

COLORECTAL CANCER AND PREVENTION

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LEARNING OBJECTIVES

- Identify risk factors for colorectal cancer (CRC)
- Identify high risk populations for CRC
- Identify types of colon polyps
- Identify options for CRC screening
- Identify ways to overcome patient barriers for colonoscopy completion



CRC STATISTICS

- Third most common cancer in men and women
- Second most common cancer related death
- 1.8 million new cases worldwide in 2018
- 861,000 deaths worldwide in 2018
- 145,600 new cases annually in the United States
- 50,630 deaths annually in the United States
- 5% lifetime risk in United States



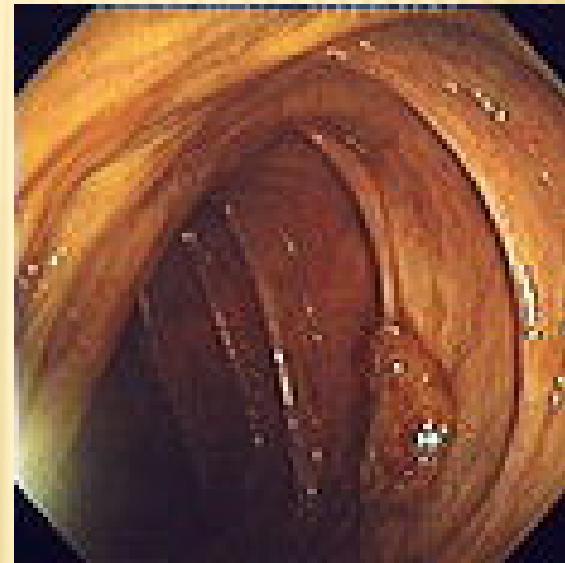
COLORECTAL CANCER (CRC)

- More specifically colorectal neoplasia
- Neoplasia include colon and colorectal polyps
- Adenomas (precancerous) colon polyps
- Colorectal adenomas cause 95% of colorectal cancer



COLON POLYPS

- Benign
 - Hyperplastic
 - Inflammatory
 - Others
- Precancerous
 - Tubular adenomas
 - Tubulovillous adenomas
 - Sessile and traditional serrated adenomas





COLON CANCER RISK FACTORS

- First-degree relative especially if under age 60
- Prior CRC or history of adenomatous polyps
- Increasing age
- Lifestyle choices:
 - Dietary: Red and/or processed meats
 - Cigarette smoking
 - Alcohol use
 - Obesity and sedentary lifestyle
 - Diabetes mellitus



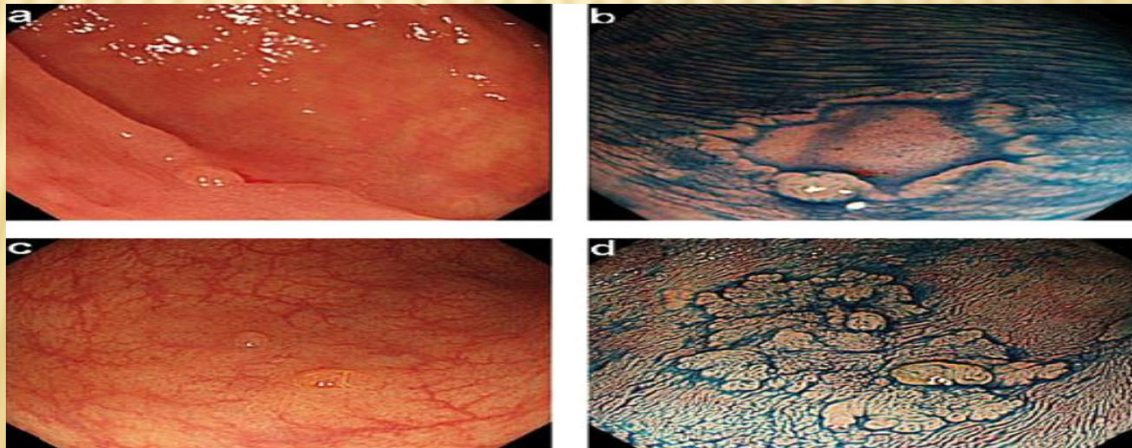
CRC RISK FACTORS

- Inflammatory Bowel Disease (IBD)
 - Includes Crohn's disease with colonic involvement of inflammation and ulcerative colitis
 - Risk increased if greater than 30% of colon
 - Risk increased if proctosigmoiditis
 - Risk increased if IBD for 8 years or longer
 - Risk increased if ulcerative colitis with PSC (primary sclerosing cholangitis)



CRC RISK FACTORS

- Lynch Syndrome
 - Hereditary nonpolyposis colon cancer
 - Accounts for less than 1 in 20 cases of CRC
 - 70-80% will have CRC by age 40-50 years
 - Increases risk for other types of cancer
 - Leads to colectomy sparing the rectum





CRC RISK FACTORS

- Familial Adenomatous Polyposis (FAP)
 - Uncommon inherited condition
 - Causes hundreds of polyps
 - Nearly 100% will develop CRC during their lifetime
 - CRC occurs mostly before age 40
 - Commonly leads to total proctocolectomy





SIGNS OF COLORECTAL CANCER

- Most commonly asymptomatic
- Symptoms often indicate later stage of malignancy:
 - Rectal bleeding
 - Change in bowel habits
 - Signs of bowel obstruction (left colon)
 - Anemia with stool positive for occult blood
 - Weight loss



CRC SCREENING

- Goal is to prevent deaths from CRC
 - Most CRC develop from precancerous polyps
 - Identify and resect precancerous abnormal growths
 - Recommendation to begin at age 50
 - American Gastroenterology Association recommends starting at age 45
 - Screening between age 76 and 85 is individualized



CRC SCREENING

- Colonoscopy
 - 15-20 minutes to assess colon to terminal ileum
 - Involves bowel prep (biggest barrier)
 - Detects small and large polyps
 - Substantially reduces the risk of dying from CRC
 - 1 in 1,000 risk for bleeding
 - 1 in 10,000 risk for intestinal wall injury or perforation



CRC SCREENING

- CT Colonography
 - CT scanner test used to examine the entire colon
 - Requires a bowel preparation
 - Non-invasive and no sedation required
 - May not be covered by insurance
 - Requires colonoscopy if abnormalities found
 - Likely misses small, flat adenomas



CRC SCREENING

- Stool tests (FIT versus Cologuard)
- Easy to complete and non-invasive
- Polyps almost never produce positive results
- If positive, colonoscopy is recommended
- High rate of false positives and false negatives
- False positive possible with ASA, NSAIDs, and red meat



CRC SCREENING

- Guaiac Test
 - Collect 2 samples from three consecutive stools
 - Avoid ASA and NSAIDs before the test
 - Must avoid peroxidase containing foods for 72 hours
- Fecal Immunochemical Test (FIT)
 - Long-handled tool to collect specimen
 - No need to avoid ASA and NSAIDs
- Cologuard
 - Looks for specific DNA markers and blood
 - One stool sample
 - No need to avoid ASA and NSAIDs
 - Superior to other stool tests



CRC SCREENING

- Frequency of colonoscopy varies
 - Risk factors: Personal history and family history
 - Type of polyps: Histology and pathology findings
 - Polyp size
 - Number of polyps
 - Bowel prep effectiveness





OVERCOMING BARRIERS

- Education is the most important component in CRC prevention
- Preparation
 - Newer options: Suprep and Plenvu
 - Better tolerated
- Procedure
 - Outpatient centers or hospital based
 - Conscious sedation or monitored anesthesia
- Time
 - 15-20 minutes exam typically



REFERENCES

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