ~20 M)
- Adults aged 45-49 years
- Pre-USPSTF: May 2018-Dec 2019
- Post-USPSTF: May 2022-Dec 2022
- Outcome: bimonthly & cumulative screening rates

+1.01%

Bimonthly screening rate ↑

95% CI 0.62–1.40, P<.001

13.9%

40–49 yr adults screened between May 2021-2022

Estimated annual rate of screening

3.5% in 2019 → 11.7% in 2022

+8.2% increase

~25% Screening via stool DNA

Colonoscopy had largest absolute ↑

Gains are meaningful but uneven (race, SES, rural vs metro, sex). Stool-DNA uptake did NOT differ by resource setting — an equity-sensitive lever for primary care.

Where We Stand: BRFSS National Data

61.4%

Adults 45-75 up-to-date

95% CI 60.9–61.8 • ~69 M people

32.3%

Never screened (45–75)

≈ 28 million U.S. adults

72.8%

Healthy People 2030 target

Gap of 11.4 pp to close

Up-to-date by age

45–49 y **29.8%** ~2 in 3 never screened

50–64 y **~64%** Established cohort

65–75 y **81.5%** Highest uptake

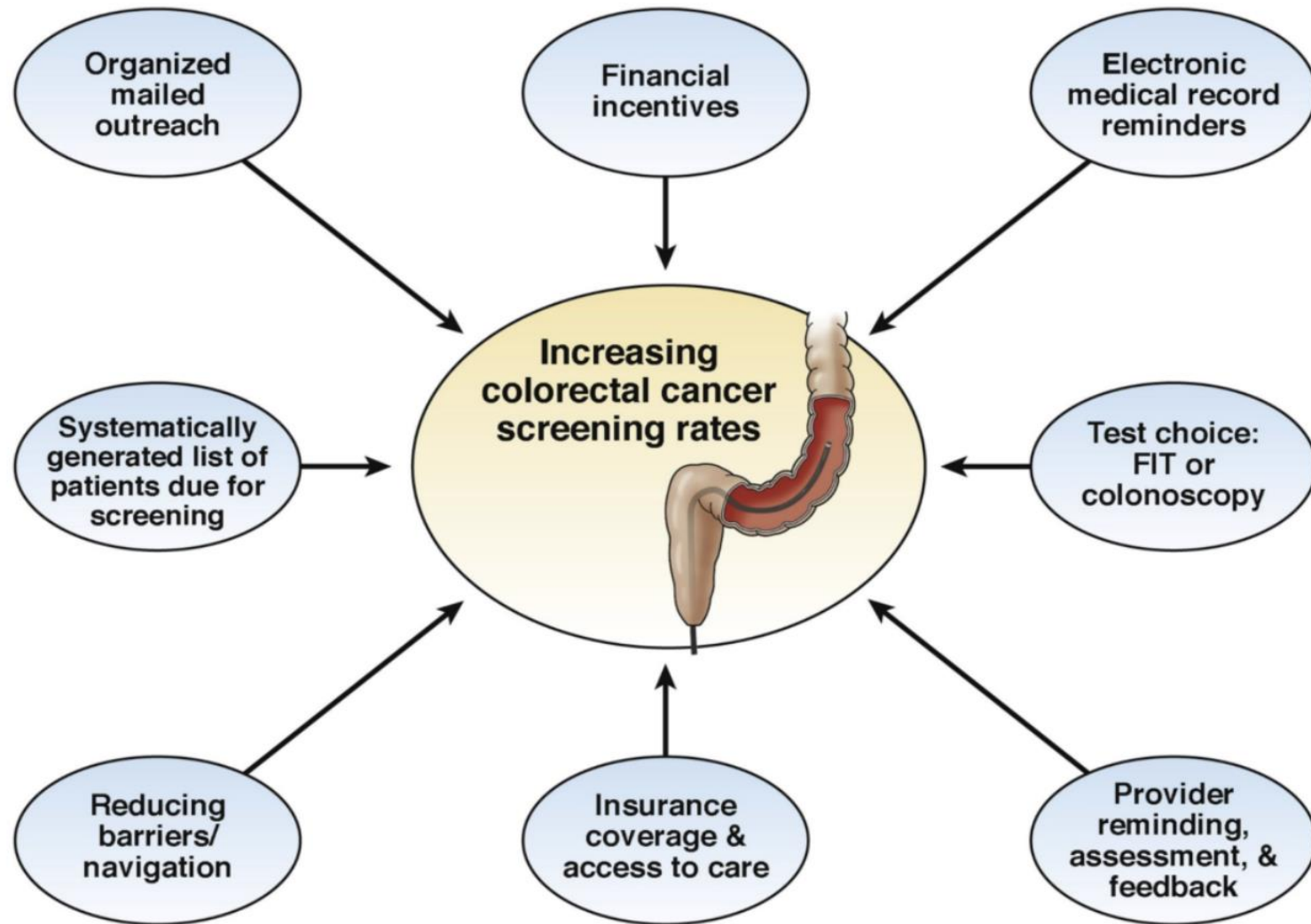
Up-to-date by race/ethnicity

Non-Hispanic Black **65.0%**

Non-Hispanic White **63.5%**

Hispanic **52.4%**

~13% gap between Hispanic and non-Hispanic adults. Language-concordant outreach + mailed FIT narrow this gap most reliably



What Works in Primary Care

01

Default order sets

Make CRC screening the default EHR order; default annual FIT unless patient elects colonoscopy.

02

Mailed FIT outreach

Mail kits with pre-paid return to overdue patients. +20-point bump in completion.

03

Patient navigation

Dedicated staff schedule colonoscopy within 2 months of any positive non-invasive test.

04

Shared decision-making

Menu of options. Let patients pick what they'll actually complete.

05

Rooming-based standing orders

Trained MAs identify overdue patients and hand out FIT kits at intake.

06

Feedback & benchmarking

Share your practice rate; track by age, race, insurance.

30-40% of positive FITs are never followed up without active navigation

American Cancer Society 2025

Screening saves lives in older adults. In younger adults, it catches the cases we can't yet prevent - until we understand why they're rising

01 Screen on time

Start at 45 for average-risk adults. Don't defer "until the next visit" — every missed invitation is a missed catch.

FIT annually or colonoscopy q10y; use the test the patient will actually complete.

02 Teach the symptoms

Rectal bleeding, change in bowel habits, iron-deficiency anemia, unexplained abdominal pain, weight loss — in anyone, regardless of age.

Educate both clinicians and patients. Don't anchor on hemorrhoids.

03 Support the whole patient

Younger patients face distinct survivorship issues. Raise them early — ideally before treatment.

Fertility preservation • Sexual health • Ostomy & body image • Financial toxicity.

KEY TAKEAWAYS: CRC IS PREVENTABLE. TREATABLE. BEATABLE

1

Screen every average-risk adult from age 45

USPSTF Grade B 45–49; Grade A 50–75. ACA covers 45–49 with no cost-sharing.

2

The best test is the one the patient will complete.

FIT & colonoscopy are first-line everywhere. Cologuard Plus is a strong non-invasive alternative.

3

Stool test detects cancer, but doesn't prevent it

Sensitivity 13% for advanced adenoma. Reserve for patients who refuse first-line options.

4

Recognize high-risk early

Family hx, IBD, Lynch-spectrum cancers, CRC < 50 = colonoscopy, not stool/blood tests.

5

Know the 2020 USMSTF intervals

Advanced adenoma → 3 yr. 1–2 small tubular → 7–10 yr. Piecemeal ≥ 20 mm → 6-month site check.

6

Close the equity gap

Mailed FIT outreach, navigation of positive tests, default EHR orders.

References

- Davidson KW et al. USPSTF Screening for Colorectal Cancer: Recommendation Statement. *JAMA*. 2021;325(19):1965-1977.
- Wolf AMD et al. ACS Colorectal Cancer Screening Guideline. *CA Cancer J Clin*. 2018; reaffirmed 2024.
- Shaukat A et al. USMSTF CRC Screening Guidelines. *Gastroenterology*. 2022.
- Shaukat A et al. ACG CRC Screening Guidelines 2021.
- Gupta S et al. Post-Colonoscopy / Polypectomy Follow-up: USMSTF 2020. *Gastroenterology*. 2020;158:1131.
- Chung DC et al. Cell-Free DNA Blood-Based Test for CRC Screening (ECLIPSE). *NEJM*. 2024;390:973-983.
- Anderson JC et al., New Hampshire Colonoscopy Registry. *Am J Gastro* 2026
- Imperiale TF et al. Next-Gen Multitarget Stool DNA Test (BLUE-C). *NEJM*. 2024.
- Zauber AG et al. Colonoscopic polypectomy and long-term prevention of CRC deaths. *NEJM*. 2012;366:687-696.
- Sinicrope F. Increasing incidence of early-onset CRC. *NEJM*. 2022;386:1547-1558.
- Nierengarten MB et al. Colonoscopy and stool tests more cost-effective than blood-based screening. *Cancer*. 2025.
- Siddique S et al. USPSTF CRC Screening Recommendation and Uptake for Individuals Aged 45–49. *JAMA Netw Open*. 2024;7(10):e2436358.
- Sadeghi S, Barzi A. USPSTF Recommendations and CRC in Younger Adults — Current Challenges and Future Opportunities. *JAMA Netw Open*. 2024;7(10):e2436305.
- Baseline Estimates of CRC Screening Among Adults 45–75, BRFSS 2022. *Prev Chronic Dis*. 2025.
- Siegel RL et al. Cancer statistics, 2024. *CA Cancer J Clin*. 2024.
- Rex DK et al. Quality Indicators for Colonoscopy. *Am J Gastroenterol*. Updated 2022.

Thank you