Colon Cancer Screening Updates for 2026

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General Outline

- Screening age recommendations
- Risk stratification
- Benefits of screening
- Available screening modalities
- Implementation and adherence

Screening Age and Population

- Initiate screening at age 45 for average risk individuals
  - Driven by increasing colorectal cancer incidence in younger adults
  - As of 2023, colorectal cancer has become leading cause of cancer deaths in people < 50
  - Modeling studies show approximately 25 additional life-years gained per 1000 individuals when doing this

Screening Age and Population

- Strong recommendations for screening through age 75
- Screening between ages 76-85 should be individualized
  - Screening history
  - Life expectancy
  - CRC risk
  - Potential for adverse events
  - Patient preferences

Risk Stratification

- Distinguish between average risk and increased risk populations
- Only colonoscopy is the appropriate screening test for increased risk populations
- Stool based tests, blood based tests, and other modalities are **not appropriate** for those at increased risk

Risk Stratification

- Increased risk individuals
  - Family history of colorectal cancer
  - Advanced adenomatous polyps in first degree relatives
  - Personal history of IBD
  - Hereditary syndromes
    - Lynch Syndrome
    - FAP
    - MUTYH-Associated Polyposis

Family History

- For individuals with >= 1 first degree relative with colorectal cancer at any age
  - Screening should begin with colonoscopy at age 40 or 10 years before the earliest diagnosis, whichever comes first
- For those with a first degree relative with advanced adenoma
  - Start with colonoscopy at age 40 or at the age of onset in the relative if younger

Benefits of Screening

- Screening reduces colorectal cancer mortality by about 25% with sigmoidoscopy
- Screening with guaiac-based testing decreases mortality by 9-22%
- Observational studies show colonoscopy reduces mortality by 68%
- Modeling studies estimate around 250 life-years gained per 1000 screened individuals

Available Screening Modalities

- Stool based tests
  - Fecal immunochemical test (FIT)
  - Multitarget stool DNA (Cologuard)
  - High sensitivity guaiac-based FOBT
- Direct visualization tests
  - Colonoscopy
  - CT colonography
  - Flexible sigmoidoscopy
- Blood test
  - Guardant Shield

Quick Review of Sensitivity and Specificity In Order to Better Understand Screening Modalities

- **Sensitivity** = of all the people who actually have the disease, what percentage does the test correctly identify as positive
- **Specificity** = of all the people who do not have the disease, what percentage does the test correctly identify as negative

Sensitivity and Specificity Continued

- A highly sensitive test is good at RULING OUT disease when negative
- A highly specific test is good at RULING IN disease when positive

Fecal Immunochemical Test (FIT)

- Performed annually
- Detects human hemoglobin in stool
- Approximately 75% sensitivity for colorectal cancer
- Approximately 25% sensitivity for advanced adenomas
- About 95% specificity
- Single stool sample collected at home
- No dietary restrictions

FIT Limitations

- Lower sensitivity for precancerous lesions compared to colonoscopy
- Requires annual testing
- Commitment to follow-up colonoscopy if positive

Multitarget Stool DNA (Cologuard)

- Performed every 3 years
- Combines FIT with DNA biomarkers
- 93% sensitivity for cancer
- Approximately 45% sensitivity for advanced adenomas
- About 87% specificity

Cologuard Limitations

- Lower specificity than FIT test = higher false positive rate at 13%
- Requires collection of an entire bowel movement
- Positive findings require follow-up colonoscopy as soon as possible
- Diagnostic uncertainty when colonoscopy is negative after positive test

High-Sensitivity Guaiac-Based FOBT

- Performed annually
- 50-75% sensitivity for cancer
- Only about 10% sensitivity for advanced adenomas

High-Sensitivity Guaiac-Based FOBT Limitations

- Requires 3 stool samples
- There are dietary restrictions
- More difficult to administer than FIT
  - More complex patient instructions
  - Sample more sensitive to handling

Colonoscopy

- Every 10 years for the average patient without findings
- The MOST sensitive test for cancer and adenomas
  - 95% sensitivity for cancer
  - Over 90% sensitivity for adenomas
- Allows simultaneous polyp removal
- Longest interval between screenings

Colonoscopy Limitations

- Requires bowel preparation
- Requires sedation
- Risks for perforation and major bleeding are low
  - < 1% perforation
  - < 1% significant bleeding

CT Colonography (Virtual Colonoscopy)

- Administered every 5 years
- Approximately 90% sensitivity for cancer
- Approximately 86% sensitivity for adenomas >=10mm
- Specificity is about 90%

CT Colonography Limitations

- Requires bowel preparation
- May cause discomfort
- Involves radiation exposure
- May detect extracolonic findings requiring additional workup of uncertain benefit
- Positive findings require follow-up colonoscopy

Flexible Sigmoidoscopy

- Every 5-10 years or every 10 years with annual FIT
- Visualizes only distal colon
- Only about 58-75% sensitivity for cancer
- Few clinicians currently perform this for screening in the US anymore
- Essentially replaced by colonoscopy in clinical practice

DNA Blood-Based Test (Guardant Shield)

- FDA and CMS approved in 2024
- Primary blood test approved for average-risk colorectal cancer screening in the US
- 83% sensitivity for colorectal cancer
- 90% specificity for advanced precancerous lesions
- Second blood test by Freenome not yet FDA approved with similar performance characteristics

DNA Blood-Based Test Limitations

- Sensitivity for advanced precancerous lesions is only 13%
  - Substantially lower than stool-based tests or colonoscopy
- Also shows lower sensitivity for early-stage disease
  - Only 55% sensitivity for stage 1 cancer

DNA Blood-Based Test Limitations

- Positive result requires follow-up colonoscopy
- AGA 2025 clinical practice update
  - A blood test is an "acceptable option" for patients who decline all other forms of screening, but emphasizes it could result in net harm if substituted for established more effective tests

Summary Tiered Approach to Screening Tests

- ACG and US Multi-Society Task Force
  - Tier 1 = Colonoscopy every 10 years or FIT annually
  - Tier 2 – Multitarget stool DNA

Implementation and Adherence

- Current colorectal cancer screening rates in the US are 69%
- National goal is 80%
- Need to address barriers at patient, provider, and system levels

Implementation and Adherence

- Screening is lowest among those
  - **Aged 45-49 years (34%)**
  - Uninsured (24%)
  - Recent immigrants (38%)
  - Household incomes below poverty level (49%)
  - Hispanic, Asian, American Indian/ Alaskan Native (56%)

Barriers to Implementation

- Patient level barriers
  - Lack of knowledge (including regarding insurance coverage)
  - Fear of test results
  - Embarrassment
  - Procrastination
  - Forgetting
  - Perceived lack of personal necessity

Barriers to Implementation

- System level barriers
  - Costs
    - Despite ACA mandate, there may still be cost sharing for follow up colonoscopy after positive stool test
  - Scheduling difficulties
  - Test availability
  - Lack of insurance coverage knowledge
  - Transportation challenges
  - Language barriers

Barriers to Implementation

- Provider level barriers
  - Lack of time
  - Competing demands
  - Insufficient recommendations

Provider Level Interventions Are Effective!

- Physician recommendation is one of the most powerful factors for increasing adherence
- Clinician reminders increase screening by 13%
- In office discussions and mailed letters, especially when signed by the patient's PCP, consistently increase screening uptake

QUESTIONS???