Updates in GI

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Disclosures
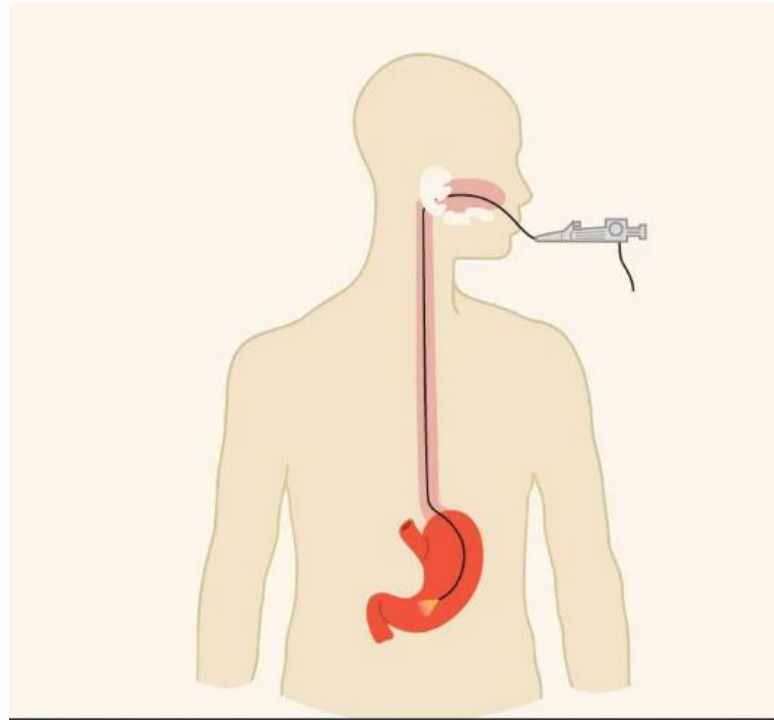
▶ none

Overview

Updates in Gastrointestinal Cancer Screening

Health Maintenance in Inflammatory Bowel Disease

Gastrointestinal Malignancies

General Cancer Prevention

- Tobacco cessation
  - Decreases risk
    - Pancreatic cancer (3x risk)
    - Esophageal cancer (squamous cell carcinoma)
    - Stomach cancer
    - Colon cancer
- Limit alcohol
  - Moderation
  - Decreases risk of pancreatic cancer, esophageal cancer (squamous cell carcinoma), liver cancer

American Cancer Society

- Weight loss
  - Obesity increases risk all GI cancers
- Exercise
  - Decreases colon cancer risk by 20%
    - Needs to be atleast 3x/week with atleast HR > 100 bpm
- Diet
  - Higher in fruits and vegetables is better
  - Red meat considered a carcinogen by WHO
  - Coffee decreases liver and colon cancer
    - If too hot can increase risk of esophageal squamous cell carcinoma
  - Mediterranean diet ideal

Cancer Incidence, 2024

Male

	Estimated New Cases	
Prostate	299,010	29%
Lung & bronchus	116,310	11%
Colon & rectum	81,540	8%
Urinary bladder	63,070	6%
Melanoma of the skin	59,170	6%
Kidney & renal pelvis	52,380	5%
Non-Hodgkin lymphoma	44,590	4%
Oral cavity & pharynx	41,510	4%
Leukemia	36,450	4%
Pancreas	34,530	3%
All sites	1,029,080	

Female

	Estimated New Cases	
Breast	310,720	32%
Lung & bronchus	118,270	12%
Colon & rectum	71,270	7%
Uterine corpus	67,880	7%
Melanoma of the skin	41,470	4%
Non-Hodgkin lymphoma	36,030	4%
Pancreas	31,910	3%
Thyroid	31,520	3%
Kidney & renal pelvis	29,230	3%
Leukemia	26,320	3%
All sites	972,060	

American Cancer Society

Estimated Cancer Deaths

Male				Female		
Lung & bronchus	65,790	20%		Lung & bronchus	59,280	21%
Prostate	35,250	11%		Breast	42,250	15%
Colon & rectum	28,700	9%		Pancreas	24,480	8%
Pancreas	27,270	8%		Colon & rectum	24,310	8%
Liver & intrahepatic bile duct	19,120	6%		Uterine corpus	13,250	5%
Leukemia	13,640	4%		Ovary	12,740	4%
Esophagus	12,880	4%		Liver & intrahepatic bile duct	10,720	4%
Urinary bladder	12,290	4%		Leukemia	10,030	3%
Non-Hodgkin lymphoma	11,780	4%		Non-Hodgkin lymphoma	8,360	3%
Brain & other nervous system	10,690	3%		Brain & other nervous system	8,070	3%
All sites	322,800			All sites	288,920	

Estimated Deaths

American Cancer Society

Red Flag Symptoms

- Unexplained weight loss
- Difficulty swallowing
- Early Satiety
- Evidence of bleeding or unexplained iron deficiency anemia
- New or increasing abdominal pain
- Change in bowel habits
- Abnormal labs (eg liver enzymes)

Clinical Case 2/2024

35-year-old female who presented to clinic for progressive dysphagia for about 3 months. She had become increasingly intolerant to any oral intake and lost about 70 pounds over this time. She was actually seen by another office and found to have severe anemia requiring blood transfusion and was acutely referred to the ER where she was discharged after a blood transfusion. Endoscopy was scheduled.
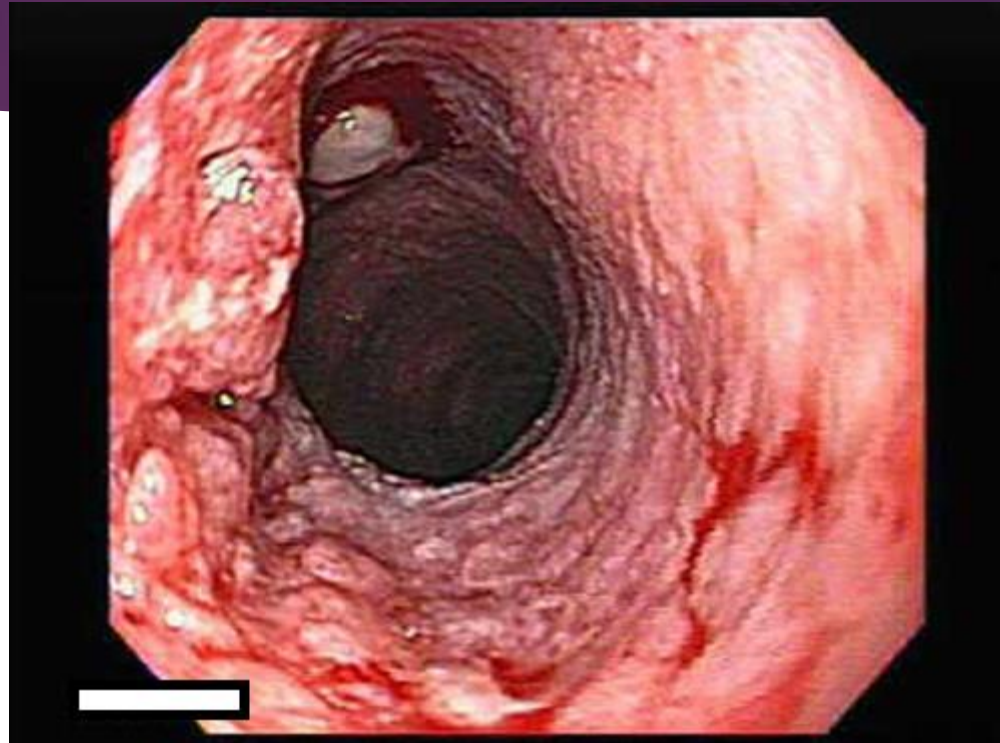
▶ EGD revealed an obstructive, circumferentially infiltrative esophageal mass starting at the mid esophagus with inability to advance scope

Esophageal Cancer

- Squamous Cell Carcinoma
  - Rare in the US – most often related to smoking, achalasia, ingestions
- Adenocarcinoma
  - Increasing in the US, usually arises from Barrett's esophagus

American Cancer Society

Barrett's Esophagus

In order to understand Barrett's esophagus, it is useful to understand the normal appearance of the esophagus. In the normal esophagus, the tissue lining appears pale pink and smooth. These flat square cells, called "squamous" (Latin for square) cells, make up the normal lining of the esophagus. See **Images 1 and 2**.
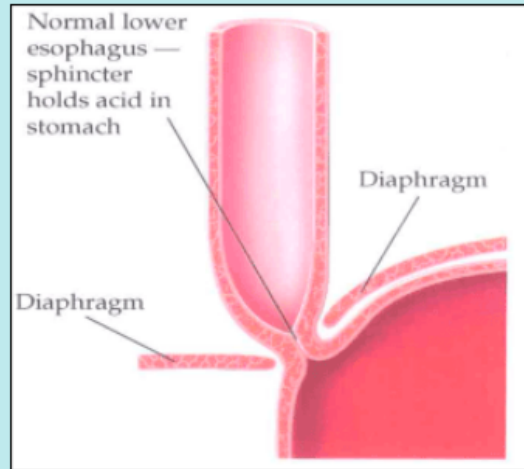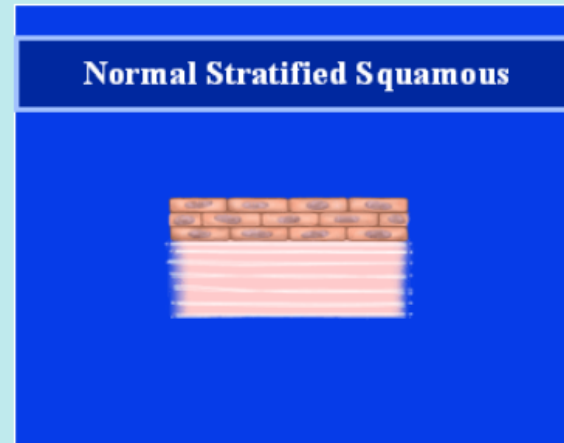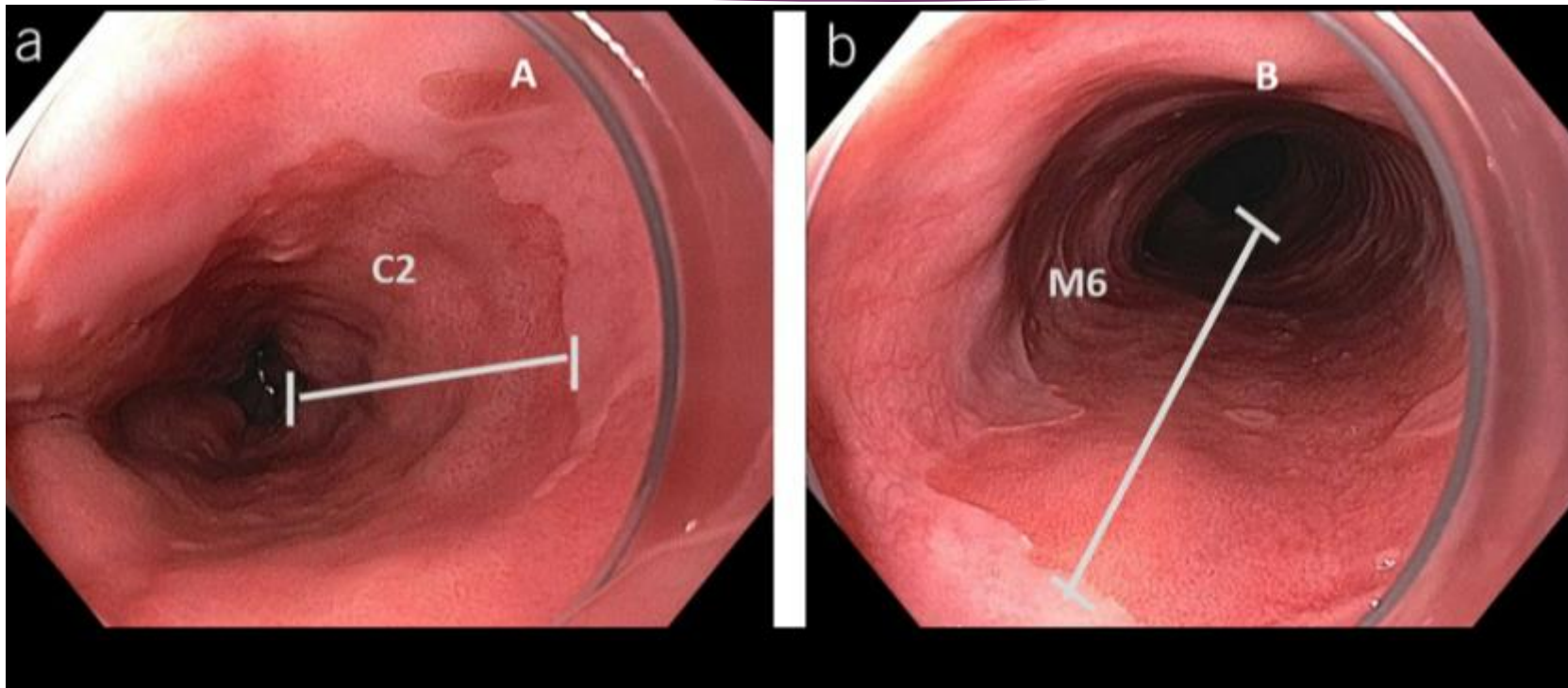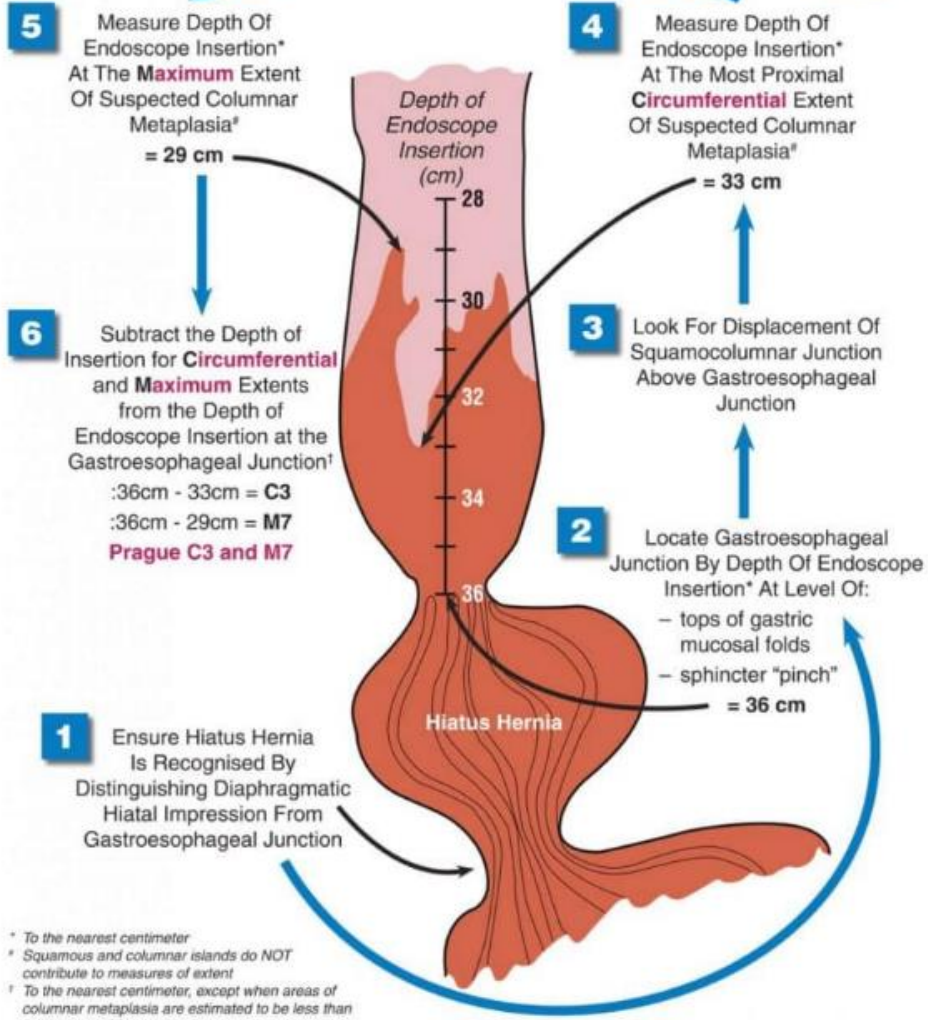
Image 1

Image 2

In contrast, Barrett's esophagus is a salmon-colored lining in the esophagus, made up of cells that are similar to cells found in the small intestine and are called "specialized intestinal metaplasia."

Barrett's Esophagus

Screening for Barrett's Esophagus

- Suggest a single screening for patients with chronic GERD symptoms and 3 or more additional risk factors for Barrett's Esophagus
  - Male sex
  - Age >50 years
  - White race
  - Tobacco smoking
  - Obesity
  - Family history of Barrett's Esophagus or Esophageal Adenocarcinoma in a first-degree relative
- Screening can be performed by endoscopy or swallowed device*

Clinical Case 7/2022

- 72 yo AAF presenting to clinic with ongoing dull abdominal aching for the last several months. Pain is worsened with eating but always present. She has lost about 12 lbs over that time. Labwork unremarkable with normal Hgb. Endoscopy was scheduled

EGD revealed large, 6cm deep cratered ulcer in the mid body of the stomach, biopsies positive for gastric adenocarcinoma

Gastric Cancer

- Overall trends are decreasing in the United States

- Likely due to modifiable risk factors:

  - More knowledge about H pylori and antibiotics

  - Decrease in tobacco use

  - Improvements in food refrigeration

- Second most common type of cancer death worldwide

American Cancer Society

Risk Factors for Gastric Cancer

	Risk estimates (95% CI)	
	Noncardia cancer	**Cardia cancer**
H pylori infection	RR 2.97 (2.34-3.77)	RR .99 (.72-1.35)
Cigarette smoking	RR 1.60 (1.41-1.80)	RR 1.87 (1.31-2.67)
Alcohol	RR 1.07 (.91-1.26)	RR .94 (.78-1.13)
Obesity (BMI > 30)	RR 1.26 (.89-1.78)	RR 2.06 (1.63-2.61)
Vegetables	RR .75 (.59-.95)	RR .63 (.50-.79)
Fruit	RR .61 (.44-.84)	RR .58 (.38-.89)
High salt intake	OR 2.05 (1.60-2.62)	
Family history of gastric cancer	OR 2.82 (1.83-4.46)	
Intestinal metaplasia	RR 6.4 (2.6-16.1)*	

Proposed Screening for Gastric Cancer
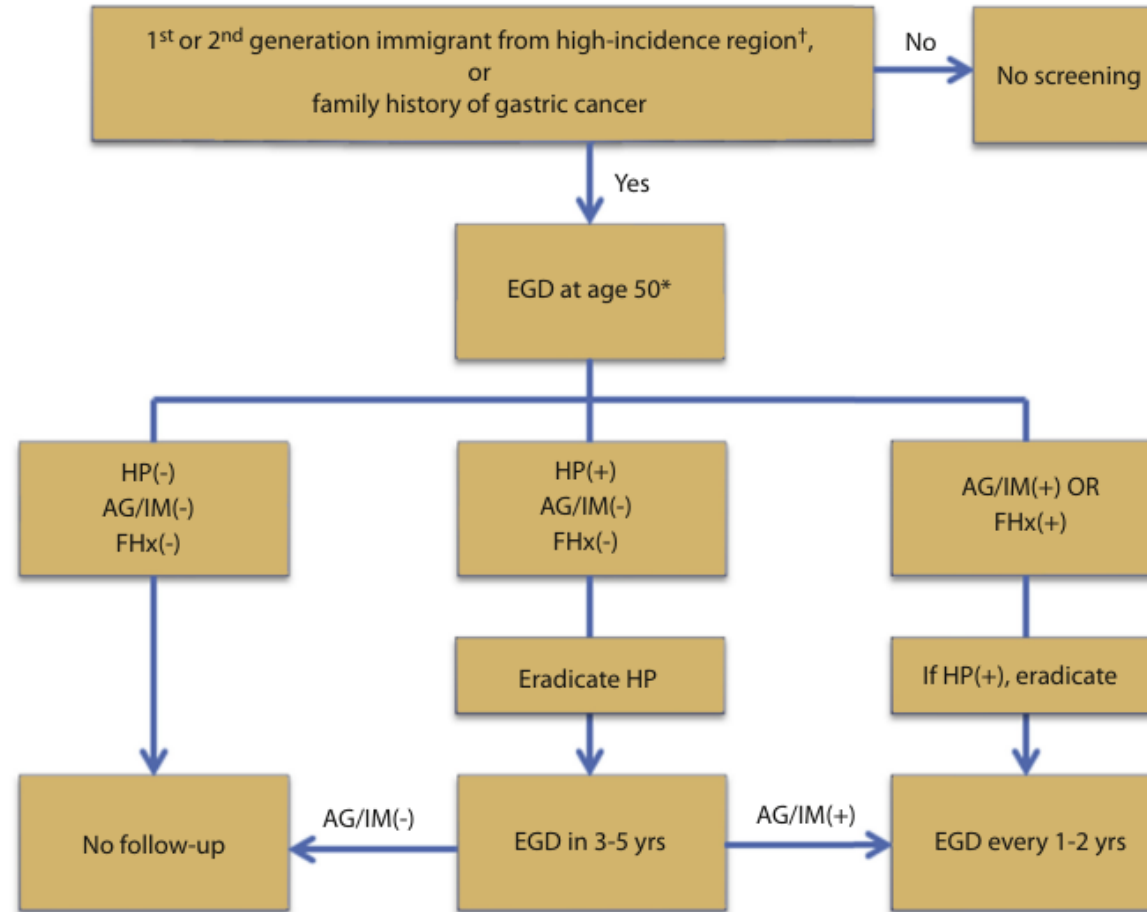
Screening for H pylori Infection:

Houston Consensus Conference recommendations: Which individuals to test?	Agreement (%)	Evidence level
Individuals with suspected *H. pylori* infection (e.g., active duodenal ulcer)	100	High
Individuals with current or past gastric or duodenal ulcers	100	High
Individuals with uninvestigated dyspepsia	100	High
Individuals with gastric mucosa-associated lymphoid tissue lymphoma	100	Moderate
Family members residing in same household of patients with proven active *H. pylori* infections	91	Moderate
Individuals with family history of peptic ulcer disease	91	Moderate
Individuals with family history of gastric cancer	100	Moderate
First-generation immigrants from high-prevalence areas	82	High
High-risk groups (e.g., in the United States, Latino and African American, and other racial or ethnic groups)	91	Low

Non-Invasive Testing for H pylori Infection

Table 2 Tests for *H. pylori* infection

| Tests	Strengths	Weaknesses
Noninvasive		
Serology	Widely available Least expensive Does not require medication modifications prior to testing	Does not reliably delineate between active and previous infection Cannot be used to confirm eradication
Stool antigen test	High sensitivity and specificity Can be used to test for active infection and evaluate for eradication	Stool sample needed, patient aversion Requires prior cessation of antibiotics, bismuth products, or proton pump inhibitors to reduce risk of false negative results
Urea breath test	High sensitivity and specificity Can be used to test for active infection and evaluate for eradication	Resources and trained personnel needed to reliably reproduce test Requires prior cessation of antibiotics, bismuth products, or proton pump inhibitors to reduce risk of false negative results

Clinical Case 4/2024

▶ 57-year-old male in otherwise normal health who presented to his primary care with acute abdominal pain and jaundice. He had noticed a yellowing of his eyes over the last several preceding weeks. Lab work was concerning for a total bilirubin of 3.7. CT scan was performed.

CT scan revealed a mass in the head of the pancreas

Pancreatic Cancer

- ▶ Overall increase in pancreatic cancer incidence
- ▶ Especially pronounced increase of incidence in younger people
- ▶ Limited options for screening

American Cancer Society
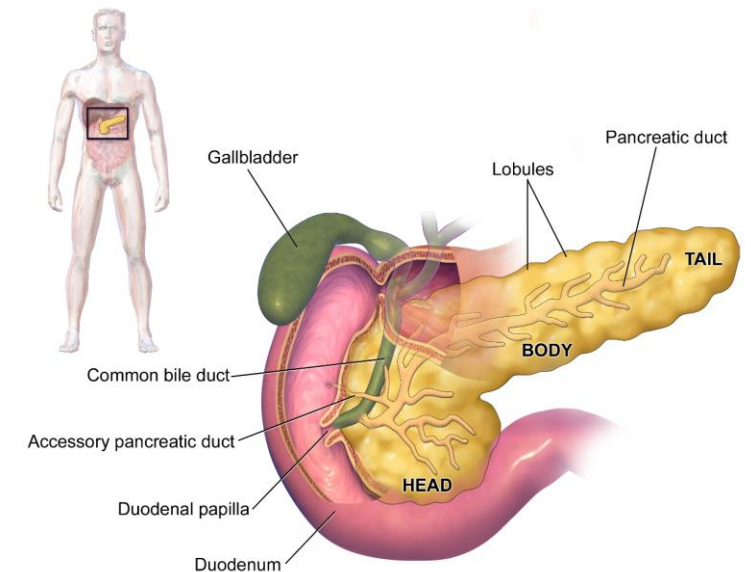
Screening for Pancreatic Cancer
US Preventive Services Task Force
Reaffirmation Recommendation Statement

Conclusions and Recommendation The USPSTF recommends against screening for pancreatic cancer in asymptomatic adults. (D recommendation)

AGA Clinical Practice Update on Pancreas Cancer Screening in High-Risk Individuals: Expert Review

Harry R. Aslanian • Jeffrey H. Lee • Marcia Irene Canto

▶ Screening can be considered in high-risk patients

  ▶ First degree relatives with at least 2 affected genetically related relatives

  ▶ Genetic syndromes associated with increased risk

**Table 1.** Risk for Pancreatic Cancer Related to Genetic Mutation

Genes	Common name	Risk of pancreatic cancer
STK11/LKB1	Peutz–Jeghers syndrome	RR, 132 (95% CI, 44–261)
PRSS1	Hereditary pancreatitis	SIR, 53 (95% CI, 23–105)
CDKN2A	Familial atypical multiple mole/melanoma syndrome	RR, 13–39
MLH1, MSH2, MSH6	Lynch syndrome	RR, 8.6–11
TP53	Li-Fraumeni syndrome	RR, 7.3 (95% CI, 2–19)
ATM	NA	RR, 3.92 (95% CI, 0.44–14.2)
BRCA1	Hereditary breast and ovarian cancer	RR, 2.26 (95% CI, 1.26–4.06)
BRCA2, PALB2		RR, 3.5–6.2 (95% CI 1.87–6.58)
Familial pancreas cancer in 1 or 2 first-degree relatives	Familial pancreas cancer	RR, 4–9.3

How to Screen for Pancreatic Cancer

- Genetic testing and counseling suggested for possible high-risk individuals

- Screening

  - Begin at age 50 or 10 years younger than first diagnosed relative

  - Begin at age 40 CKDN2A and PRSS1 mutation carriers

  - Begin at age 35 for patients with Peutz-Jeghers syndrome

- MRI and Endoscopic Ultrasound preferred methods of screening

 - Repeat in 12 months if screening method negative

Clinical Case 4/2024

▶ 81-year-old female who initially presented to clinic with worsening constipation for about 2 months prior. Complained of taking 3 stool softeners daily with only brief and incomplete evacuation of her bowels in the morning, with an urgency to go throughout the day. Patient had also noticed stools had become much thinner and difficult to pass. CT scan was performed which was normal and patient was thus referred for a colonoscopy
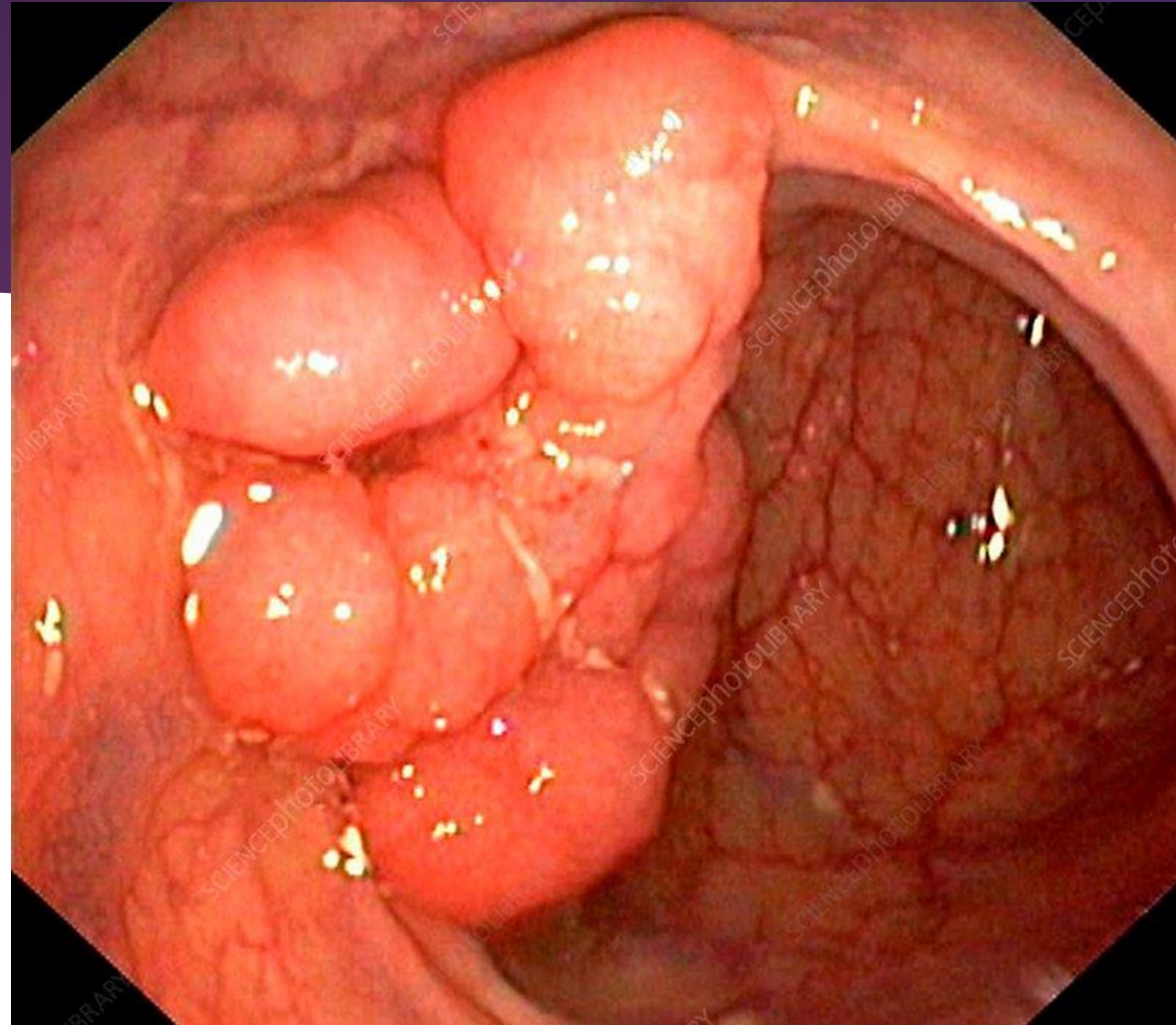
Colonoscopy was performed which showed an invasive adenocarcinoma in her sigmoid colon, partially obstructive
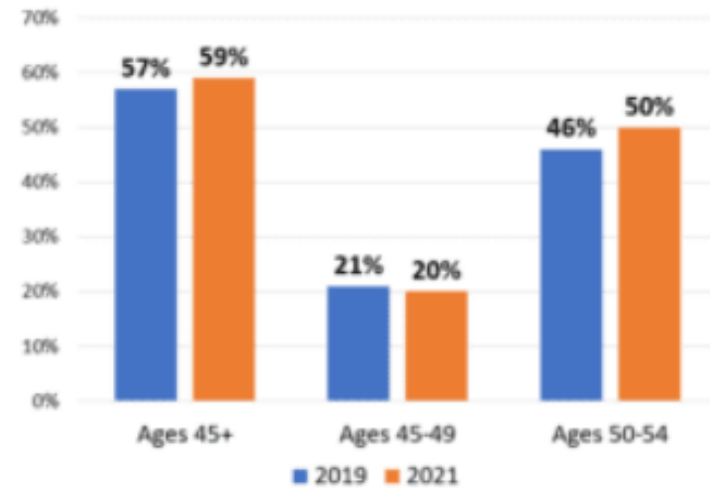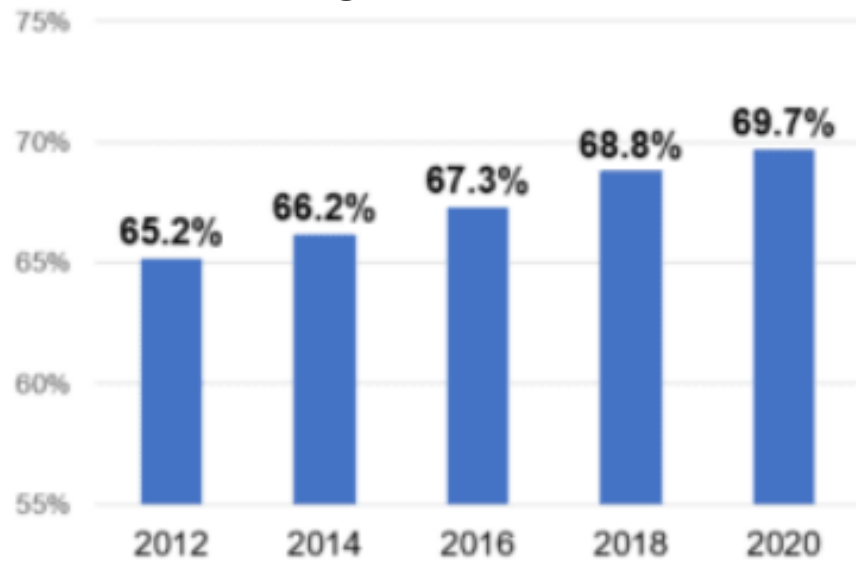
Colon Cancer

- Third highest cancer incidence among men and women
- Increasing trends in young people
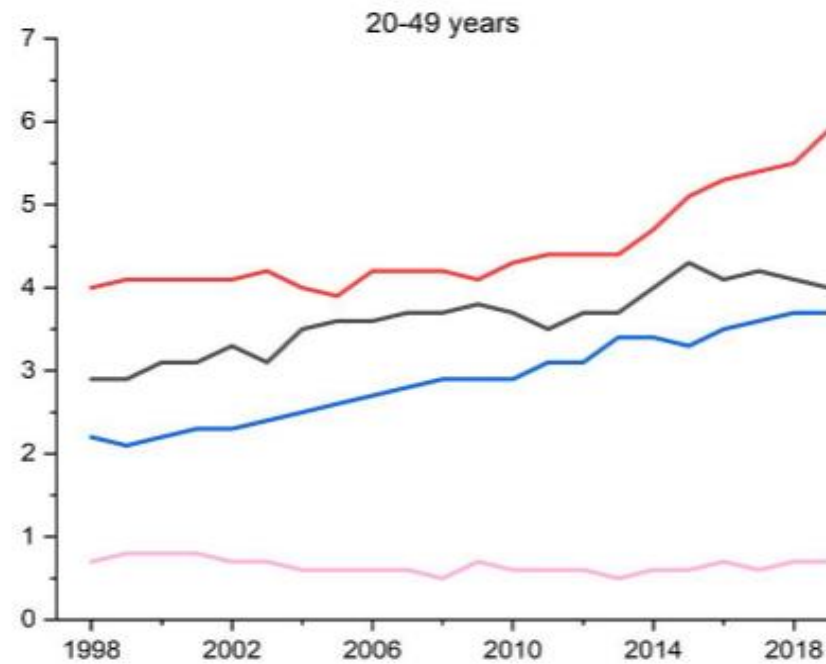- 20% of all colon cancer diagnoses < 55 y/o
  - Only 11% in 1995
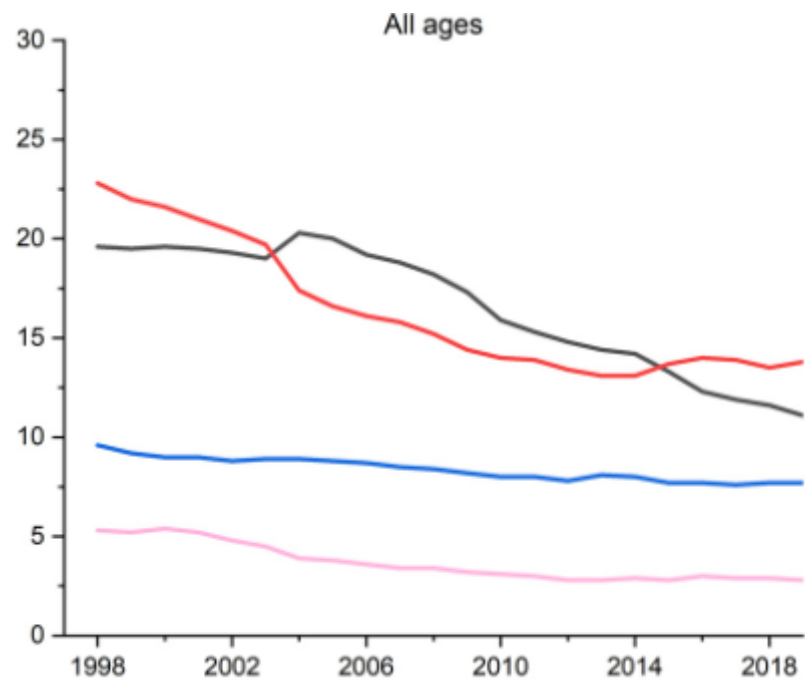

Transverse colon
Ascending colon
Sigmoid colon
Descending colon
Appendix
Rectum
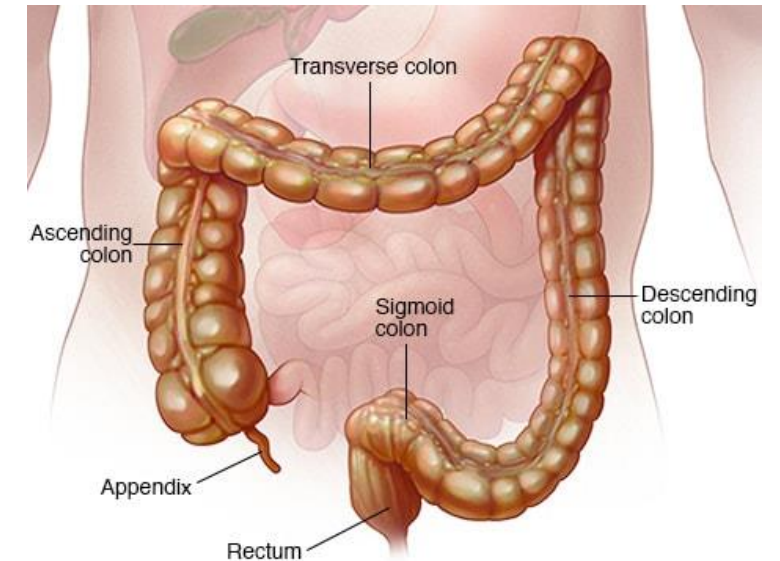
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Screening Rates

Age 50-75

American Cancer Society

Incidence of colon cancer

Screening Recommendations

- Begin screening at age 45, until age 75
- Above age 75
  - Discussion of risks and benefits between provider and patient
- No further screening beyond age 85
- Family History
  - Start age 40 or 10 years younger than first degree relative
- Risk with age largely comes from complications with prep(falls)
- The best test is the one the patient will do!

Colonoscopy remains gold standard

- Both sensitive and specific
- Allows for identification/prevention of colon cancer
- Has some drawbacks
  - Invasive
  - Requires bowel prep
  - Sedation
  - Cost

Colonoscopy

Colon

Rectum

Colonoscope

Anus

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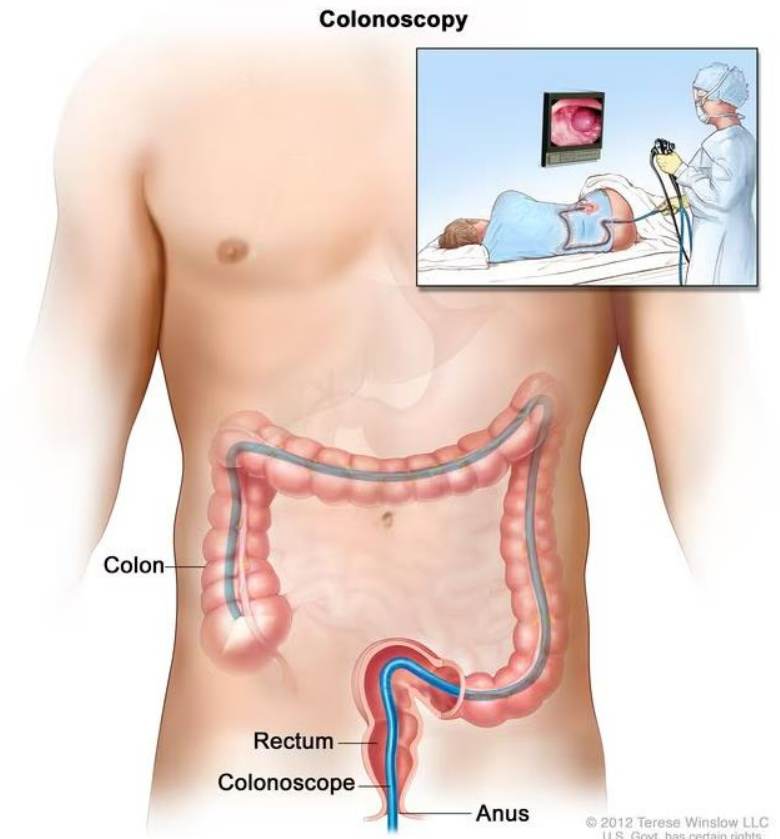
Stool Based Screening Modalities

- Guaiac FOBT test (heme-occult test)

  - 3 separate tests

  - Tests based on peroxidase – like activity between heme and guaiac

  - Dietary restrictions (can react with red meat, certain fruits/vegetables)

  - Can detect clinically insignificant blood loss (nose bleeds, blood thinners)

- Fecal Immunochemical Test (FIT)

  - Antibody to human blood in stool -tests hemoglobin from the lower intestine

- Multitarget Stool DNA testing (Cologuard)

  - Combines FIT test with detection of abnormal DNA or epigenetic markers from colorectal lesions is based on natural exfoliation of cancerous or pre-cancerous cells into the colorectal tract

Table 1. Sensitivity and Specificity of the Multitarget Stool DNA Test and the Fecal Immunochemical Test (FIT) for the Most Advanced Findings on Colonoscopy.

Most Advanced Finding	Colonoscopy (N=9989)	Multitarget DNA Test (N=9989)		FIT (N=9989)	
		Positive Results	Sensitivity (95% CI)	Positive Results	Sensitivity (95% CI)
	no.	no.	%	no.	%
Colorectal cancer					
Any	65	60	92.3 (83.0–97.5)	48	73.8 (61.5–84.0)
Stage I to III*	60	56	93.3 (83.8–98.2)	44	73.3 (60.3–83.9)
Colorectal cancer and high-grade dysplasia	104	87	83.7 (75.1–90.2)	66	63.5 (53.5–72.7)
Advanced precancerous lesions†	757	321	42.4 (38.9–46.0)	180	23.8 (20.8–27.0)
Nonadvanced adenoma	2893	498	17.2 (15.9–18.6)	220	7.6 (6.7–8.6)
			Specificity (95% CI)		Specificity (95% CI)
All nonadvanced adenomas, non-neoplastic findings, and negative results on colonoscopy	9167	1231	86.6 (85.9–87.2)	472	94.9 (94.4–95.3)
Negative results on colonoscopy	4457	455	89.8 (88.9–90.7)	162	96.4 (95.8–96.9)

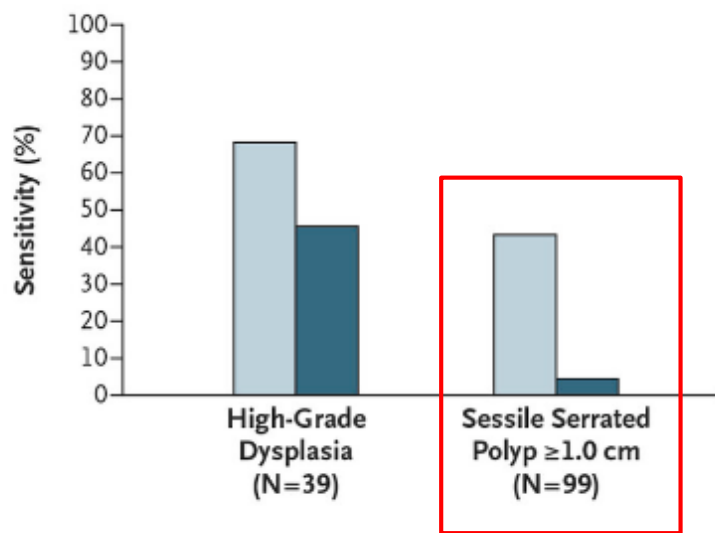Legend: Multitarget DNA test; FIT

A Colorectal Cancer According to Stage
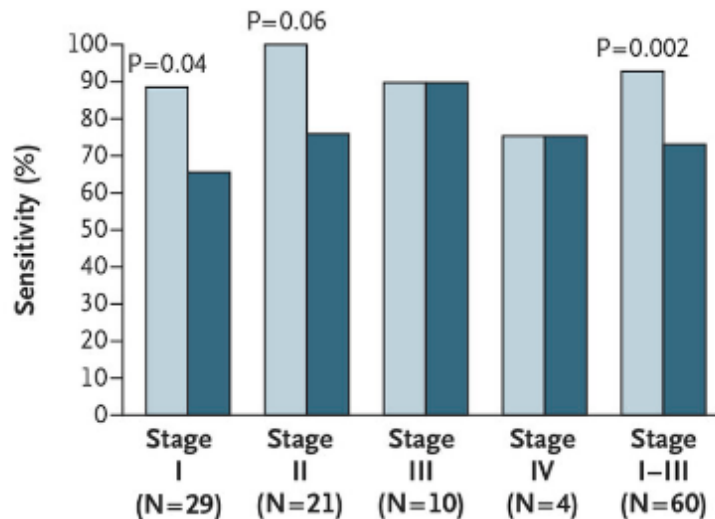
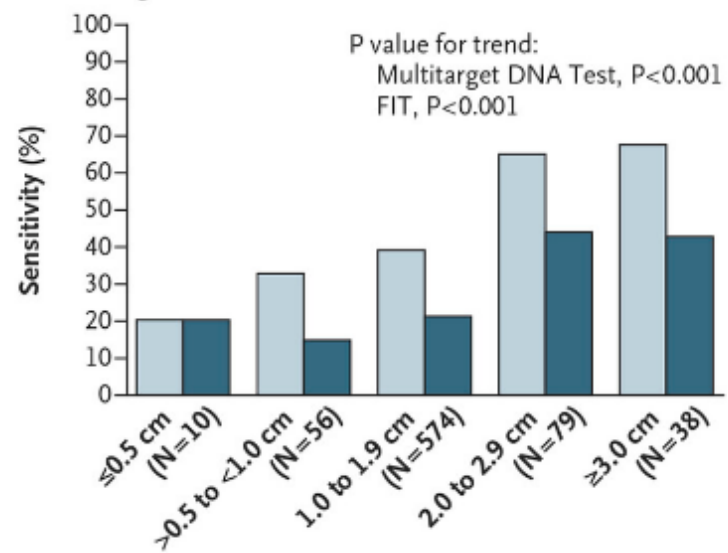**B** Cancer and Advanced Precancerous Lesions According to Location
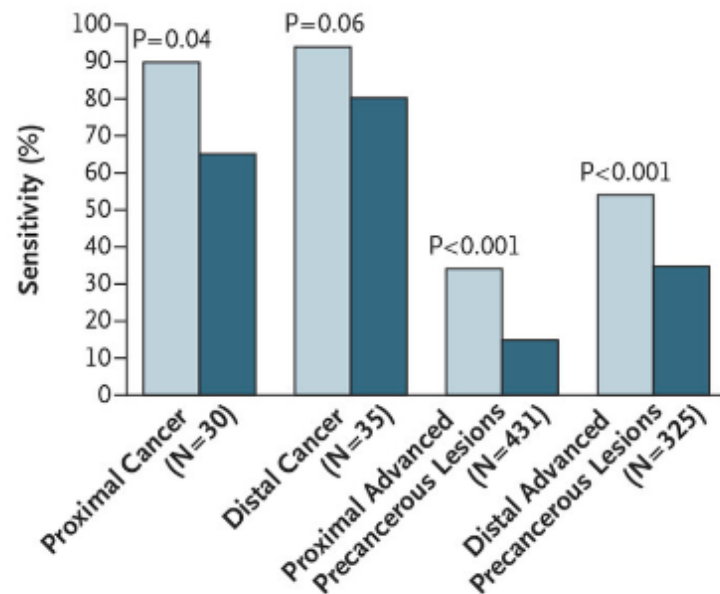
C Higher-Risk Types among Advanced Precancerous Lesions

D Advanced Precancerous Lesions According to Size of Largest Lesion

Blood test

- None currently recommended by any GI guidelines
- Serum DNA test for Septin-9
  - Low sensitivity and specificity
- Guardiant blood test
  - FDA endorsement on Thursday
  - Awaiting more information
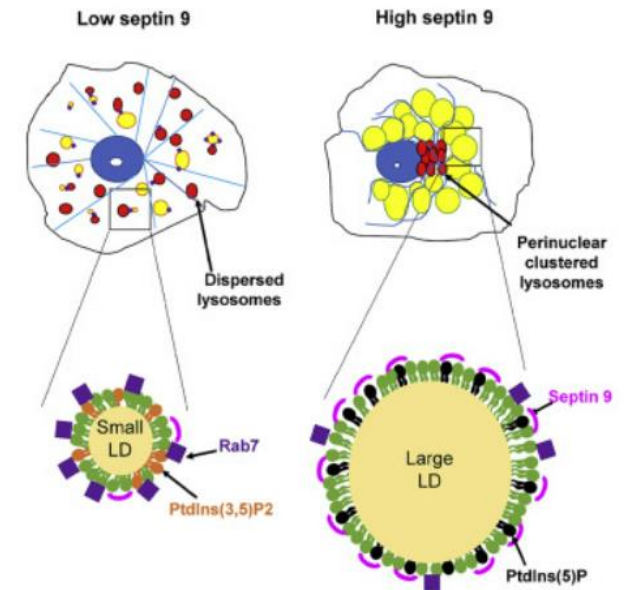
CT Colonography

- Does require bowel prep
- CO_2 pump after rectal tube insertion
- CT Scan and image reconstruction
- Drawbacks
  - Radiation
  - No intervention possible
  - Small polyps not detected (<5mm)

Table 2. Diagnostic Yield of Primary CTC and Primary OC Screening.

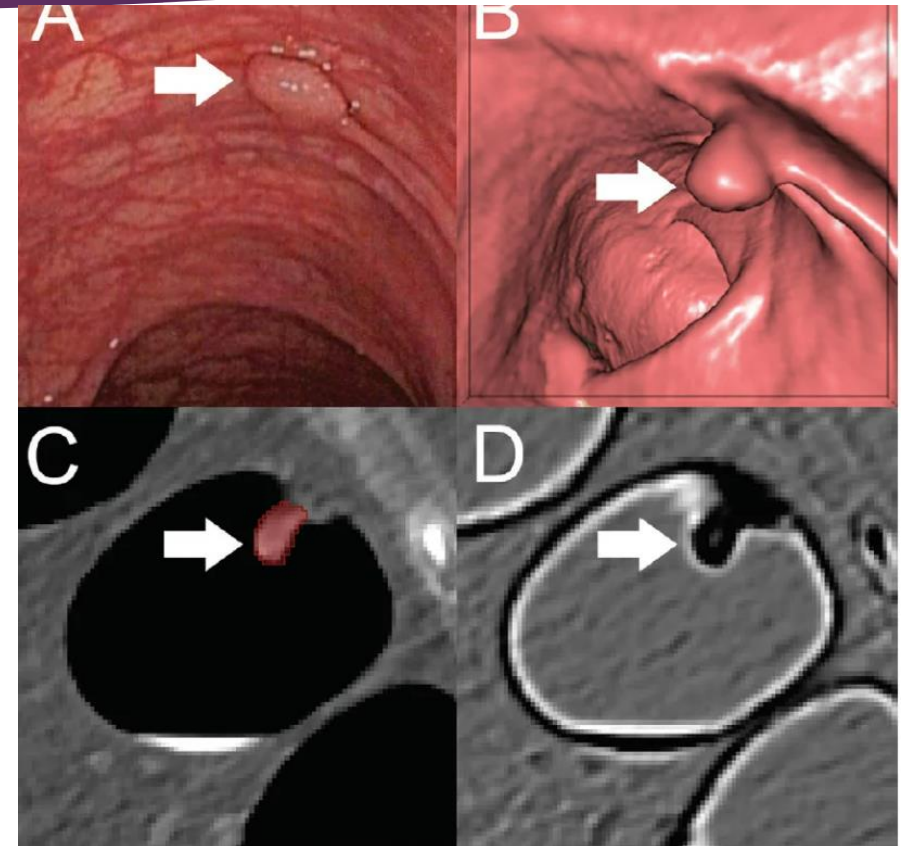| Variable	Primary CTC (N=3120)	Primary OC (N=3163)	P Value
Use of OC — no. of patients (%)	246 (7.9)	3163 (100)	<0.001
Total no. of polyps removed	561*	2434	<0.001
No. of advanced adenomas			
≥10 mm	103	103	0.92
6–9 mm	5*	11	0.14
≤5 mm	1†	3	0.32
Invasive carcinoma			
No. of carcinomas	14	4	0.02
No. of patients (%)	12 (0.4)	4 (0.1)	0.04
Total advanced neoplasia‡			
No. of neoplasms	123*	121	0.81
No. of patients (%)	100 (3.2)*	107 (3.4)	0.69

▶ Good at detection of colon cancer and large polyps

▶ Significant drop off for smaller polyps

▶ No ability to remove polyps, need another bowel prep/procedure

Colon Capsule Endoscopy

- Double ended camera
- Requires a bowel prep
- Drawbacks:
    - No intervention
    - Data unclear – interval is not fully established

Table 2. The Prevalence of Lesions Detected by Colonoscopy in the 320 Patients in the Accuracy Analysis, and the Sensitivity and Specificity of Capsule Endoscopy for the Detection of These Lesions.

Variable	Colonoscopy*	Capsule Endoscopy†	
	Prevalence	Sensitivity	Specificity
	no. of patients (%)	% (95% CI)	
Polyp			
Any size	212 (66.2)	72 (68–75)	78 (71–84)
<6 mm	188 (58.8)	61 (57–64)	82 (76–87)
≥6 mm	87 (27.2)	64 (59–72)	84 (81–87)
≥10 mm	50 (15.6)	60 (51–66)	98 (96–99)
Adenoma			
≥6 mm	71 (22.2)	68 (58–76)	82 (79–84)
≥10 mm	45 (14.1)	64 (54–72)	97 (96–99)
Advanced adenoma‡			
Any size	52 (16.2)	85 (73–93)	50 (48–51)§
≥6 mm	49 (15.3)	73 (61–83)	79 (77–81)
≥10 mm	45 (14.1)	64 (54–72)	97 (96–99)
Colorectal cancer¶	19 (5.9)	74 (52–88)	74 (72–75)

* Patients could be included in more than one size category.
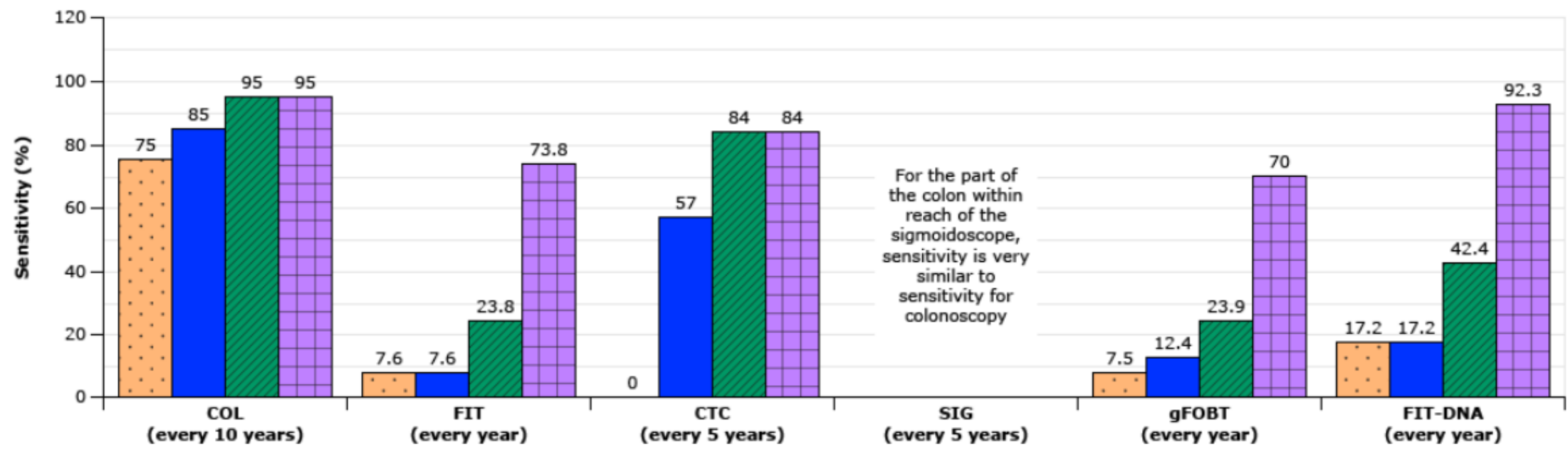† Per-patient data are listed. Colonoscopy was the standard criterion.
‡ Advanced adenoma was defined as an adenoma 1 cm or larger or an adenoma with villous features or high-grade dysplasia.
§ A high prevalence of polyps less than 6 mm in size, combined with a low likelihood of histologic features of advanced adenoma, decreased the specificity.
¶ All colorectal cancers were 6 mm or larger (19 were ≥6 mm, and 18 of these were ≥10 mm).

Data is unimpressive, even for detection of colon cancer

Haven't seen used in clinical practice widely
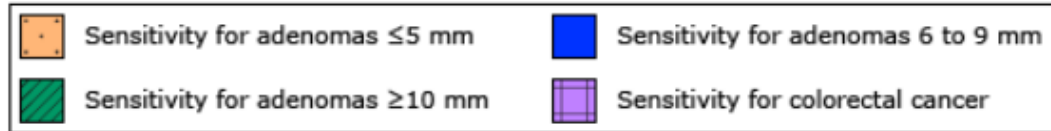
USPSTF 2015

TABLE 4. Multi-Society Task Force ranking of current colorectal cancer screening tests

Tier 1
Colonoscopy every 10 years
Annual fecal immunochemical test
Tier 2
CT colonography every 5 years
FIT–fecal DNA every 3 years
Flexible sigmoidoscopy every 10 years (or every 5 years)
Tier 3
Capsule colonoscopy every 5 years
Available tests not currently recommended
Septin 9

Modifiable Factors for Colon Cancer

- Factors that increase risk
  - Heavy Alcohol use (>3 drinks/day)
  - Obesity (BMI > 30)
  - Red meat (100g/day)
  - Processed meat (50g/day)
  - Tobacco
- Factors that decrease risk
  - Physical activity
  - Dairy (400g/day) – Vitamin D

American Cancer Society

Liver Cancer

► Hepatocellular Carcinoma (HCC)

    ► Most common liver cancer

    ► Most arise from liver cirrhosis

    ► Increasing incidence in HCC in non cirrhotic patients (13%)

        ► Hepatitis B

        ► Metabolic dysfunction - associated steatohepatitis (MASH)

► Fastest growing cause of cancer death in the US

Liver cancer

Mayo Clinic
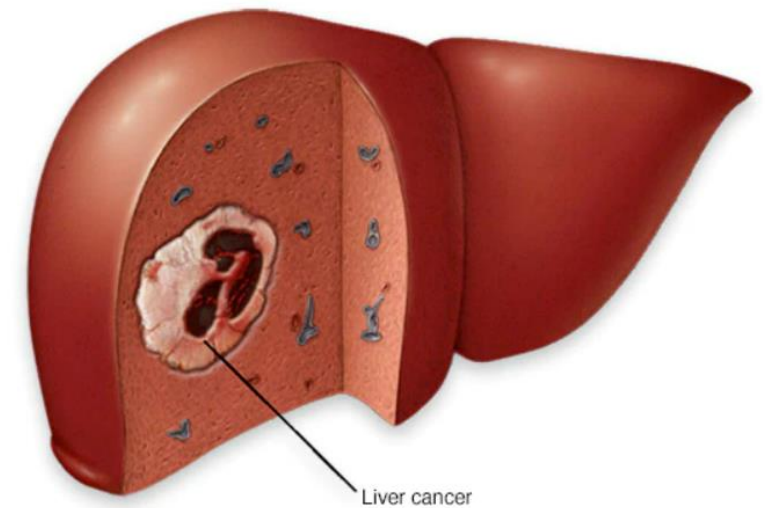
Who to Screen for HCC?

- Cirrhosis patients
  - All classes
  - Regardless of etiology
- Non cirrhotic hepatitis B
  - Males from endemic country > 40 y/o
  - Females from endemic country > 50 y/o
  - All people from Africa at earlier age
  - Family history of HCC
  - PAGE-B score > 10 – looks at multiple factors in patients with chronic hepatitis B to determine risk (age, viral load, eAg status, ALT level, sex)

How to Screen?

- Recommend Ultrasound + AFP every 6 months
- Some experts recommend staggering the monitoring (every 3 months)
- Any suspicious findings needs multiphasic imaging:
  - Suspicious lesions ≥1cm
  - AFP ≥ 20 ng/ml or rising
  - Contrast enhanced CT or MRI
- Currently do not recommend screening without advanced fibrosis (MASH)

Take Home: Whom to Screen?

▶ Esophageal Cancer:

  ▶ Think obese, Caucasian males with chronic GERD symptoms, especially if family history or tobacco use

▶ Gastric Cancer:

  ▶ Endemic areas (Russia, South America, Southeast Asia) or family history

  ▶ Low threshold to screen for H pylori (highest risk factor)

▶ Pancreatic Cancer

  ▶ Not much screening recommended - consider if family history or genetic syndromes

  ▶ Aggressively workup abnormal lab work (eg elevated liver function tests) on routine labwork

- Colon Cancer
  - Everyone! Starting at age 45
  - Younger screening if family history
  - The best test is any test the patient will comply with
- Liver Cancer
  - Highest risk in cirrhotic patients
  - Increasing incidence in non cirrhotic Hepatitis B or MASH patients

Health Maintenance for patients with Inflammatory Bowel Disease

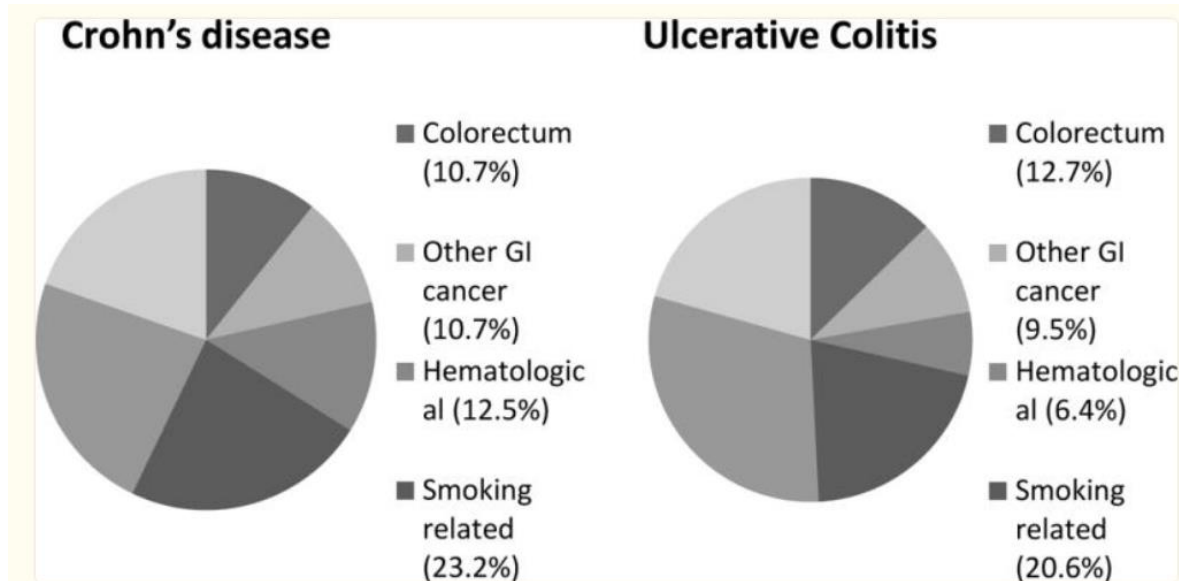# Inflammatory Bowel Disease

- Nearly 1 in 100 Americans diagnosed with IBD
- Men and Women are equally affected
- Most often diagnosed in 20s
- Increased risk with first degree relative
- Affects all ethnic backgrounds however most common in Caucasians
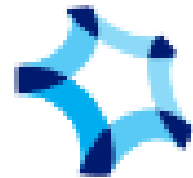
CROHN'S & COLITIS FOUNDATION

Cancer Screening in IBD

Crohn's disease

- Colorectum (10.7%)
- Other GI cancer (10.7%)
- Hematological (12.5%)
- Smoking related (23.2%)

Ulcerative Colitis

- Colorectum (12.7%)
- Other GI cancer (9.5%)
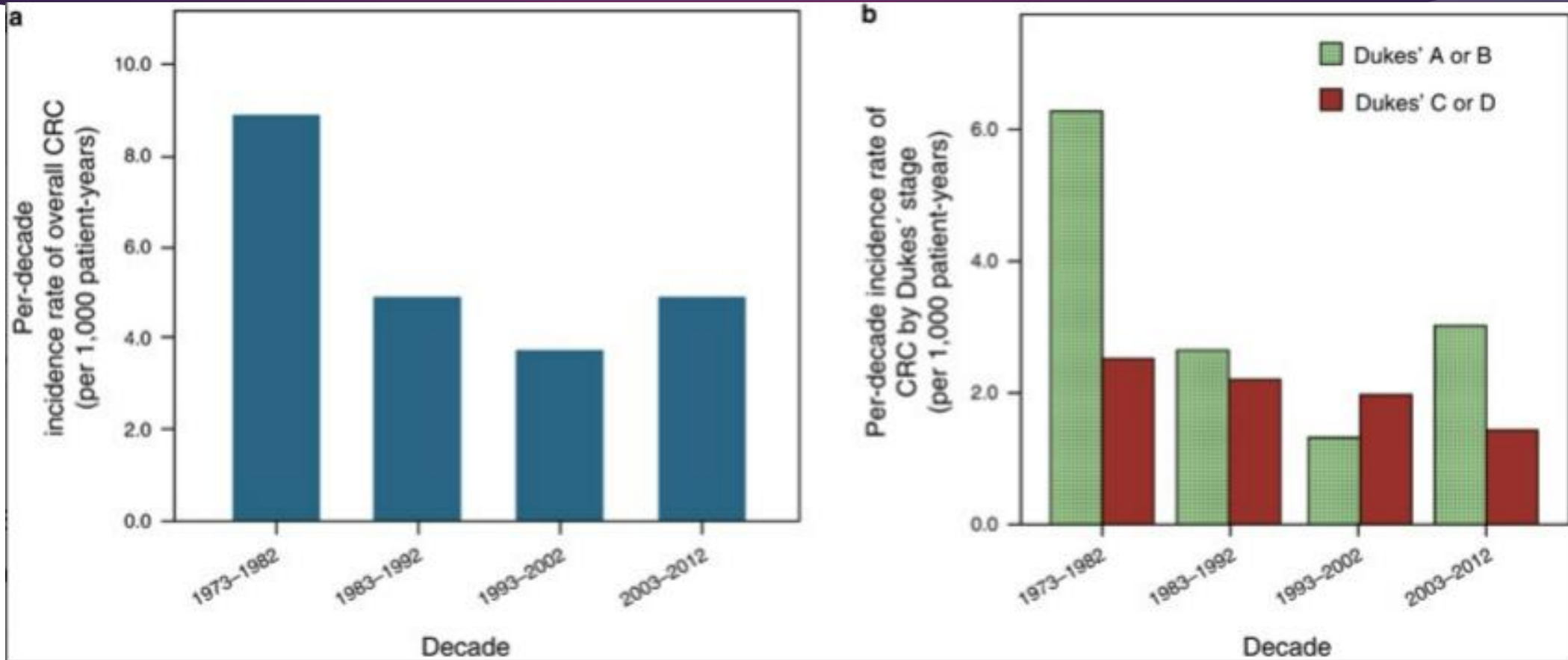- Hematological (6.4%)
- Smoking related (20.6%)

Figure 1

Absolute risk of invasive malignancy 1–11 years following IBD diagnosis, Denmark 1978–2010.

Increased risk in both GI and non-GI related Cancer

Decreasing over the last 30 years in GI cancers through better treatments with biologic and immunosuppressant therapies

Colorectal Cancer in IBD – 40-year study

Decreasing Colorectal Cancer

- Reduction via primary and secondary prevention of disease
- Control of underlying disease and therefore risk
    - Prevention of inflammation decreases incidence
    - Better treatments available with biologics and immunosuppressants
- Better overall screening tools and performance
    - Increased risk at 8 years of disease – start annual screening

Skin Cancer and IBD
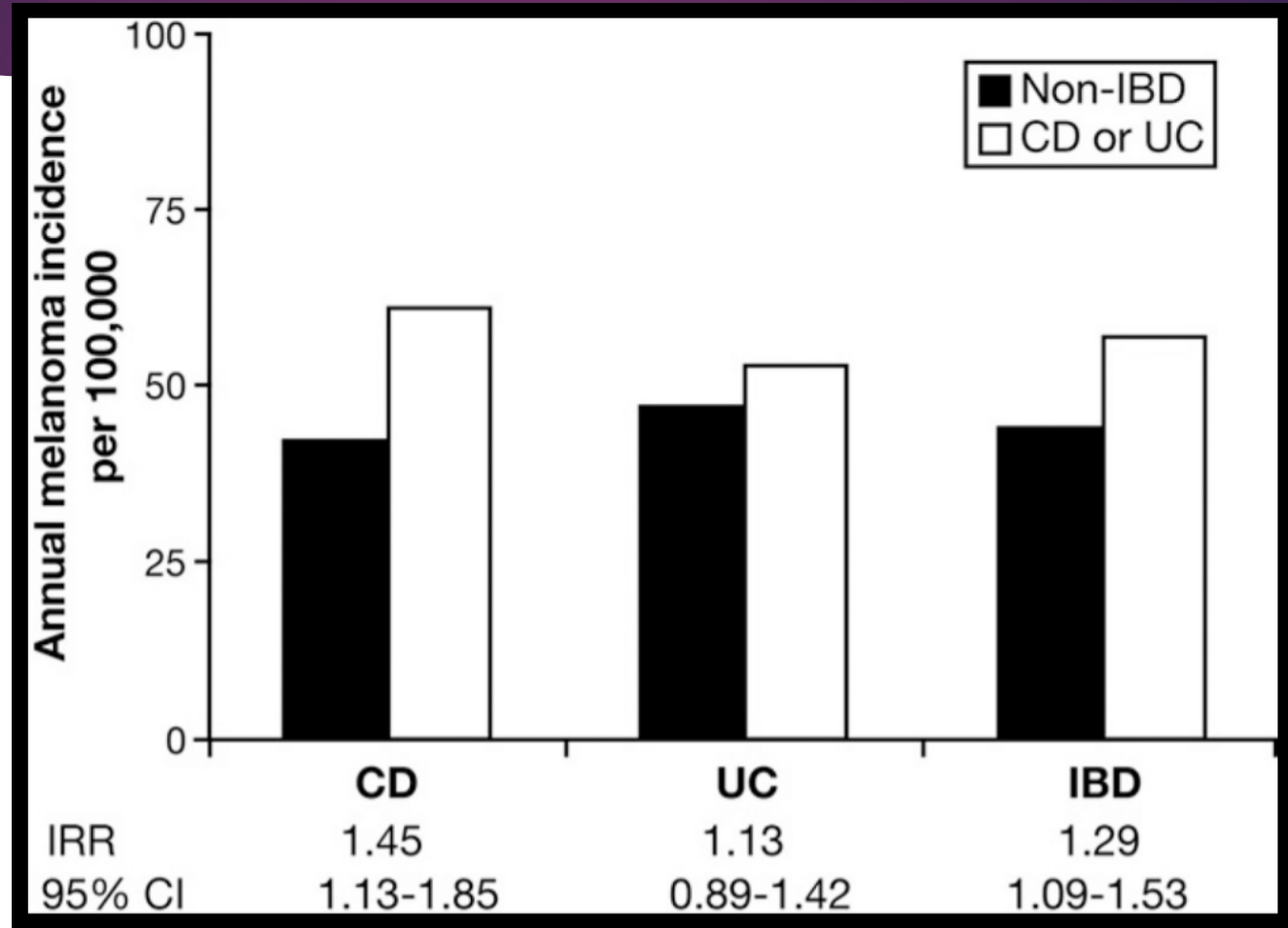
Treatment related skin cancer risk

Medication[a]	IBD overall		CD		UC	
	Melanoma	NMSC	Melanoma	NMSC	Melanoma	NMSC
Any use						
5-ASA	1.06 (0.77–1.45)	0.99 (0.92–1.08)	0.98 (0.63–1.53)	1.01 (0.90–1.13)	1.22 (0.76–1.96)	0.99 (0.89–1.11)
Biologic	1.88 (1.08–3.29)	1.14 (0.95–1.36)	1.94 (1.03–3.68)	1.16 (0.95–1.41)	1.73 (0.53–5.63)	1.06 (0.69–1.64)
Thiopurine	1.10 (0.72–1.67)	1.85 (1.66–2.05)	0.92 (0.53–1.59)	1.99 (1.73–2.27)	1.31 (0.66–2.60)	1.63 (1.36–1.94)

Skin Cancer Prevention

- Recommendations:
  - Education of patients with risk factors
    - Fair skin, family history, overall UV exposure
  - Primary Protection
    - Sun avoidance
    - Sun protection (sunscreen or sun protective clothing)
  - Secondary Prevention
    - Yearly skin screen with dermatologist

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Lymphoma Risk in IBD

- Increased risk in Crohn's disease more so than Ulcerative Colitis

- Increased risk with both anti-TNF therapy or thiopurines

- Hepatosplenic T-Cell Lymphoma

  - Universally fatal

  - Extremely rare, almost exclusively in males < 35 years of age

  - Occurs on thiopurine or in combination, rarely on anti-TNF monotherapy

Risk Recommendations

- Understanding risks and informed discussion with patients
  - Primarily thiopurine exposure
- No recommendation of routine EBV testing
- Consider dose de-escalation or non thiopurine options (methotrexate)

Cervical and Anal Cancer in IBD

▶ HPV causative agent (usually HPV 16 & 18)

▶ Cervical Cancer

  ▶ Recent studies suggest no increased risk in cervical cancer risk

▶ Anal Cancer

  ▶ Rare, usually squamous cell carcinoma

  ▶ Associated with receptive intercourse, immunosuppression or severe ano-rectal Crohns disease (structuring disease)

AGE STANDARDISED RATES OF CANCER TYPES IN IBD & NON-IBD POPULATIONS
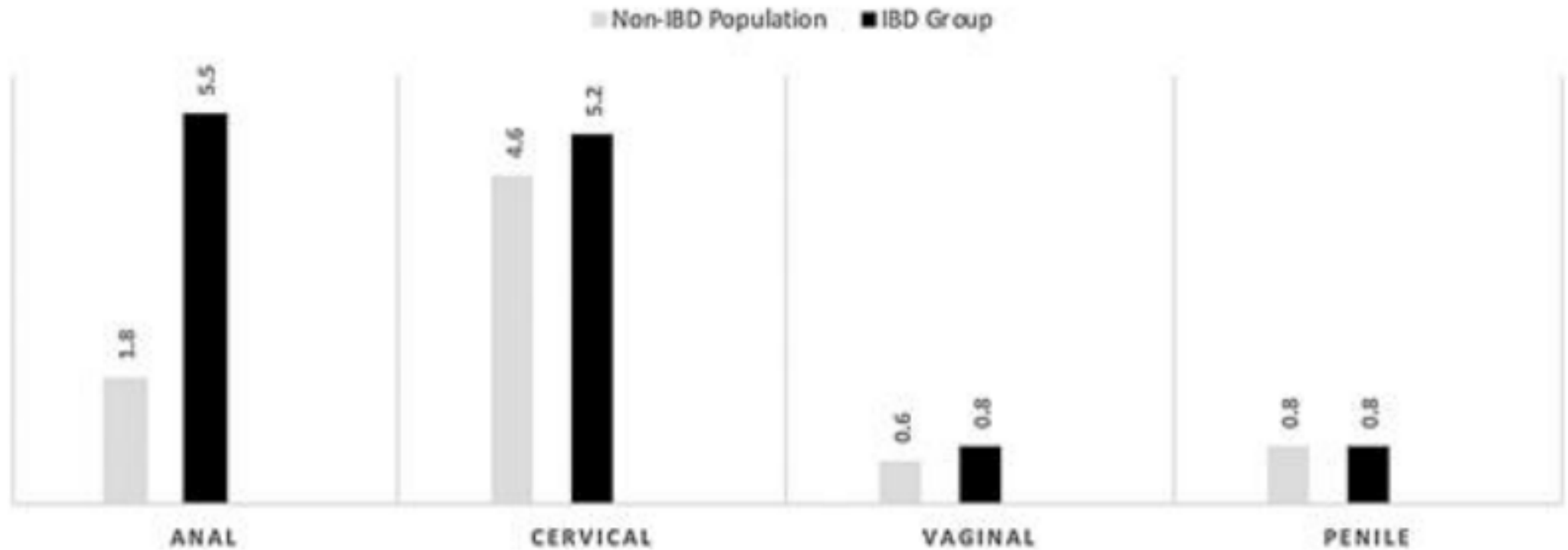
Prevention

- HPV Vaccine
  - Approved for women and men (age 9-45)
  - Active against HPV types 6, 11, 16, 18
  - No change in efficacy of biologic or immunosuppressive therapies
- Regular Pap Smears
  - Starting at age 21 per ACOG guidelines

Vaccine Preventable Illnesses

- Increased risk of infections in patients with IBD

- No association with between vaccines causing flares for IBD

- Age-appropriate vaccines ideally prior to initiation of immunosuppressive medications

- New mRNA vaccines (COVID) are approved for all IBD patients

- Common vaccinations:

  - Influenza

  - Pneumococcal

  - Herpes Zoster

  - HPV

Vaccines

▶ Live Vaccines are not recommended for patients on immunosuppressive therapies

▶ Common Live Vaccines:

  ▶ Varicella

  ▶ Measles, Mumps, Rubella (MMR)

  ▶ Live Influenza

▶ IDSA recommends live vaccines given at least 4 weeks prior to initiation of immunosuppressive and certainly not within 2 weeks

Bone Health in IBD

- Increased risk of osteoporosis and osteopenia
  - Relative risk of fracture 40% higher in IBD patients compared to general population
- Prevalence in IBD
  - Varies in studies
    - Range from 22 – 77% and 17 – 41%
- Osteoporosis prevalence 5% at diagnosis

Screening Recommendations

- American College of Gastroenterology
  - Patients should undergo screening at diagnosis and periodically thereafter
    - Pre-existing fragility fracture
    - Women 65 y/o or Men 70 y/o
    - Patients with chronic inflammation, treatment with steroids, malnutrition
- Crohns and Colitis Foundation and Cornerstones Checklist
  - Low BMI   Post-menopausal women
  - Chronic steroid use > 3 months   Hypogonadism
  - Smokers   Maternal history of osteoporosis
- Serial Vitamin D monitoring and repletion of Calcium and Vit D with courses of steroids

Depression and Suicidal Ideation

- High incidence of anxiety and depression, similar to other patients of chronic illness

- With psychological treatment and relaxation techniques utilized

  - Significant decrease in hospitalizations

  - Decrease in sick leave days

Useful Resources

- Cornerstones Checklist:
    - https://www.cornerstoneshealth.org/wp-content/uploads/2020/08/NEW-IBD-Checklist-for-Monitoring-Prevention-526a.pdf
- Crohns and Colitis Foundation
    - https://www.crohnscolitisfoundation.org/sites/default/files/2019-09/Health%20Maintenance%20Checklist%202019-3.pdf

CME Question

- A 52 yo WM patient with a history of Crohns disease presents to your office for annual checkup. His Crohns disease is doing well, he is currently in disease remission, both clinically as well as endoscopically, his last colonoscopy was last year. He was briefly on steroids 5 years ago at the time of diagnosis for about 2 weeks, since then he has been treated with Infliximab infusions every 8 weeks. He was high risk at the time of diagnosis when he was found to have a blockage as his terminal ileum which responded well to medication treatment. He has no symptomatic complaints. His evaluation is significant for a mild hypertension of 134/82. Labwork is normal.

- Which of the following does patient need a referral to
  - General Surgery
  - Rheumatology
  - Dermatology
  - Endocrinology

Answer:

▶ Answer: Dermatology

▶ Patients with inflammatory bowel disease, in particular Crohns disease, are at increased risk of both melanoma and non melanoma skin cancer. Furthermore, treatment with biologic agents, in particular anti-TNF agents, increases risk of melanoma skin cancer while use of thiopurines increases risk of non melanoma skin cancers. Therefore yearly evaluation with a dermatologist is recommended for total body skin examination.

Thank you

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