



# Colorectal Cancer Facts, Screening, and What's New

**FIGHT**  
★  
**COLORECTAL CANCER**



Swati G. Patel, MD MS

March 25, 2026





# Disclosures

Olympus America (research support)

Exact Sciences (research support)





# Myths!

Colonoscopy is the best screening option

Colon cancer is an “old person” problem

Colon cancer only affects men

Bleeding isn't a big deal, everyone has hemorrhoids!

I don't need testing if I don't have symptoms

New DNA Blood tests are the way to go!





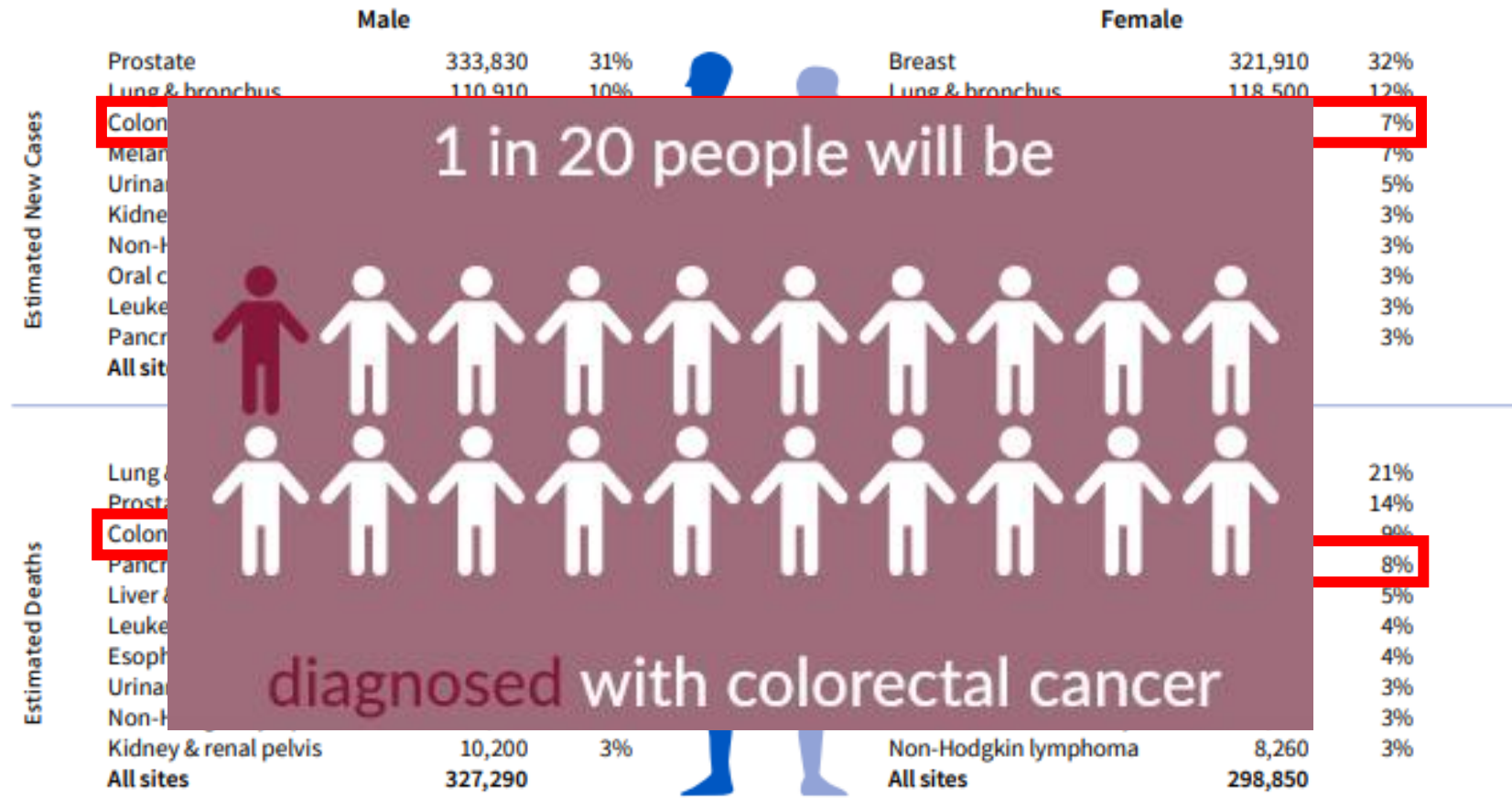
# Objectives

- **Who Gets Colorectal Cancer and How It Develops**
- Colorectal Cancer Screening Options
- Additional Tips for Colorectal Cancer Prevention





Figure 3. Leading Sites of New Cancer Cases and Deaths – 2026 Estimates











Estimates are rounded to the nearest 10 and exclude basal cell and squamous cell skin cancers and in situ carcinoma except urinary bladder. Rank is based on modeled projections and may differ from observed data.

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# Signs & Symptoms of CRC

 <p>Weight loss without trying</p>	 <p>Blood in poop or bleeding from rectum (bottom)</p>	 <p>Pain or cramping in belly</p>	 <p>Change in bowel habits, narrow stools</p>
 <p>Tiredness or weakness</p>	 <p>Feeling full or bloated</p>	 <p>Feeling like bowel doesn't fully empty</p>	 <p>Nausea or vomiting</p>

or **NONE**



# Why Are More Young Americans Getting Colon Cancer?

February 28, 2017 · 10:09 AM ET



## HEALTH

### Chadwick Boseman died from colon cancer and was just 43. What's the risk for young people?

Grace Hauck USA TODAY

Published 3:24 p.m. ET Aug. 29, 2020 | Updated 5:20 p.m. ET Aug. 29, 2020



Lauran Neergaard, Associated Press

Mar. 2, 2017, 10:04 AM 41,304

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1:15 p.m. ET Feb. 28, 2017

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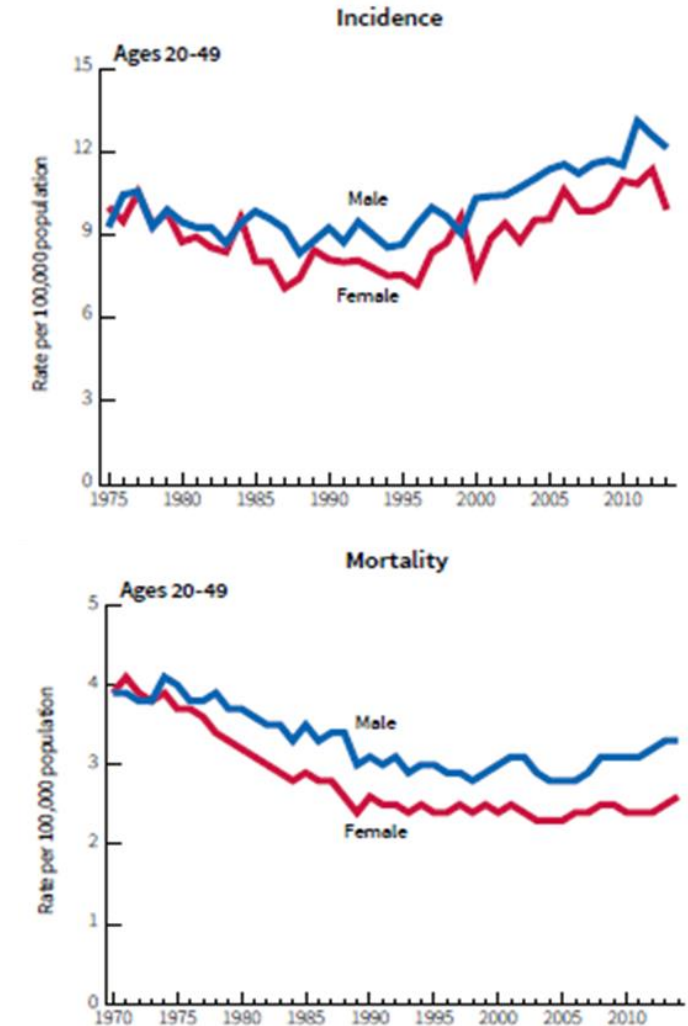
HEALTH

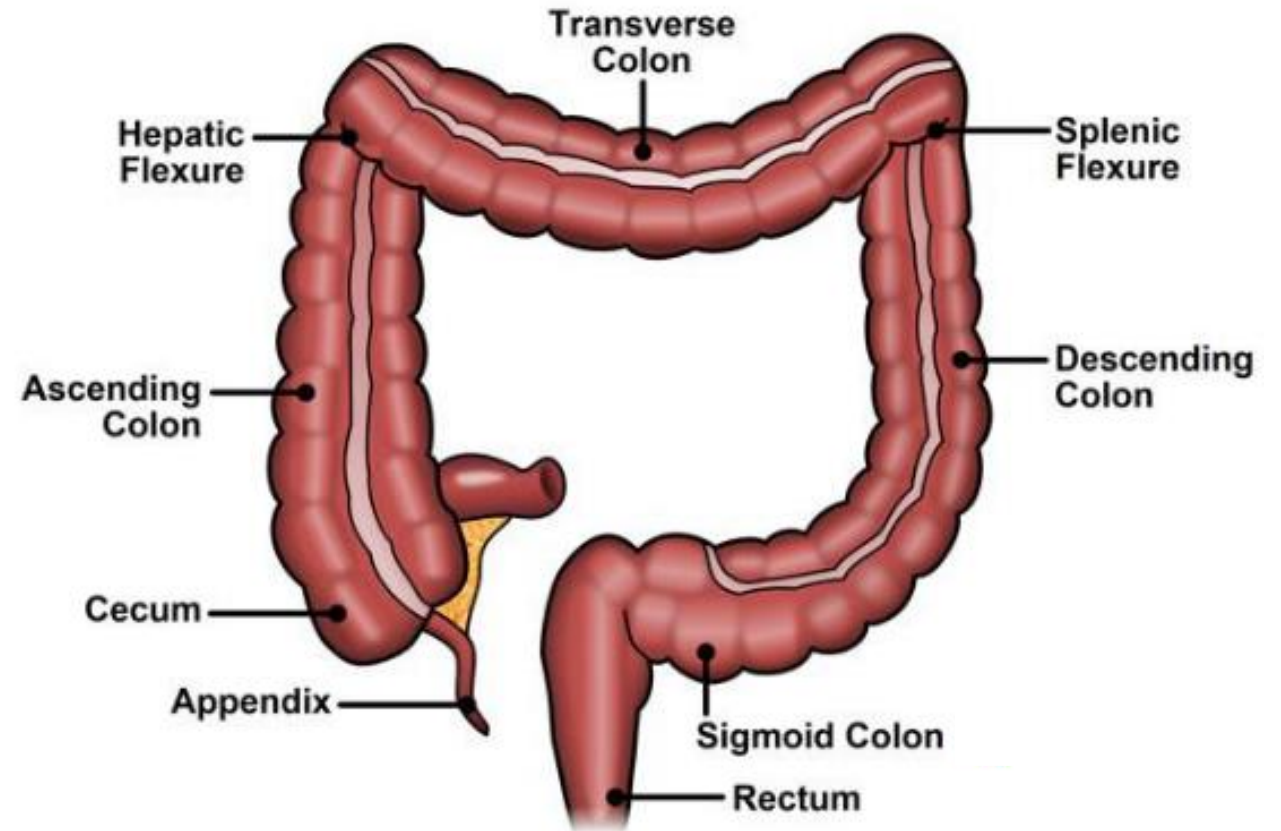
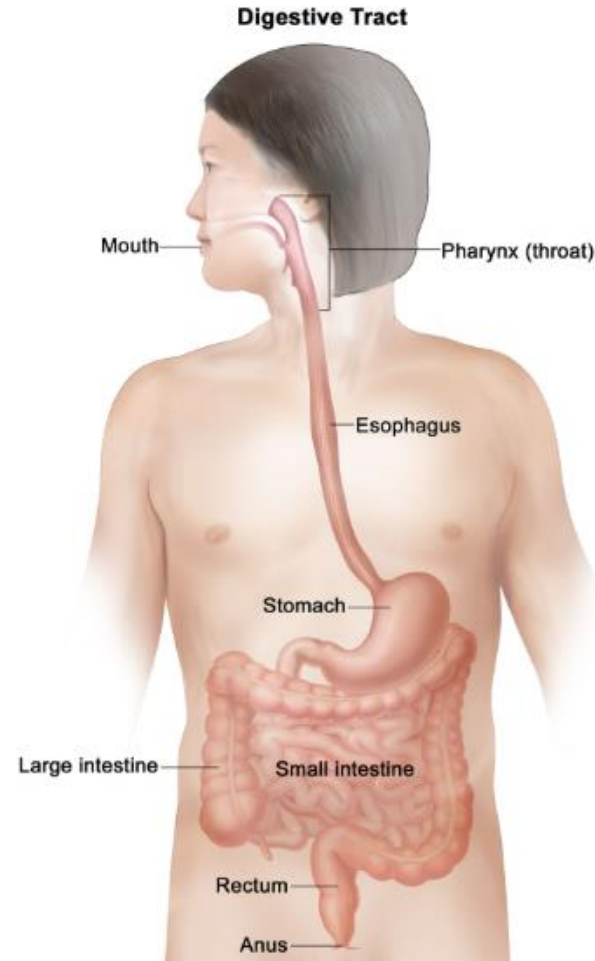
### Colorectal cancer is rising in younger adults. Here's who is most at risk and symptoms to watch for

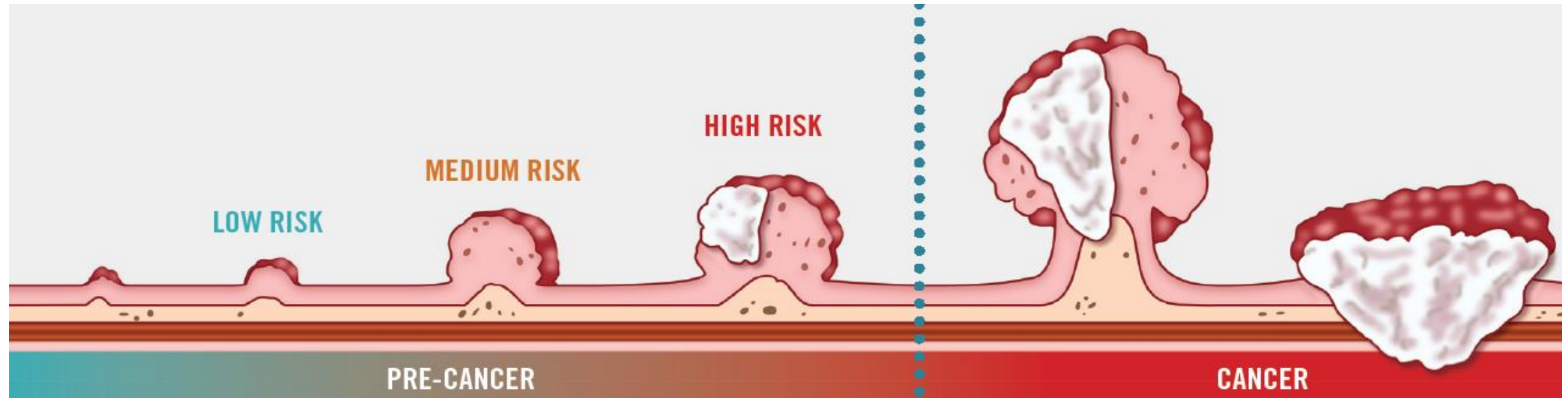


# In those under age 50....

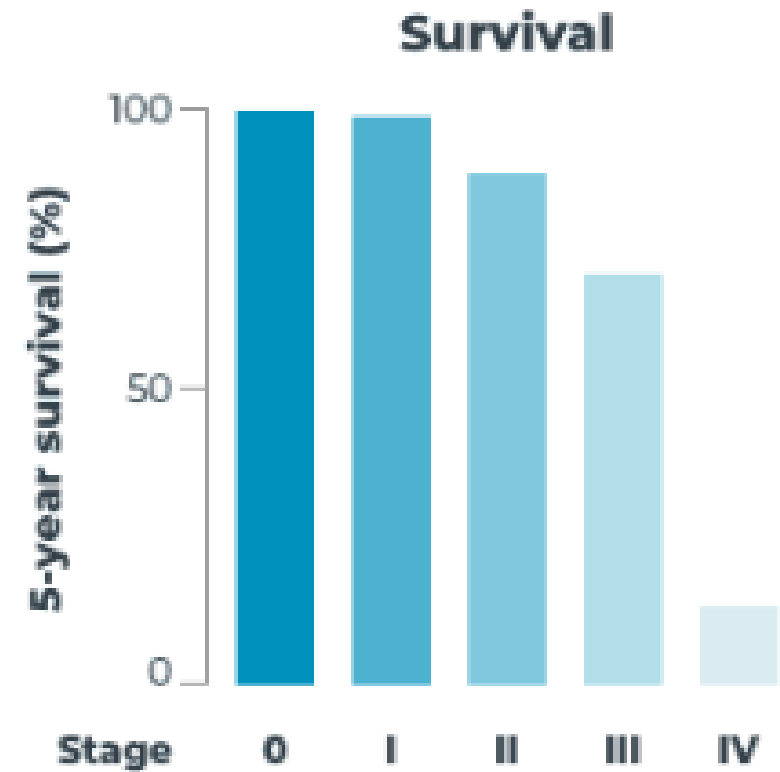
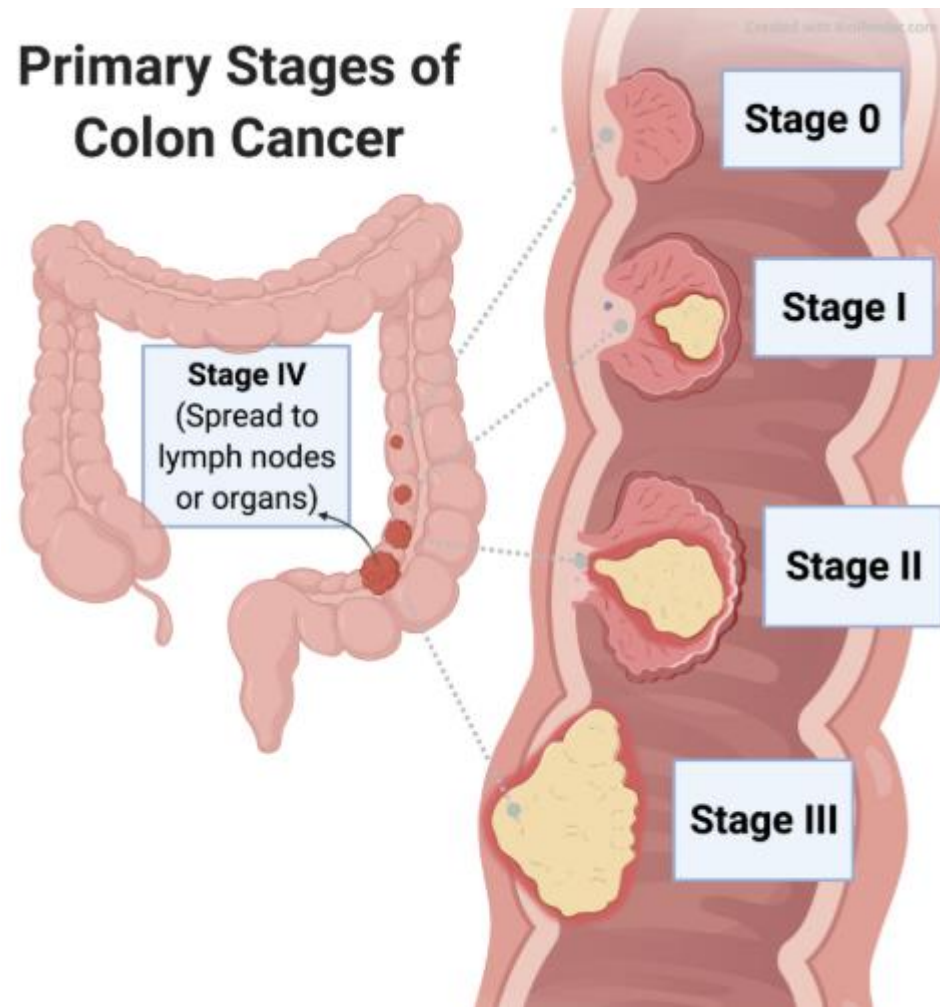
- 2<sup>nd</sup> most common cancer
- LEADING cause of cancer-related death
- By 2030
  - 11% of all colon cancers
  - 23% of all rectal cancers







## Primary Stages of Colon Cancer

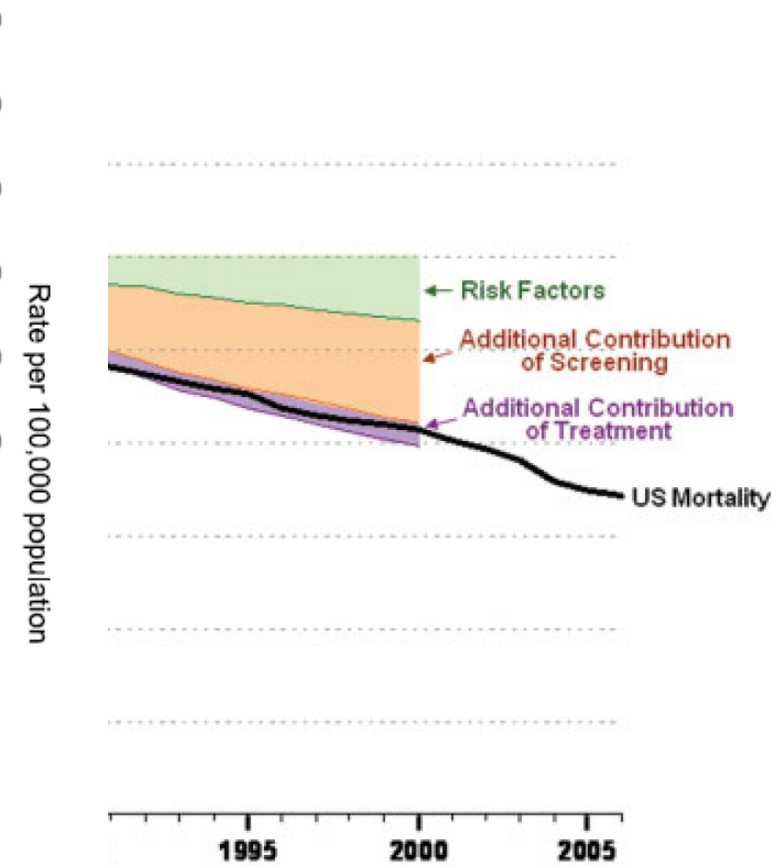
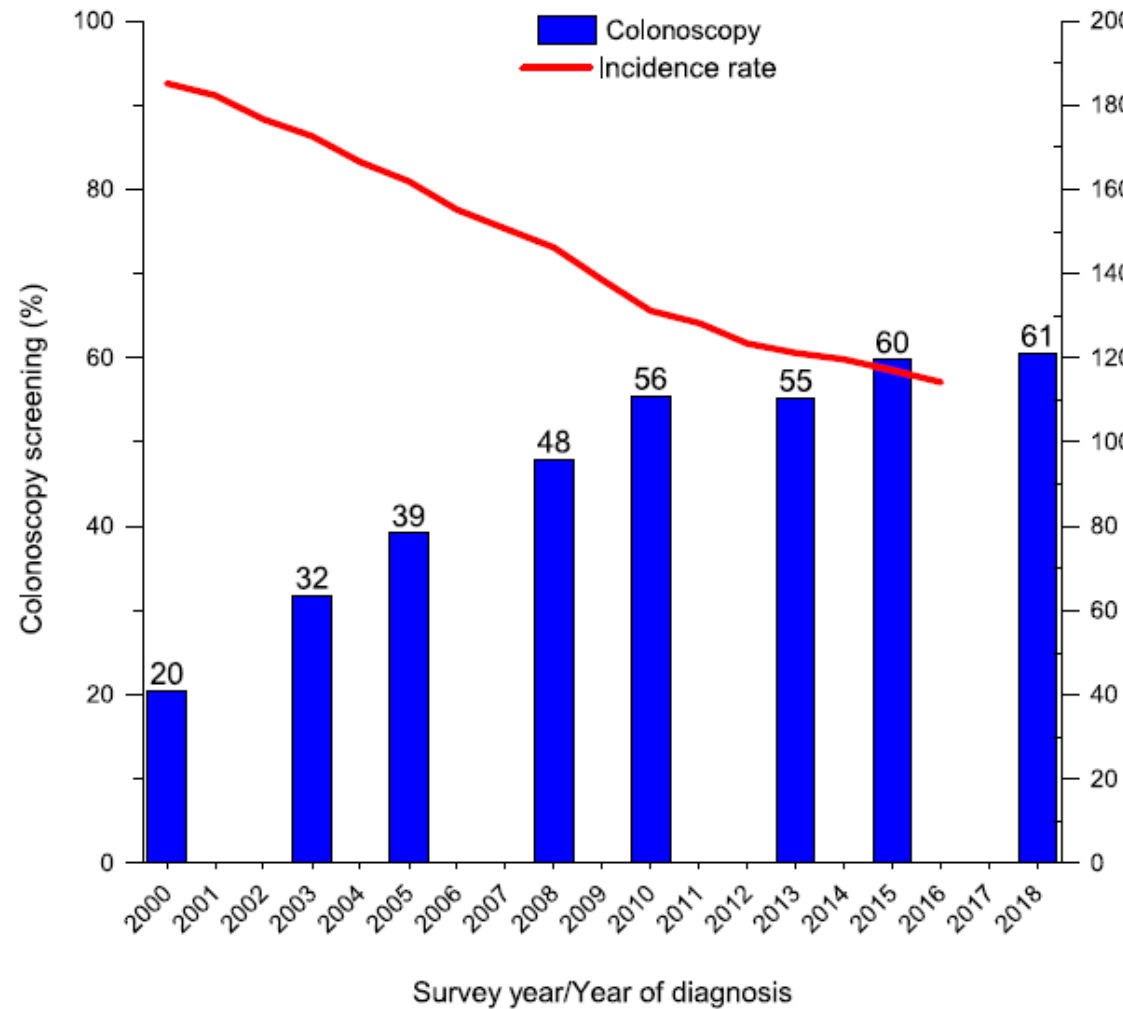
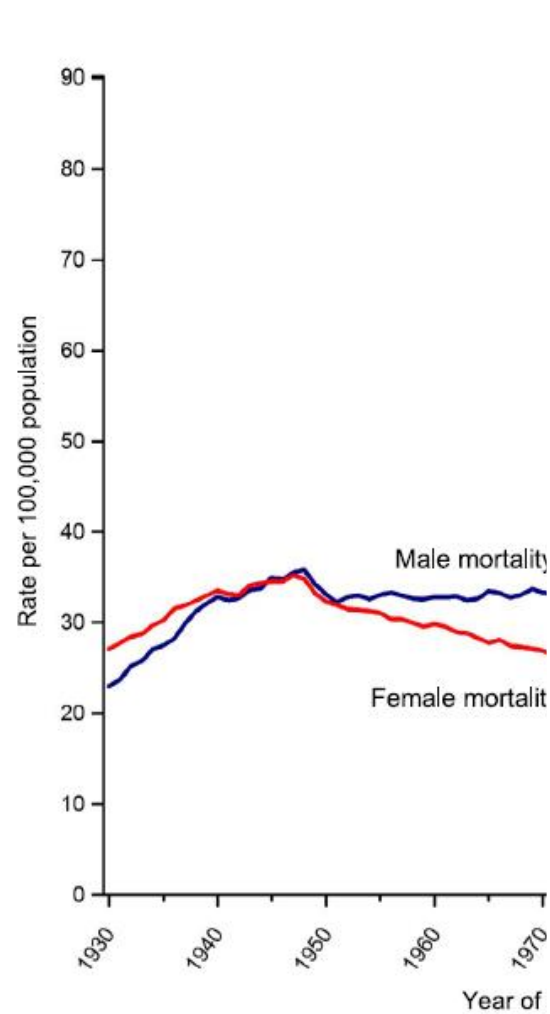




Population	Recommendation	Grade
Adults aged 50 to 75 years	The USPSTF recommends screening for colorectal cancer in all adults aged 50 to 75 years. See the "Practice Considerations" section and Table 1 for details about screening strategies.	<b>A</b>
<u>Adults aged 45 to 49 years</u>	The USPSTF recommends screening for colorectal cancer in adults aged 45 to 49 years. See the "Practice Considerations" section and Table 1 for details about screening strategies.	<b>B</b>
Adults aged 76 to 85 years	The USPSTF recommends that clinicians selectively offer screening for colorectal cancer in adults aged 76 to 85 years. Evidence indicates that the net benefit of screening all persons in this age group is small. In determining whether this service is appropriate in individual cases, patients and clinicians should consider the patient's overall health, prior screening history, and preferences.	<b>C</b>

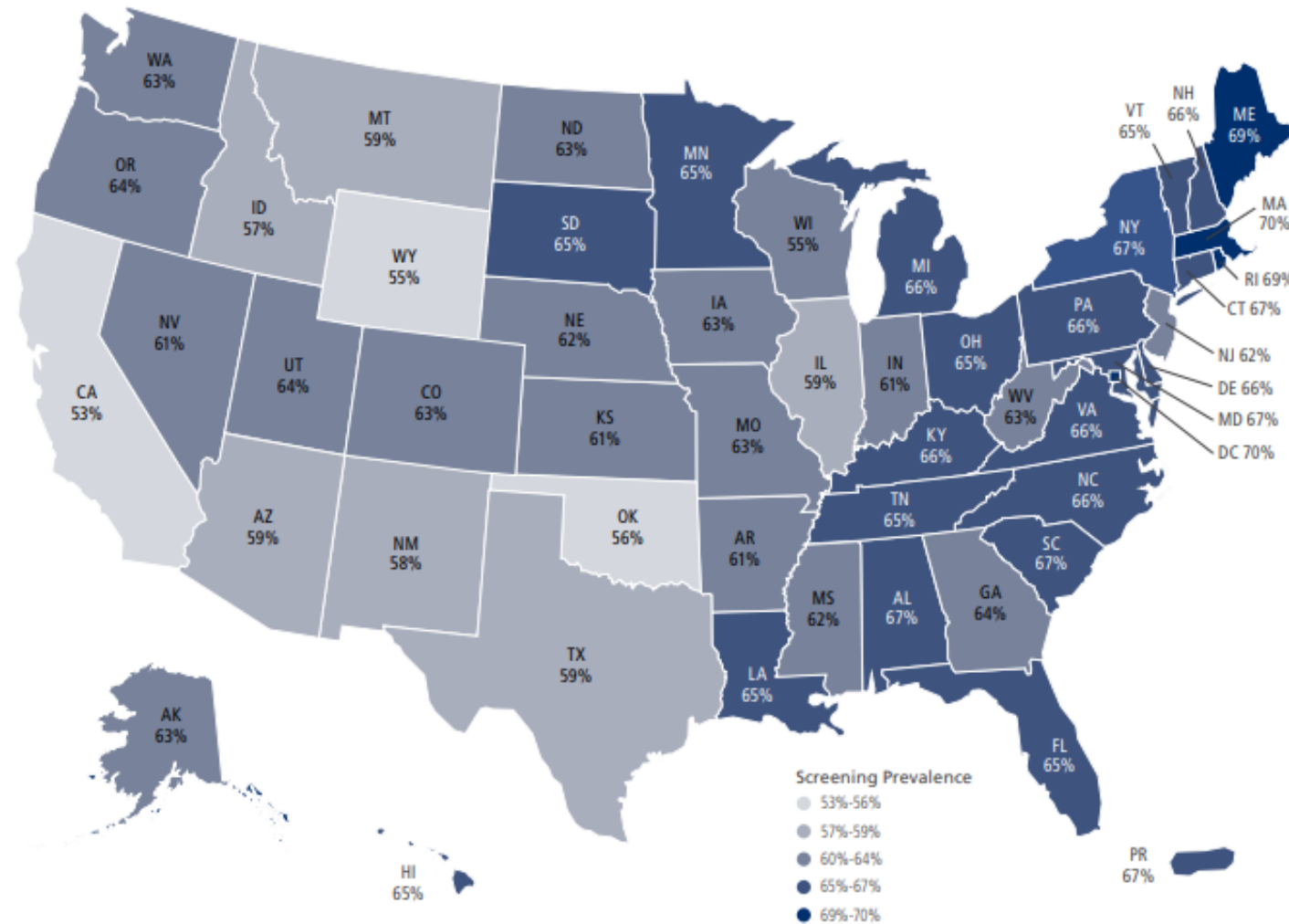
Prepared by: Swati G. Patel, MD, PhD,<sup>1</sup> Colasada P. May, MD, PhD, MPH,<sup>2</sup> Joseph C. Anderson, MD,<sup>5,6</sup> Carol A. Burke, MD,<sup>7</sup> Jason A. Dominitz, MD, MHS,<sup>8</sup> Seth A. Gross, MD,<sup>9</sup> Brian C. Jacobson, MD, MPH,<sup>10</sup> Aasma Shaukat, MD, MPH,<sup>11</sup> and Douglas J. Robertson, MD, MPH<sup>5</sup>







Colorectal Cancer Screening\* (%), Adults 45 Years and Older by State, 2020



Screening Prevalence

- 53%-56%
- 57%-59%
- 60%-64%
- 65%-67%
- 69%-70%

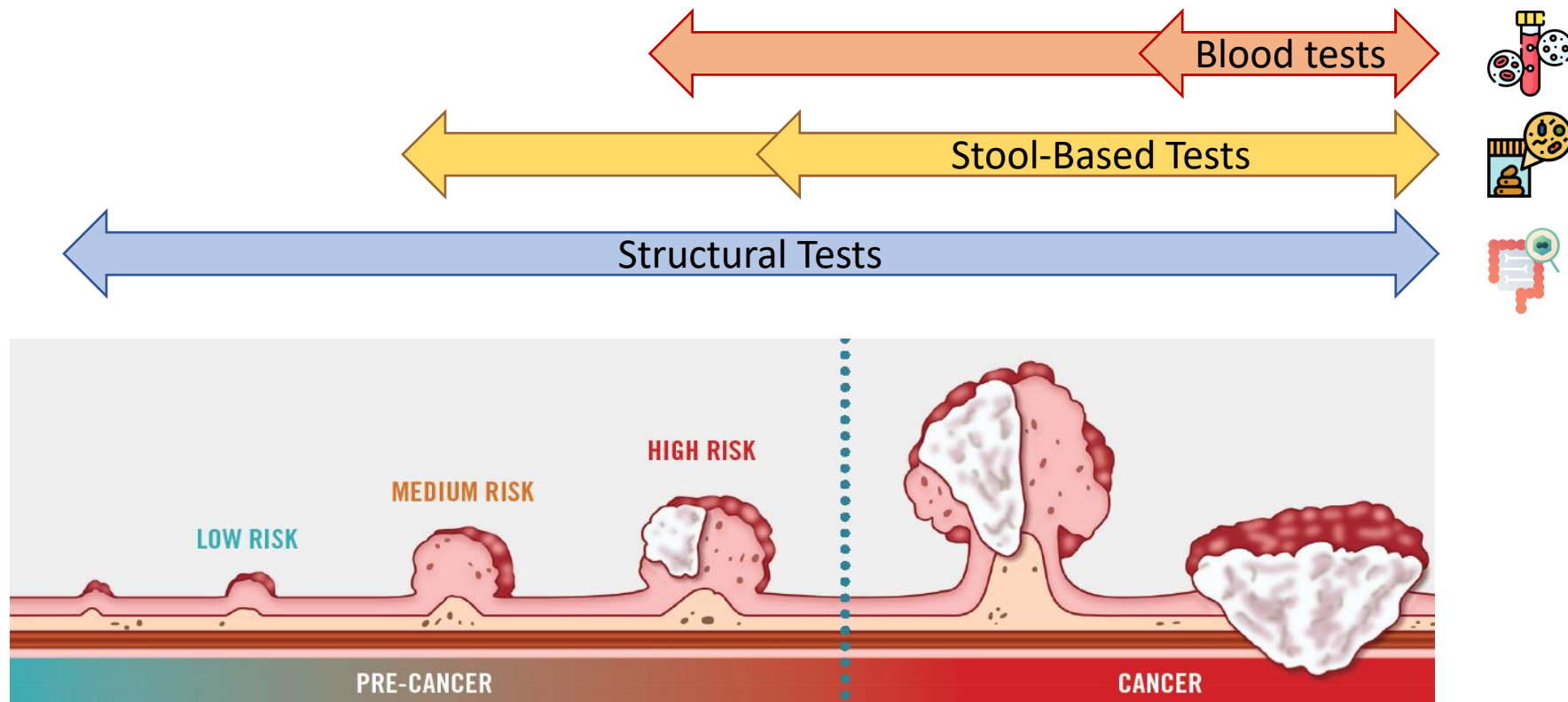




# Objectives

- Who Gets Colorectal Cancer and How It Develops
- **Colorectal Cancer Screening Options**
- Additional Tips for Colorectal Cancer Prevention







## Blood tests

Septin9

Guardant Shield

Freenome  
SimpleScreen

## Stool-based tests

Fecal occult blood testing (FOBT)

Fecal Immunochemical Testing (FIT)

FIT-Fecal DNA/RNA

## Structural Tests

CT Colonography

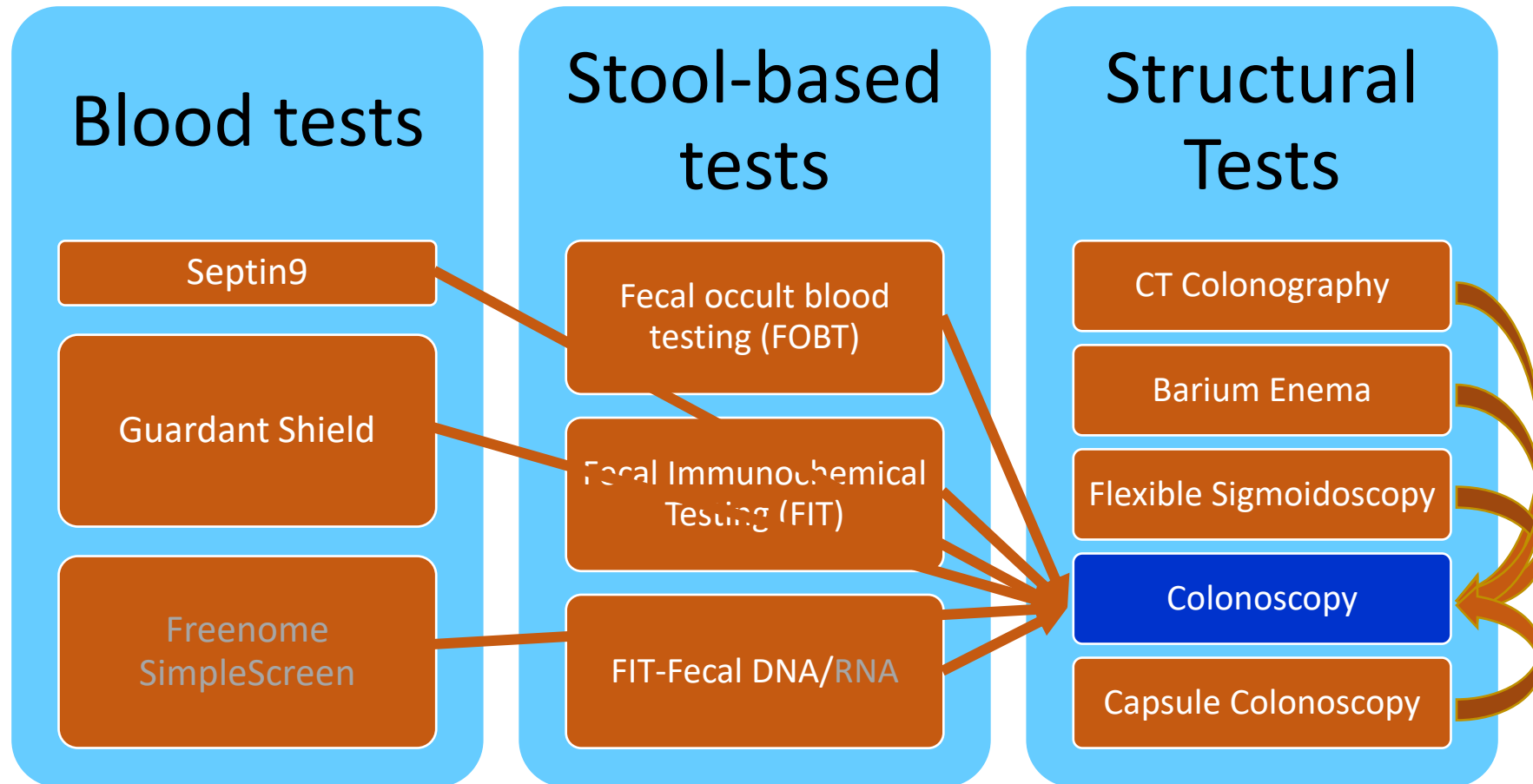
Barium Enema

Flexible Sigmoidoscopy

Colonoscopy

Capsule Colonoscopy

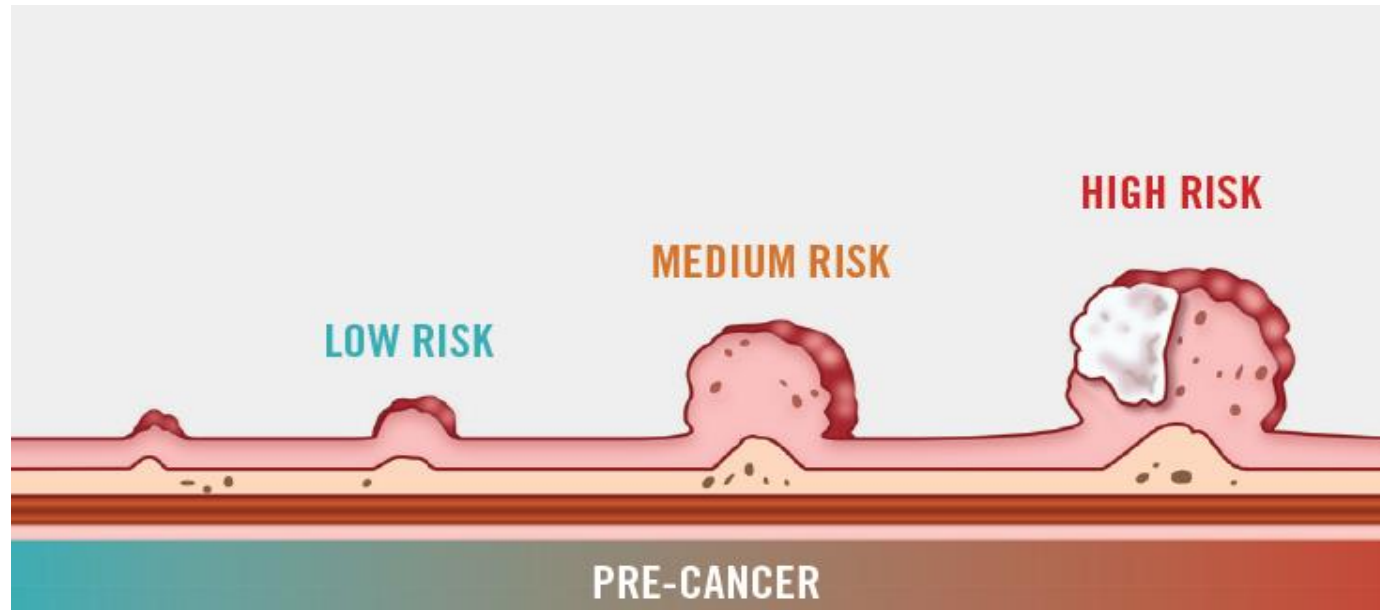




# Colonoscopy

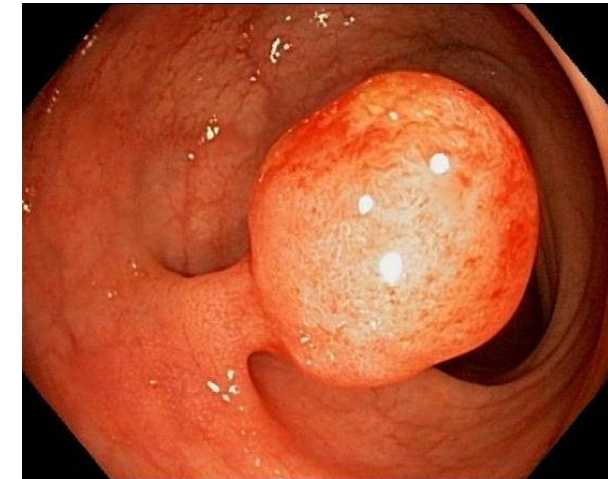
- Requires a bowel preparation to cleanse the colon
  - Clear liquids day before procedure
  - Bowel preparation evening before and day of procedure (split dose)
- Insertion of a flexible scope to visualize the entire rectum and colon
- Sedation given during the procedure, but not required
  - Requires day off life/work
  - Requires escorted transportation
- Can diagnose cancer and perform biopsies
- Can detect and remove potentially pre-cancerous polyps





# Colonoscopy Quality

Excellent prep	Good prep	Fair prep	Poor prep
			
>90% of mucosa seen, mostly liquid stool, <b>minimal suctioning</b> needed for adequate visualization <sup>1</sup>	>90% of mucosa seen, <b>mostly liquid stool</b> , significant suctioning needed for adequate visualization <sup>1</sup>	>90% of mucosa seen, mixture of liquid and semi-solid stool, which <b>could</b> be suctioned and/or washed <sup>1</sup>	<90% of mucosa seen, mixture of semi-solid and solid stool, which <b>could not</b> be suctioned and/or washed <sup>1</sup>





	Detect any cancer	Detect stage I/II cancer	Detect advanced polyps	Specific for cancer/adv polyps	Cost	Adherence
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Colonoscopy	>99%	>95%	95%	89%		
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Patel & Dominitz. Ann Int Med 2024; 177(4):49-64. Yen, Do & Patel. Curr Op Gastro 2026; 42(1):1-13.

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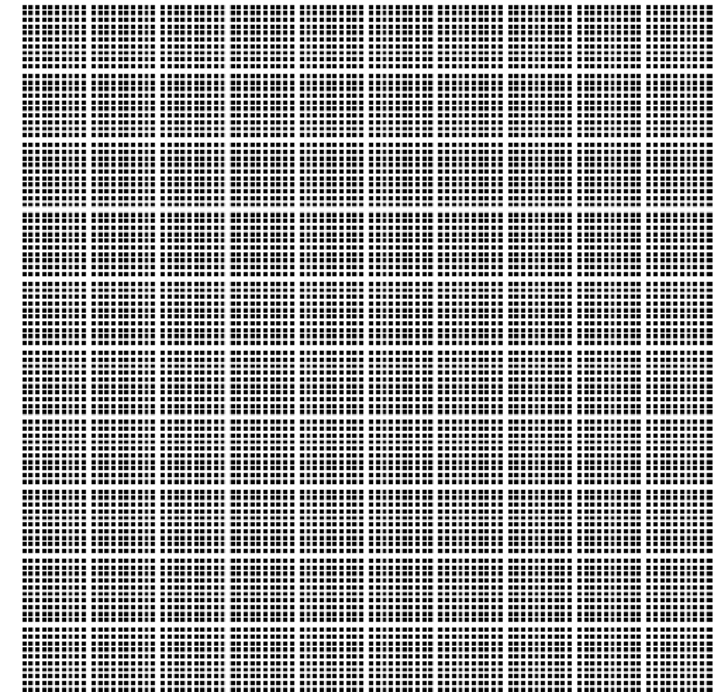
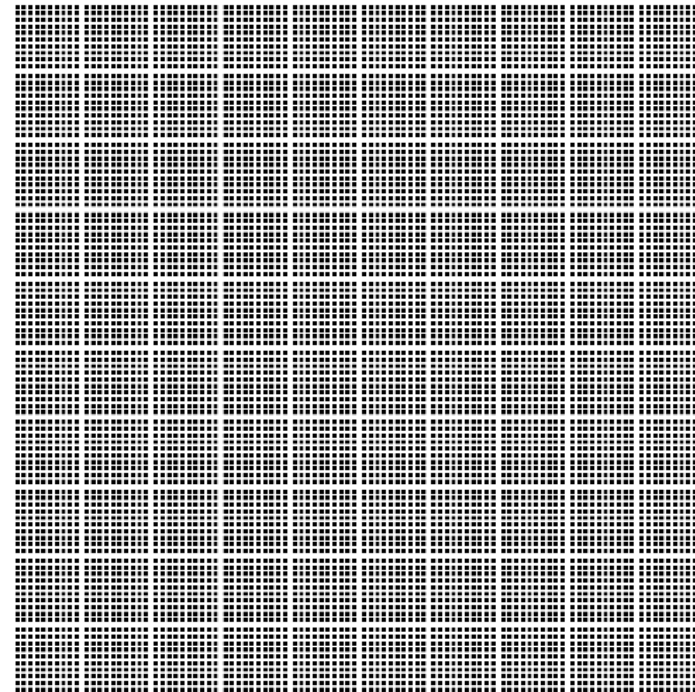
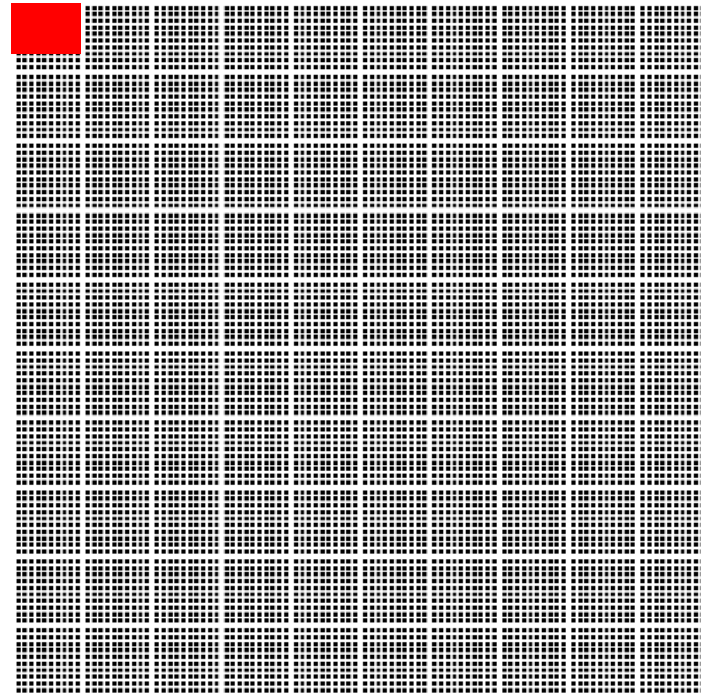
# Colonoscopy Risks

- **Perforation 0.5/1,000**
- **Bleeding 2.6/1,000**
- **Death 2.9/100,000**



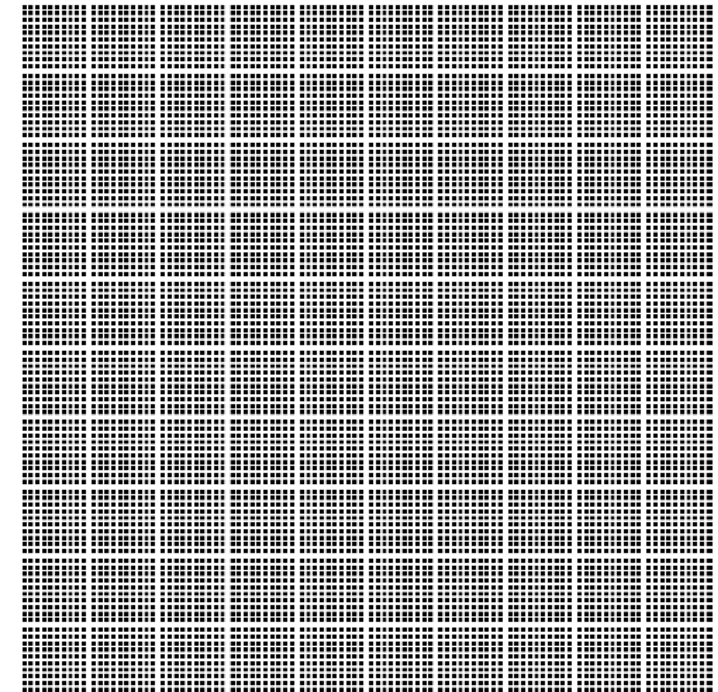
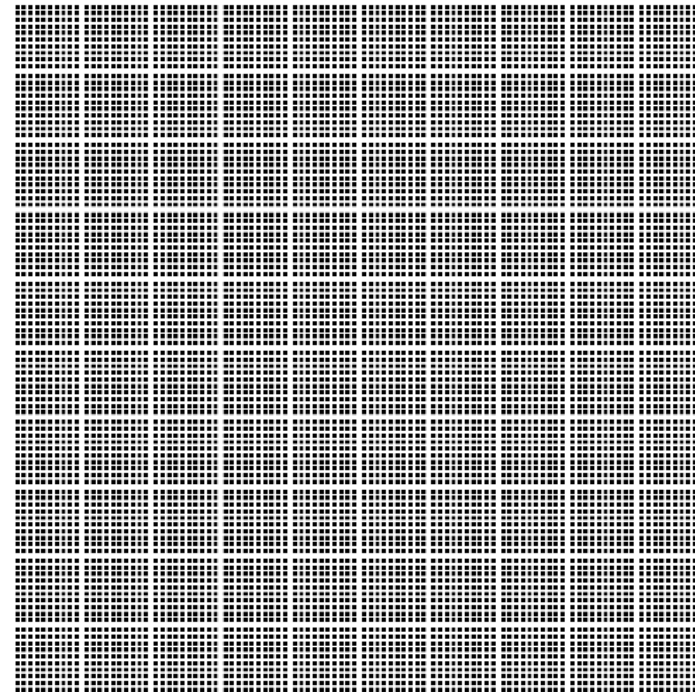
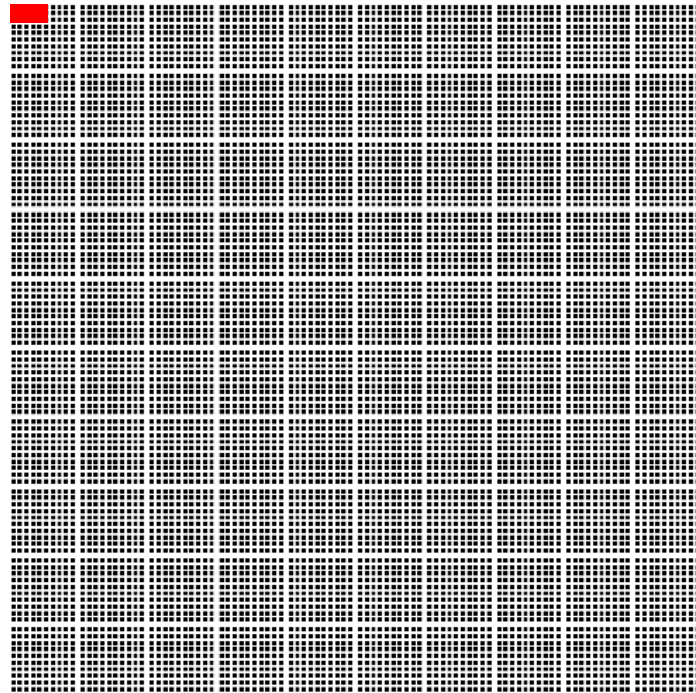


# Bleeding



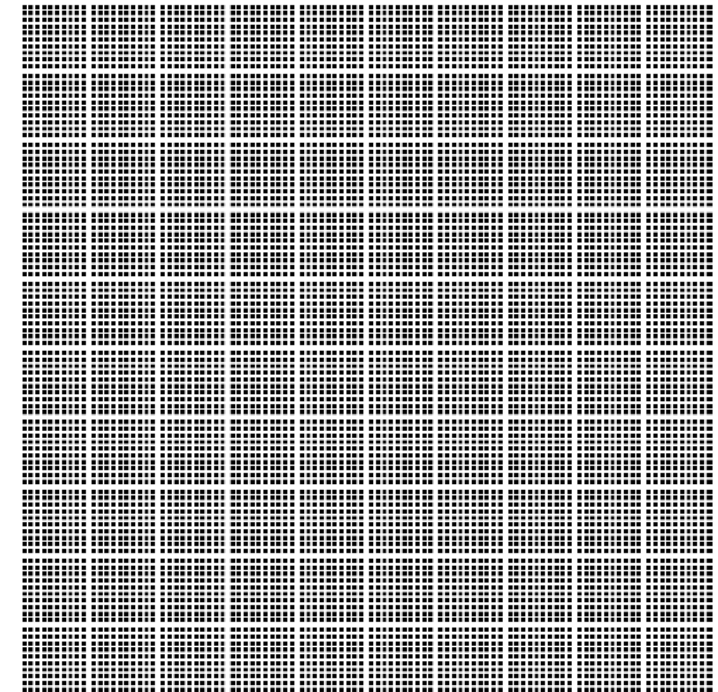
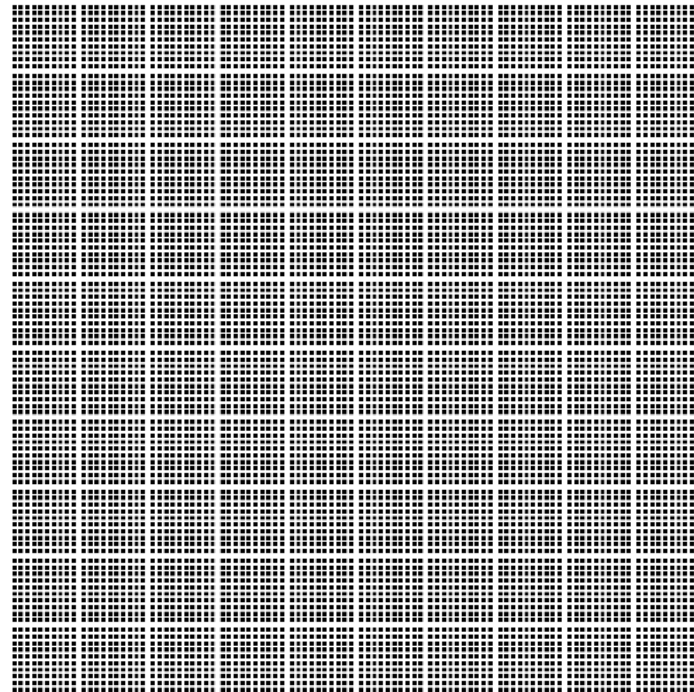
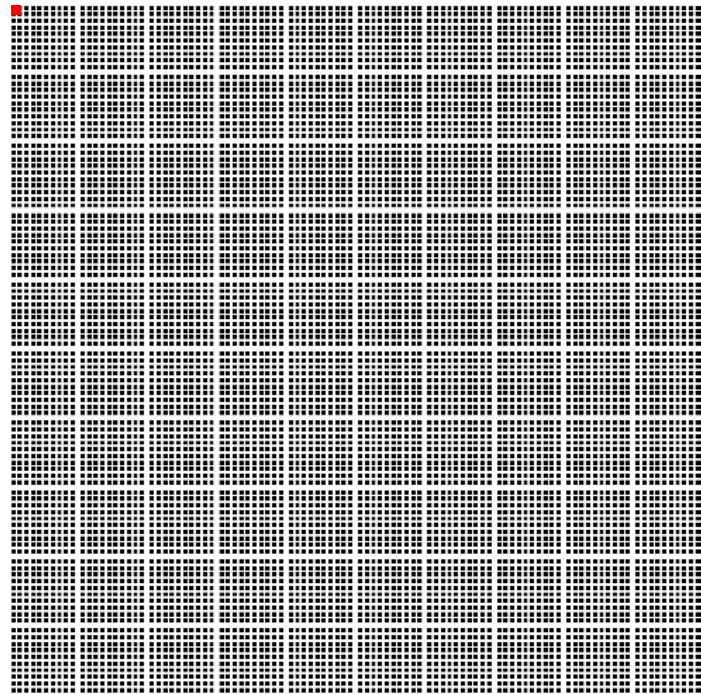


# Perforation



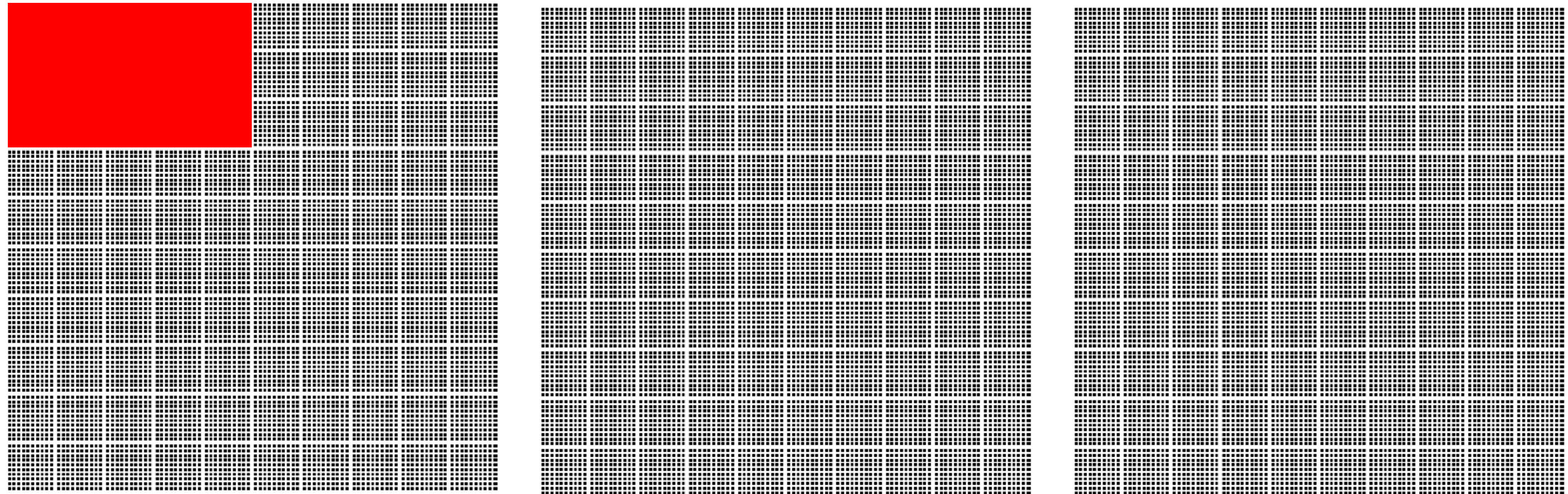


# Death





# Colorectal Cancer



# Colonoscopy



## Advantages

- Can visualize the entire colon
- Diagnose and remove lesions
- Performed every 10 years
- Minimal patient discomfort
- **SINGLE STEP TEST**

## Disadvantages

- Invasive, procedural risks
- Sedation required
- Time consuming, expensive
- Full bowel preparation
- Operator, preparation dependent



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Guardant Shield

Freenome  
SimpleScreen

## Stool-based tests

Fecal occult blood testing (FOBT)

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FIT-Fecal DNA/RNA

## Structural Tests

CT Colonography

Barium Enema

Flexible Sigmoidoscopy

Colonoscopy

Capsule Colonoscopy



## FOBT

- Three successive smears
- Non-specific (human vs non-human hemoglobin; location in GIT), qualitative
- Dietary (red meat, poultry, fish, raw vegetables) & medication restriction (NSAIDs)
- Annual testing



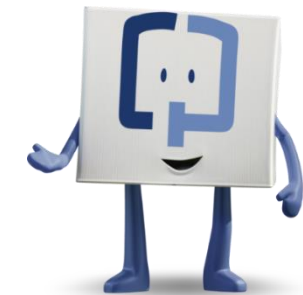
## FIT

- Measures intact human globin protein, quantitative
- No restrictions
- Single sample
- Annual testing



## Stool FIT+DNA

- FIT
- KRAS mutations, aberrant NDRG4 and BMP3 methylation, B-actin
- Every 3 years





	Detect any cancer	Detect stage I/II cancer	Detect advanced polyps	Specific for cancer/adv polyps
FIT	81%	73%	28%	94%
MT-sDNA I	92%	93%	42%	89%
MT-sDNA II	94%	93%	43%	91%
Stool RNA	94%	100%	46%	88%
Colonoscopy	>99%	>95%	95%	89%





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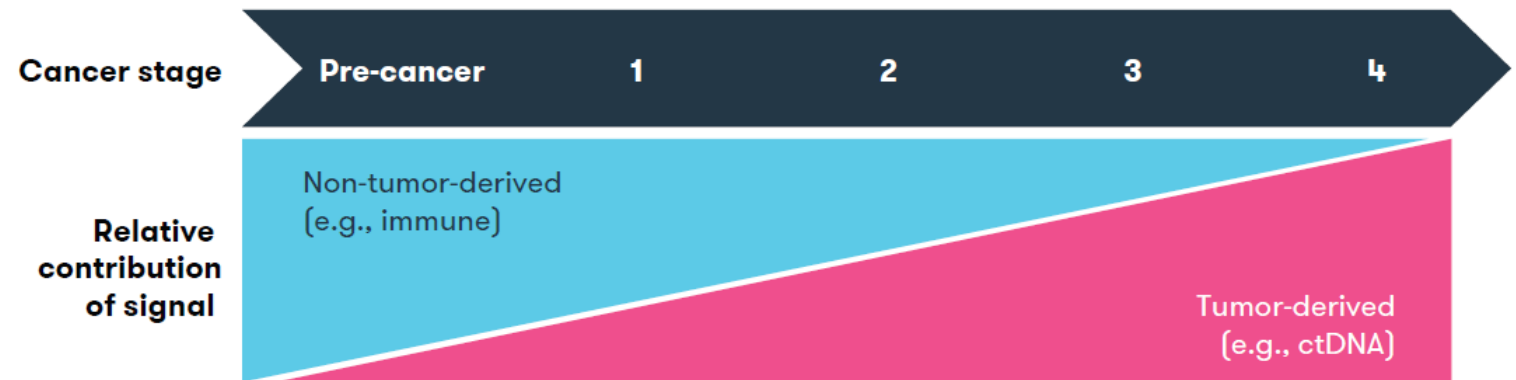
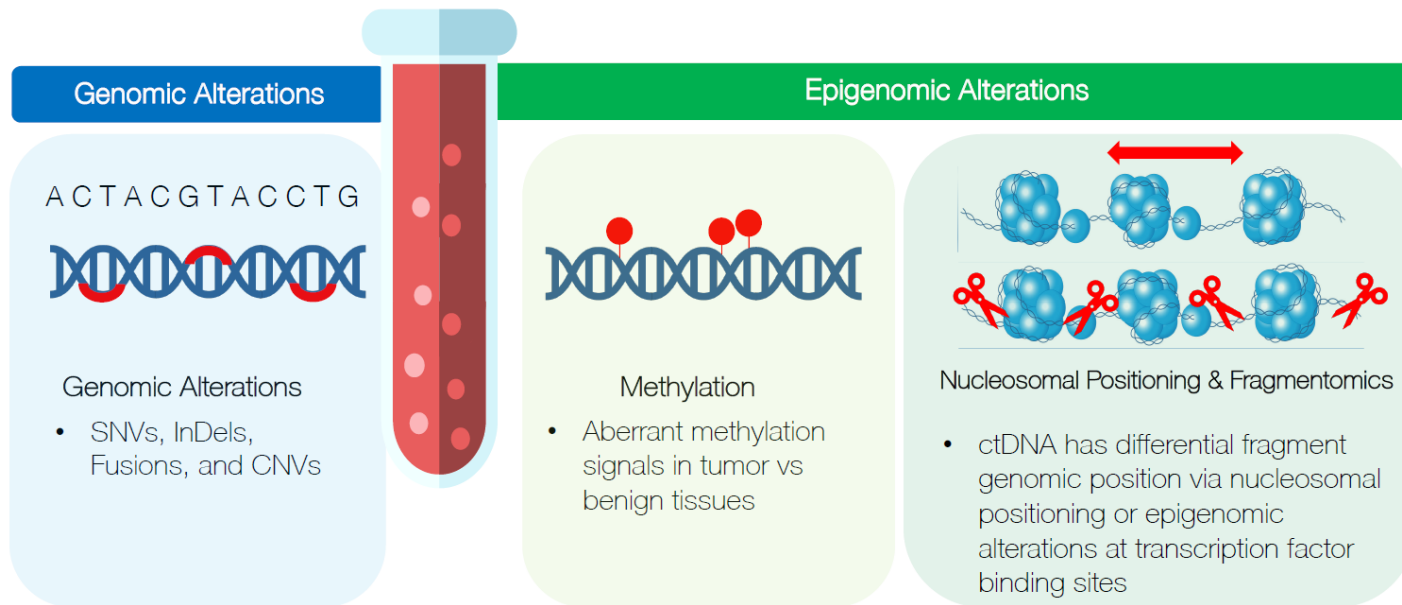
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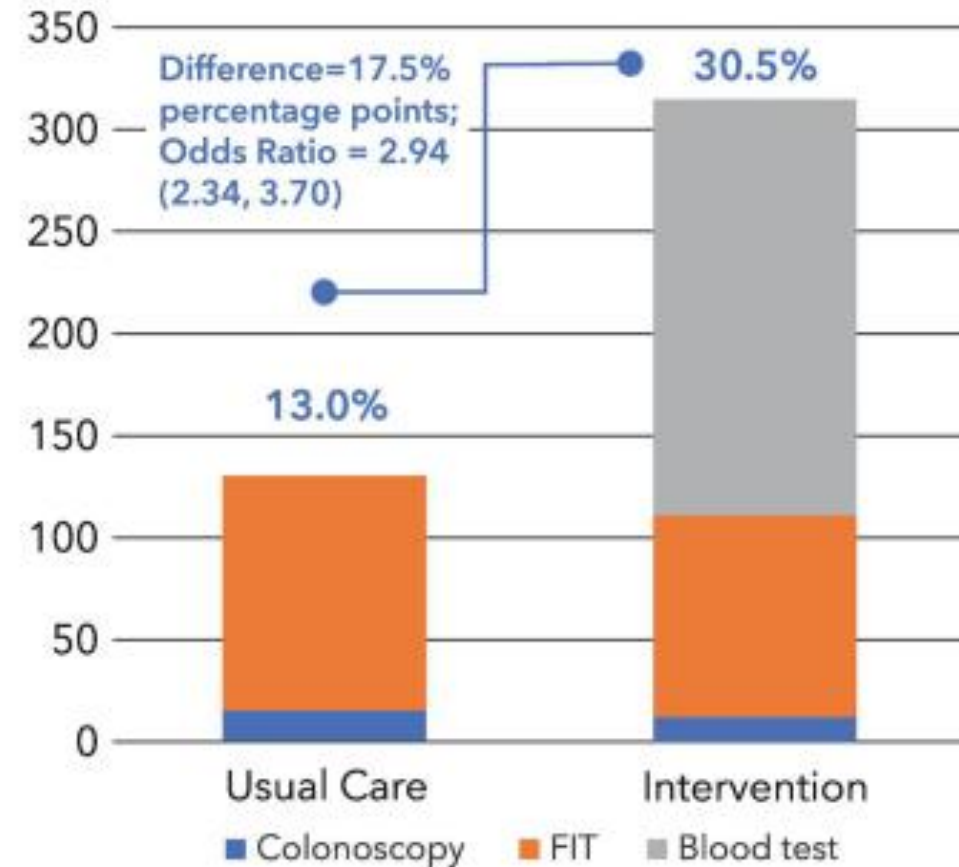
Capsule Colonoscopy







- 45-75 y/o
- Offered FIT in prior 3-9 mo
- Did not complete screening





	Detect any cancer	Detect stage I/II cancer	Detect advanced polyps	Specific for cancer/adv polyps
Septin-9	68%	35%	22%	80%
Guardant SHIELD	83%	65%	13%	90%
Freenome SimpleScreen	79%	57%	12%	92%
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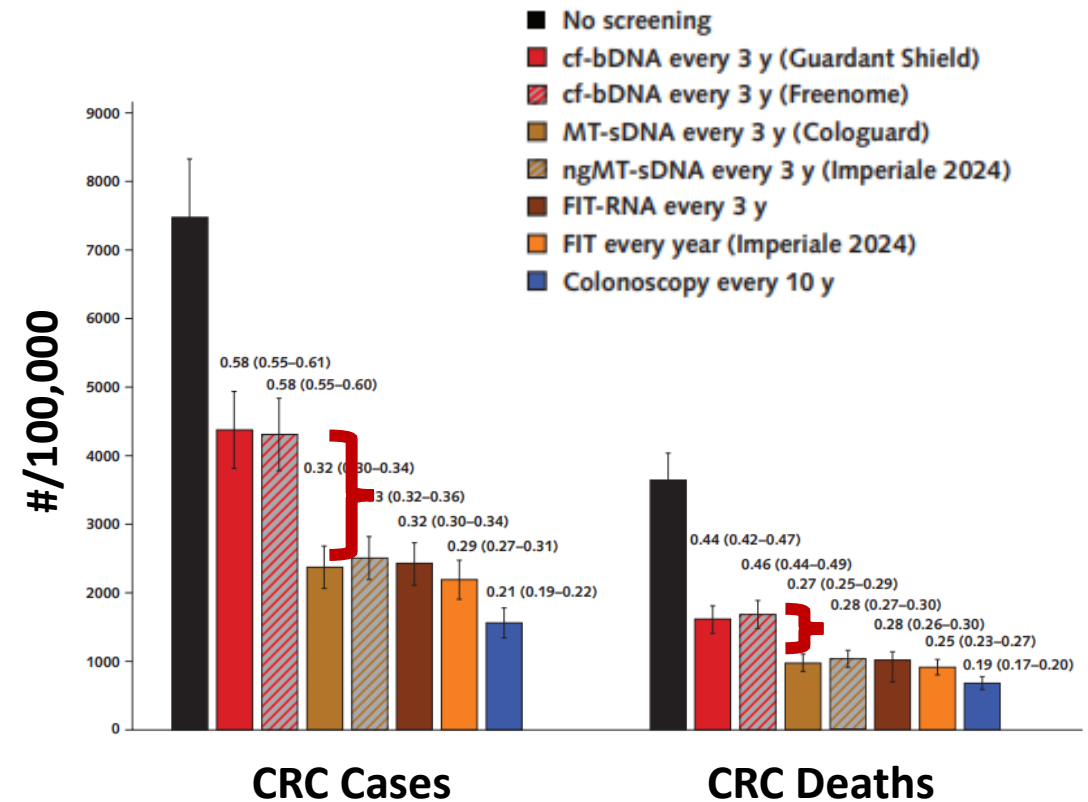


# Blood-Based Colorectal Cancer Screening The Illusion of Simplicity and the Cancer Prevention Paradox

Jason A. Dominitz, MD, MHS; Swati G. Patel, MD; David A. Lieberman, MD

Although the **convenience** and **simplicity** of a blood-based test may result in **greater participation** in CRC screening, substitution for proven, albeit more inconvenient, CRC screening tests like colonoscopy or stool-based tests could paradoxically come at the cost of **increased CRC incidence and mortality**.

On the other hand, if blood-based tests are completed in individuals who would **otherwise not complete** any screening, **CRC deaths could be averted**.








Which is the *best* test?





	Detect any cancer	Detect stage I/II cancer	Detect advanced polyps	Specific for cancer/adv polyps	Cost	Adherence
 Septin-9	68%	35%	22%	80%		
Guardant SHIELD	83%	65%	13%	90%	\$1495	Good?
Freenome SimpleScreen	79%	57%	12%	92%		
FIT	81%	73%	28%	94%	\$18-40	60-80%
 MT-sDNA I	92%	93%	42%	89%	\$509-681	70-80%
MT-sDNA II	94%	93%	43%	91%	\$509-681	70-80%
Stool RNA	94%	100%	46%	88%	?	?
 Colonoscopy	>99%	>95%	95%	89%	\$1000-1800	50%

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	Detect any cancer	Detect stage I/II cancer	Detect advanced polyps	Specific for cancer/adv polyps	Cost	Adherence
Septin-9	68%	35%	22%	80%		
Guardant SHIELD					1495	Good?
Freenome SimpleScreen						
FIT					40	60-80%
MT-sDNA I					681	70-80%
MT-sDNA II					681	70-80%
Stool RNA						?
Colonoscopy					100-1800	50%



**Bottom Line**

- ❖ Screening works
- ❖ First line tests are stool-based tests or colonoscopy
- ❖ Only do blood test *if* completely refuse stool/colonoscopy as first step AND willing to do colonoscopy if abnormal

Patel & Dominitz. Ann Int Med 2024; 177(4):49-64. Yen, Do & Patel. Curr Op Gastro 2026; 42(1):1-13.  
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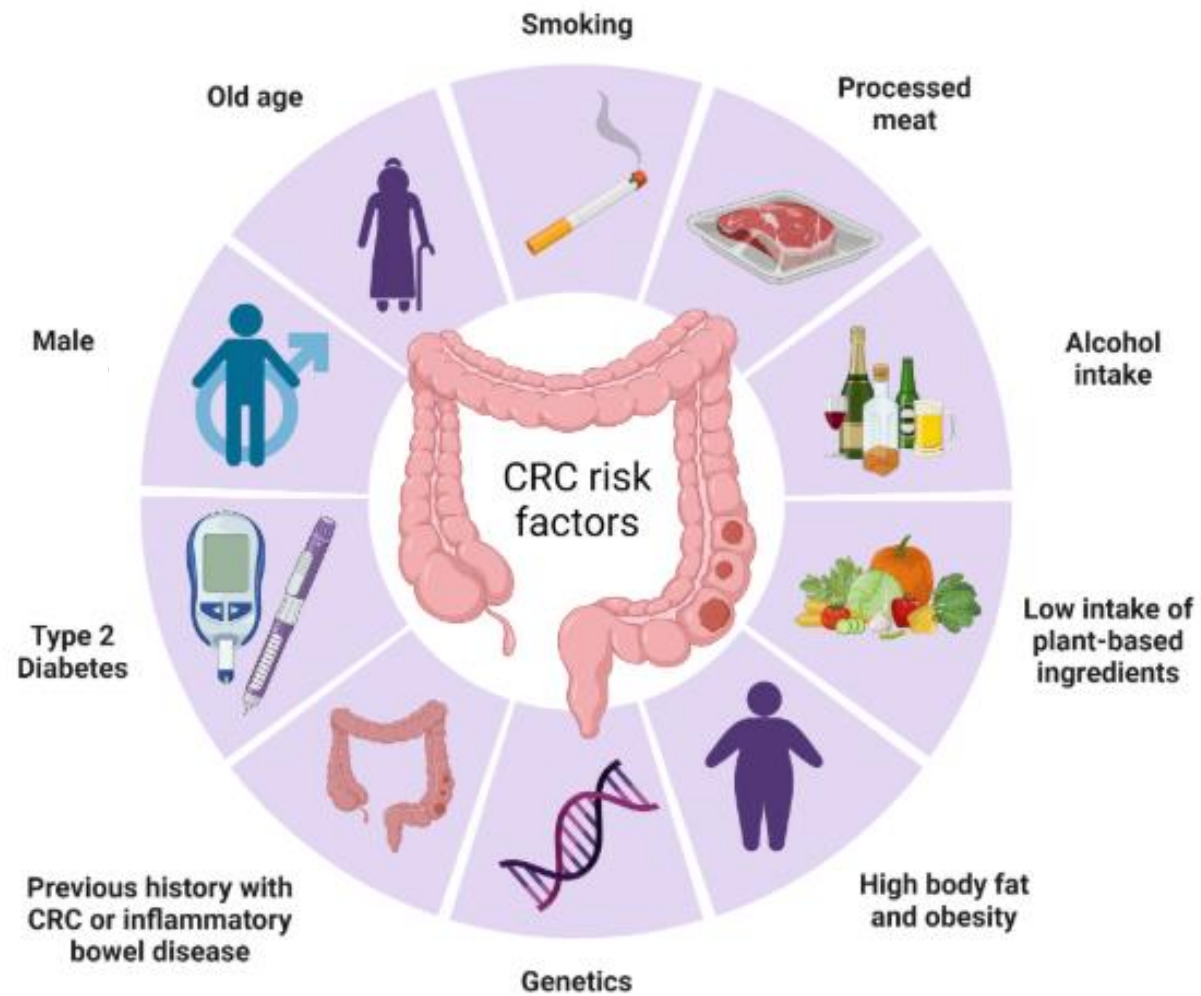


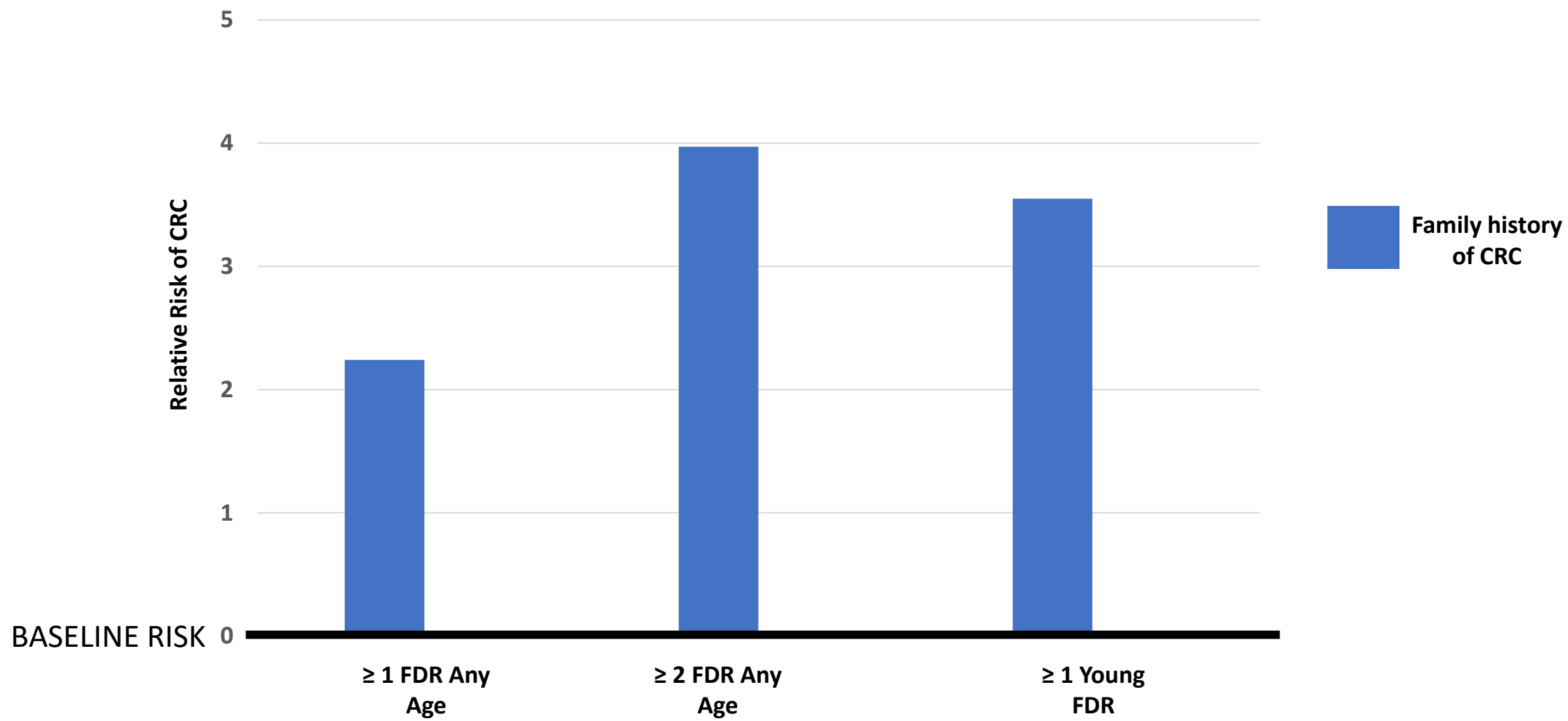


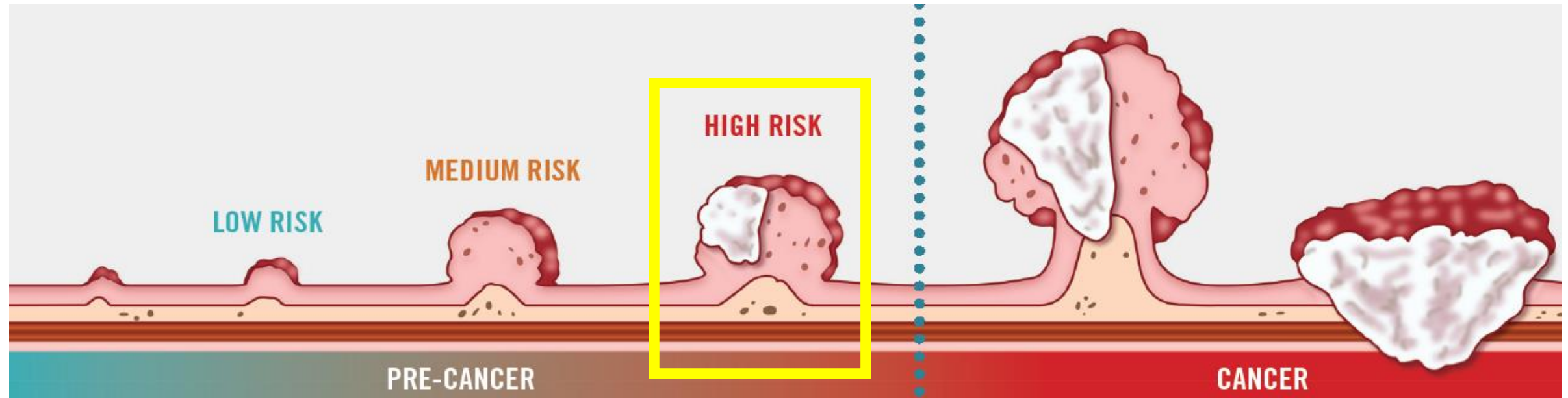
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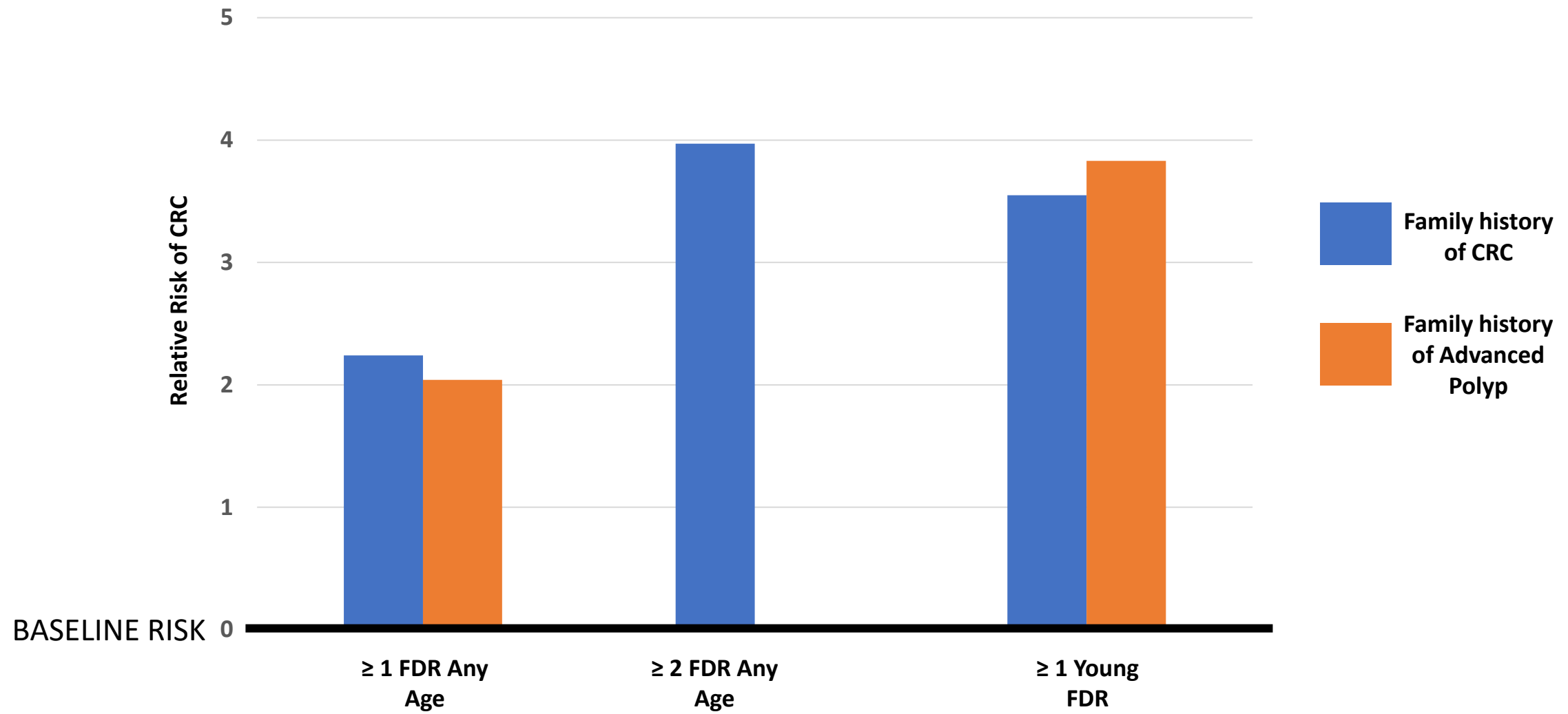




Table 5. MSTF recommendations for persons with high-risk family histories not associated with polyp syndromes

Family history	Recommended screening	
	US-MSTF (2017)	NCCN (2025)
≥ 1 FDR CRC <60	Colo @ 40/-10, q5y	Colo @ 40/-10, q5y
≥ 2 FDR CRC any age	Colo @ 40/-10, q5y	Colo @ 40/-10, q5y
1 FDR CRC ≥60	Any test @ 40, av risk int	Colo @ 40/-10, q5y



National Comprehensive Cancer

NCCN Guidelines Version 1.2024  
Colorectal Cancer Screening

[NCCN Guidelines Index](#)  
[Table of Contents](#)

	US-MSTF (2017)	NCCN (2025)
FDR with advanced polyp	Colo @ 40/-10, q5y	Colo @ 40 or age of polyp dx

Second- and third-degree relatives with CRC at any age

Colonoscopy beginning at age 45 y<sup>ddd</sup>

Repeat every 10 y or if positive, repeat per colonoscopy findings

First-degree relative with confirmed advanced adenoma(s) (ie, high-grade dysplasia, ≥1 cm, villous or tubulovillous histology, TSA), or advanced SSPs/SSLs (≥1 cm, any dysplasia) at any age<sup>eee,iii,iii</sup>

Colonoscopy beginning at age 40 y or at age of onset of adenoma in relative, whichever is first

Repeat every 5–10 y<sup>fff,999</sup> or if positive, repeat per colonoscopy findings





# Myths!

**BEST IS THE ONE THAT GETS DONE**

Colonoscopy is the best screening test

**INCREASING IN YOUNG FOLKS**

Colon cancer is an "old person" disease

**AFFECTS US ALL**

Colon cancer only affects African Americans

Bleeding is a big deal, everyone has hemorrhoids!

**BLEEDING = RED FLAG**

**CAN BE ASYMPTOMATIC/SILENT**

I don't need testing if I don't have symptoms

**STOOL AND COLONOSCOPY BEST**

New DNA stool tests are the way to go





# Final thoughts

- CRC is common and lethal, but screening is effective at finding CRC at preventable/curable stages
- Talk to family about cancer and polyp history
- Bring symptoms to medical attention immediately
- Best time to talk to your doctor about CRC risk is moment you meet them!





PATIENTS & CAREGIVERS

ABOUT COLORECTAL CANCER

OUR PROGRAMS

GET INVOLVED

English



COLORECTAL CANCER FACTS YOUR RISK & PREVENTION TIPS SCREENING & EARLY DETECTION

DONATE NOW

## Colorectal Cancer Facts



### WHAT IS COLORECTAL CANCER?

Colorectal cancer starts in the colon or rectum. Many cases begin as polyps that can be removed before they turn into cancer, which is why early detection is so critical.



### STATISTICS

Colorectal cancer statistics reveal the urgency of our work. Learn the data points that drive Fight CRC's focus on prevention, research, and early detection.



### HOW COLORECTAL CANCER DEVELOPS

CRC develops when a polyp in the colon or rectum starts to change and becomes cancerous. Removing polyps during screening is one of the most effective ways to stop cancer before it starts.

