



**GEORGIA
CANCER CENTER**
AUGUSTA UNIVERSITY



Colorectal Cancer: The Inside Story

Cancer Information and Awareness

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What are Risks and Risk Factors for Cancer?

Risks

- Anything that increases chances or risk of getting a disease
- Having a risk factor does not mean you will get a specific disease
- Some risk factors can be changed (modified) others cannot be changed

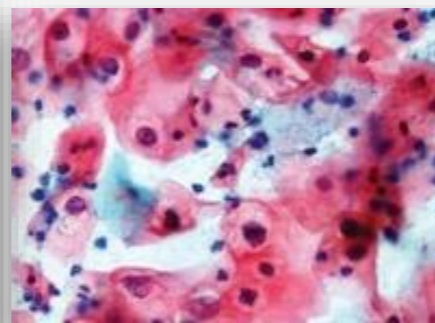
Genes



Environment



**Viral and
Bacterial
infections**



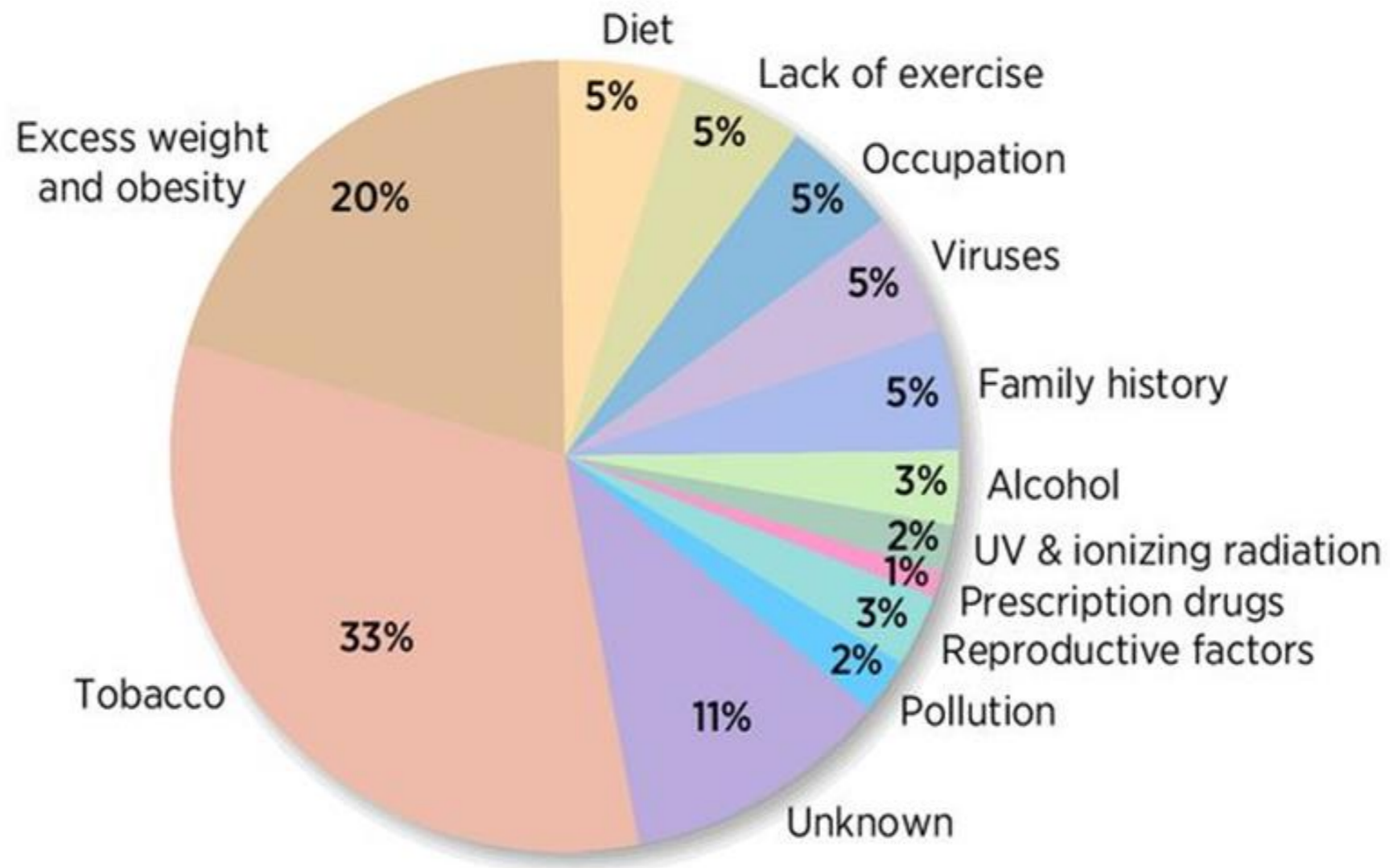
**Lifestyle
Behavior/Choices**



**Social &
Economic
Factors**



Causes of Cancer



1/3 to 1/2 of cancer deaths in Western populations are linked to risk factors that can be changed. (2018)

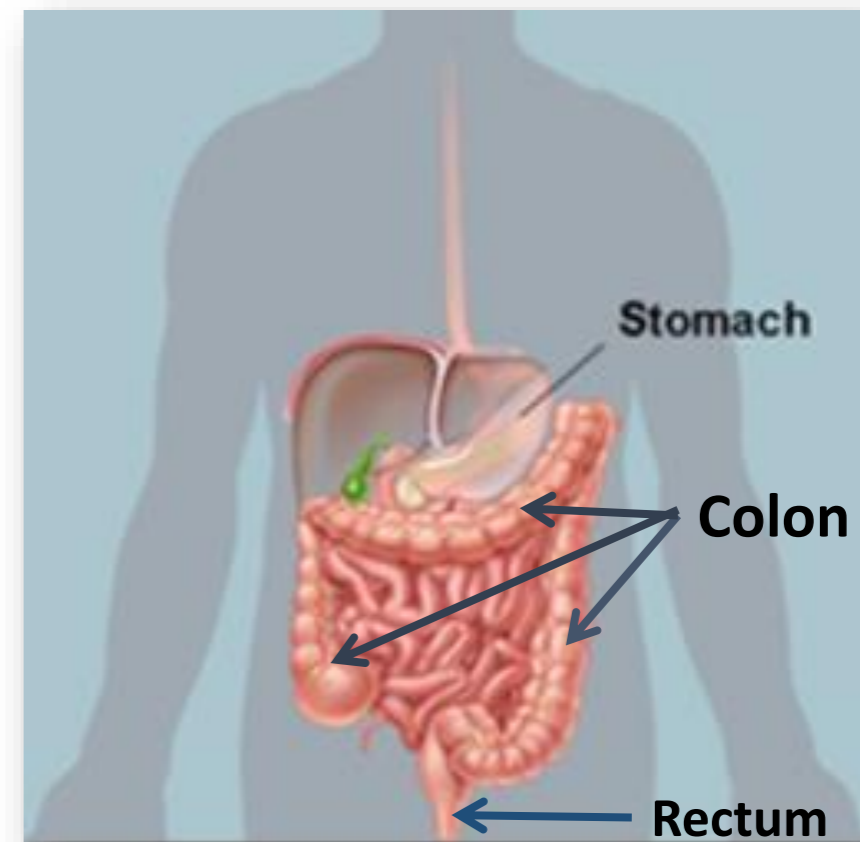


What is Colorectal Cancer?

Cancer of the large intestine

- Colorectal cancer includes the colon and the rectum
- It is slow growing and can take years to develop

Colorectal cancer is preventable and treatable!





Colorectal Cancer

Abnormal tissue or cell growths in the large intestine or colon

Begins as polyps in the inner lining of colon or rectum that are not cancerous

Tumors can be

- **Benign** - not cancer
- **Malignant** - cancer

2 types of polyps

- **Adenomas** – common; can be pre-cancerous
- **Hyperplastic** – common; more potential to be cancerous

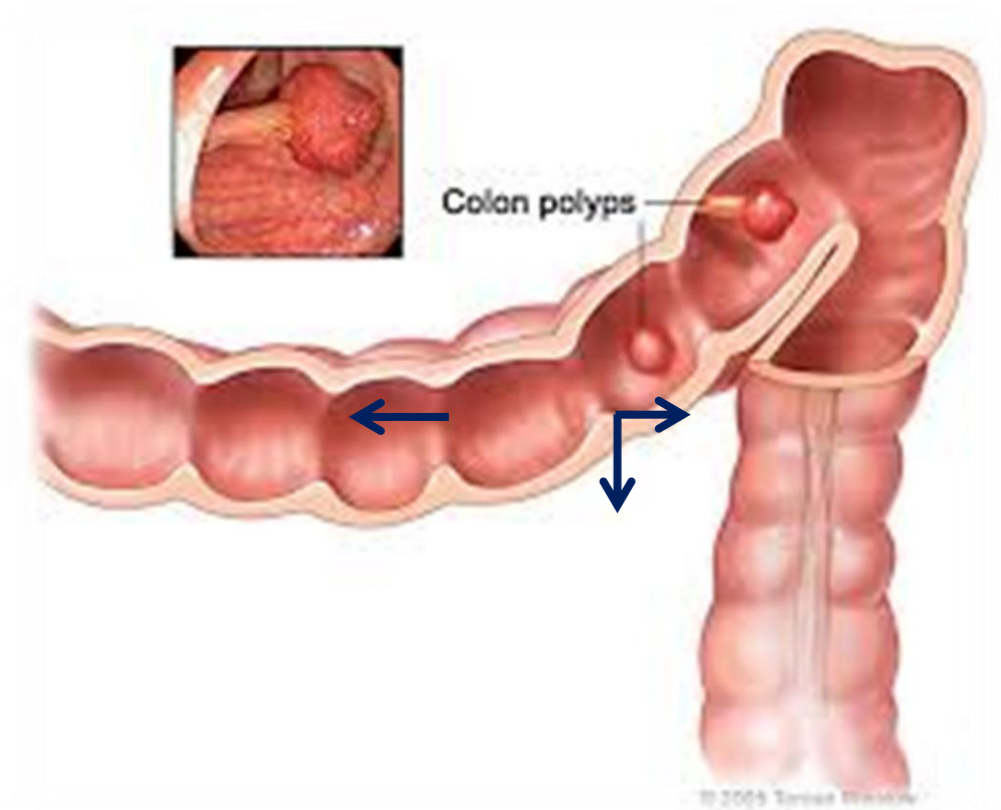


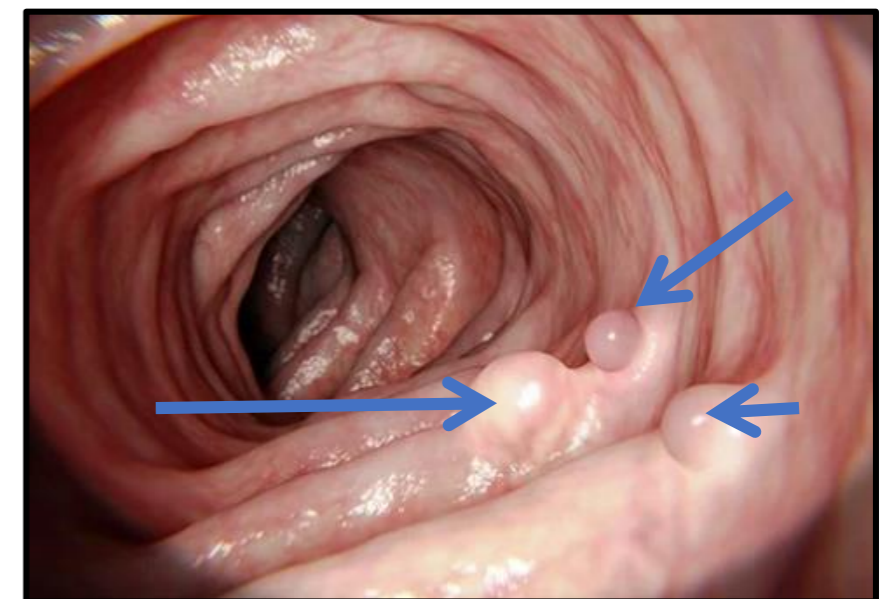
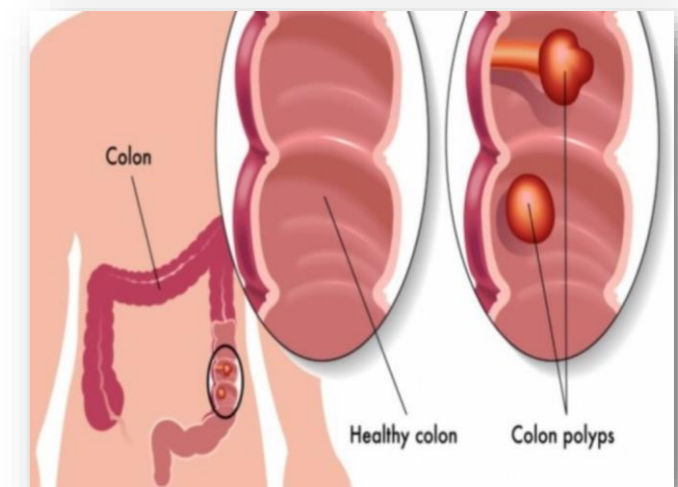
Image: National Cancer Institute (NCI)

Anyone Can Get Colon Polyps



Risk factors for getting polyps:

- **Age** - 45 years of age and older
- You had polyps before
- Family member had polyps
- Family member had colon or rectal cancer
- Women that had uterine or ovarian cancer before age 50
- Drinking alcohol
- Not getting exercise
- Overweight or obese
- Using **tobacco** products
 - Smoke cigarettes, cigars, pipes, hookah (water pipes)
 - Chew tobacco or use snuff



Polyps on the inside of large intestine

Sources: Top: DrCarney.com; Bottom: ImageNet



Colon Polyps Can Become Cancer

Polyp features that increase chances of cancer

- Type of polyp
- Size – more than 1 cm (.3937 inches)
- Number – more than 2 polyps

Abnormal development of cells in the polyp (*dysplasia*) based on:

- Growth
- Size
- Shape
- How the cells are organized

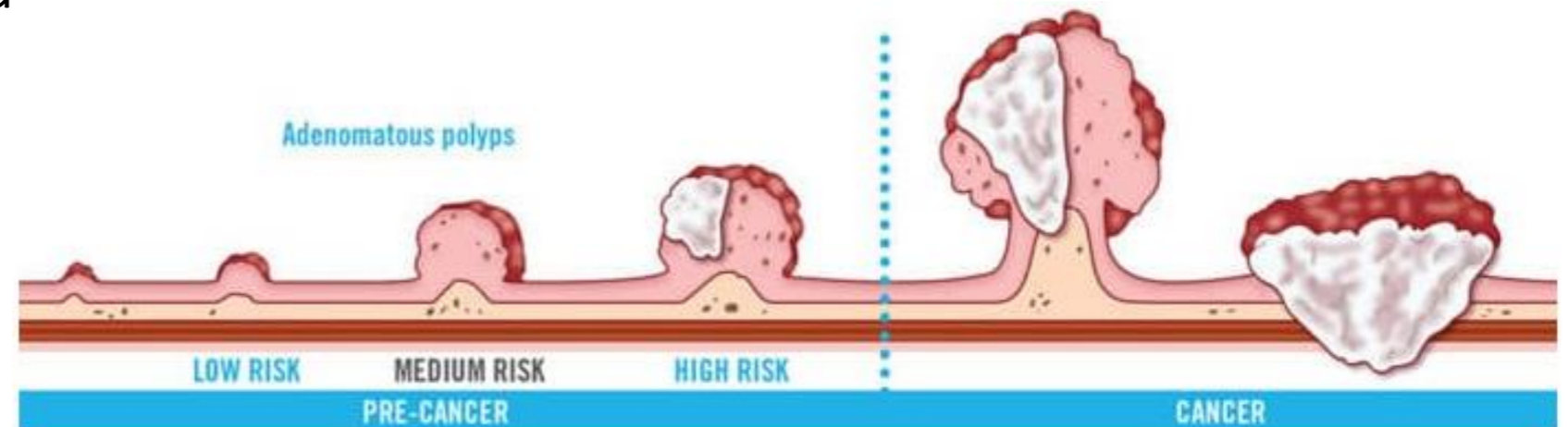
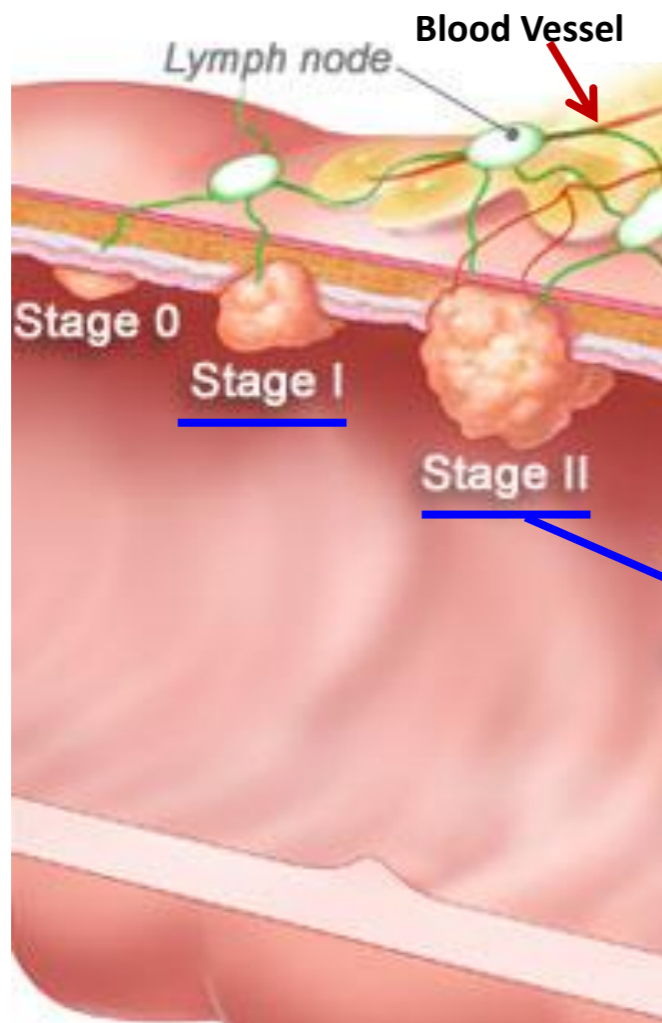


Image shows how polyps change and go from low risk to cancer.

Image Source : [Fight Colorectal Cancer Organization](https://www.fightcolorectal.org/)



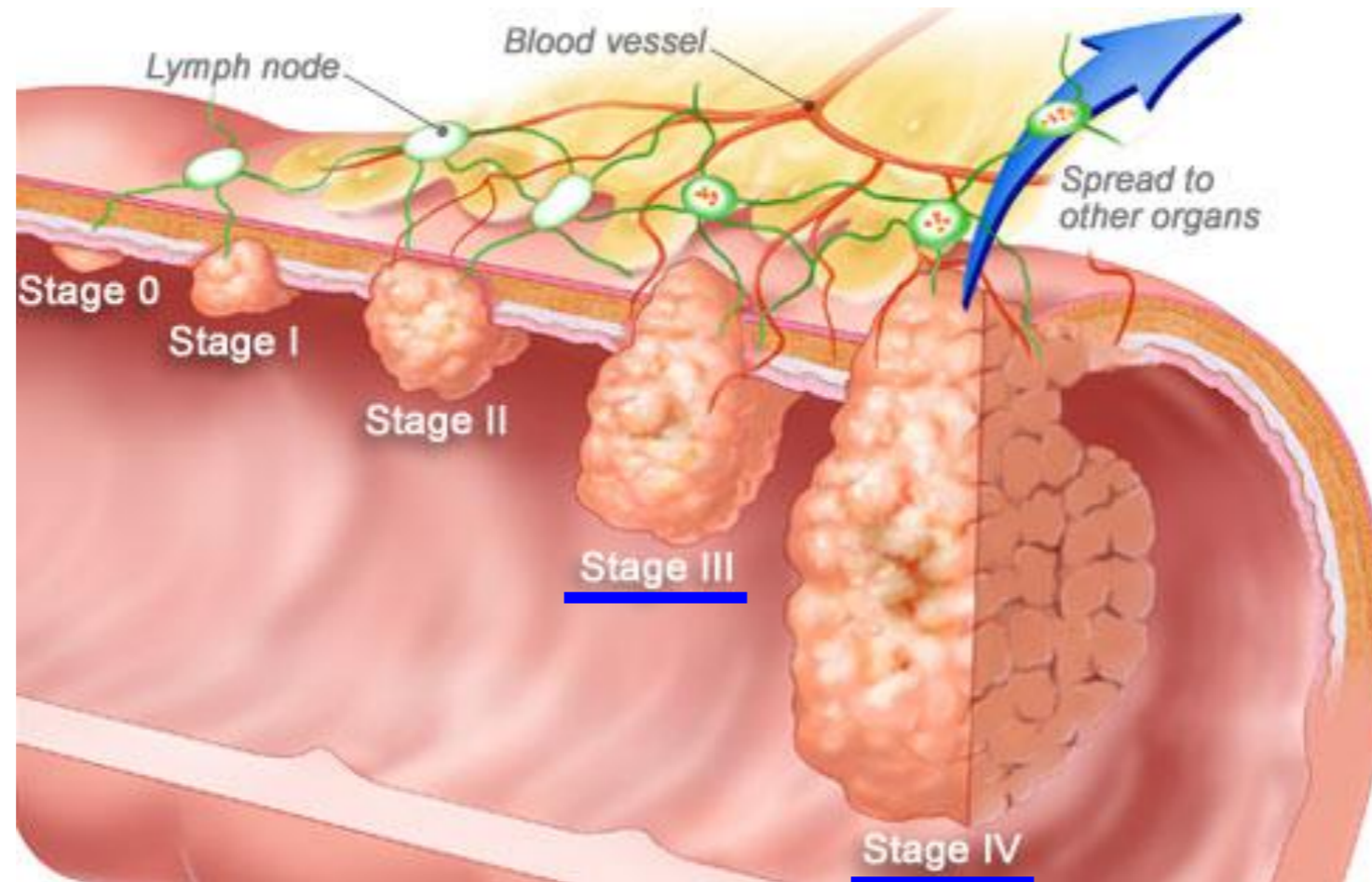
Stages of Colorectal Cancer



0	Early stage. Inner layer (mucosa) of colon or rectum; contained
I	Cancer spread through mucosa or lining of colon or rectum to muscle layer
II	Cancer has grown <ul style="list-style-type: none">• into outermost layers of colon & rectum (IIA)• through colon or rectum wall but not into other tissues or organs (IIB)• through colon or rectum wall and into other nearby tissues or organs (IIC)



Stages of Colorectal Cancer



III	Cancer grown through wall of colon or rectum and spread to lymph nodes or to fat and tissue near nodes
IV	Cancer spread to other distant organs (liver, lungs, bones) or distant lymph nodes



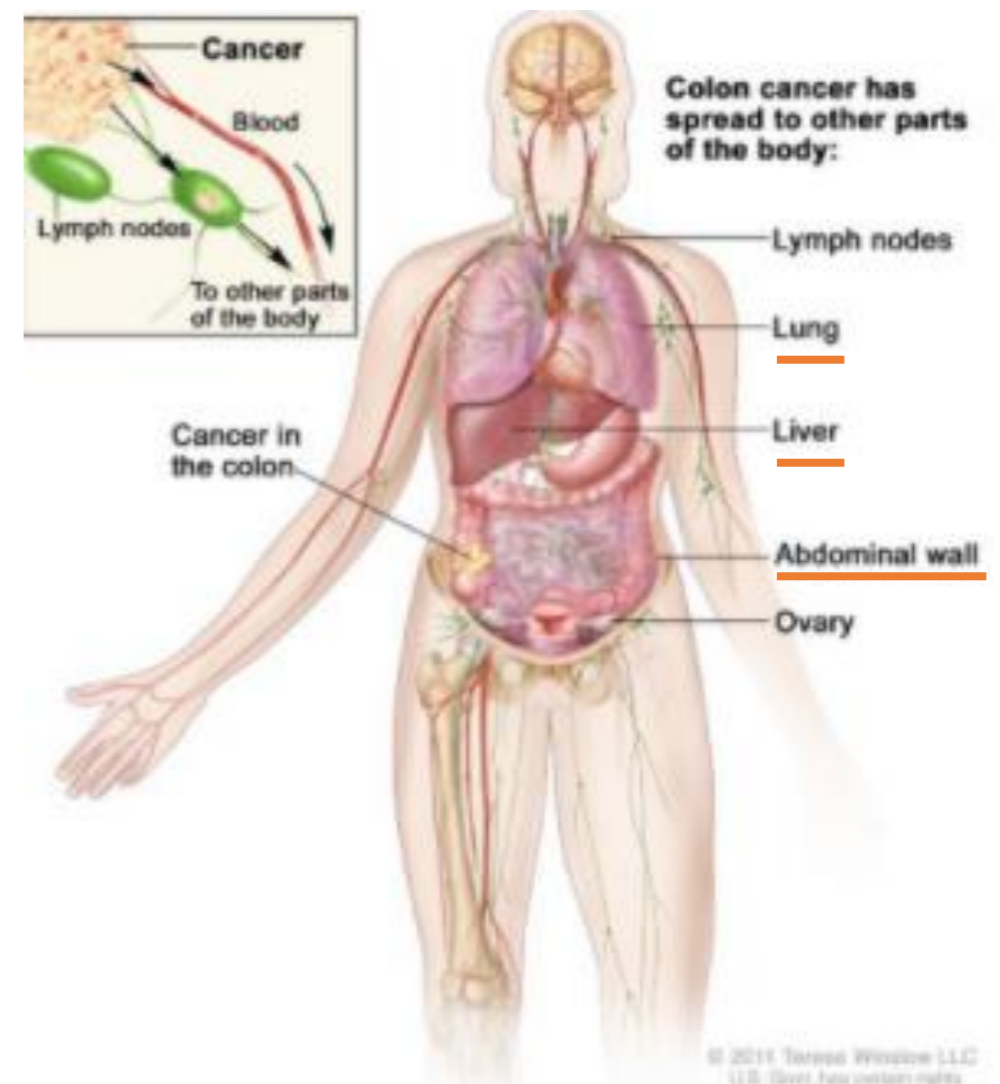
Colorectal Cancer Can Spread

Metastasis

- Cancer spreads to other parts of the body
- Spreads via lymph and blood systems

Organs most affected

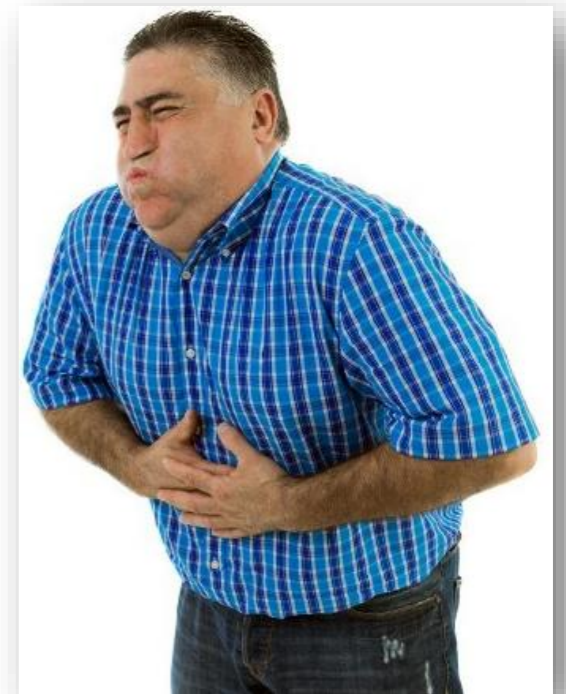
- **Liver**
- **Lung**
- Peritoneum – membrane lining the abdominal cavity





Colorectal Cancer Symptoms

- Change in bowel habits
 - Diarrhea
 - Constipation
- **Blood in or on stool (poop)**
- Bleeding from rectum
- **Stomach ache** - frequent gas pains; cramps; bloating
- **Losing weight - don't know why**
- Chronic fatigue or being tired





Risks for Colorectal Cancer

Non-Modifiable Risks - Risks you cannot change

- **Aging** - risk increases with age
- **Family history of colon or rectal cancer, or polyps**
- **Inflammatory Bowel Disease**
Possible causes – heredity; immune system malfunction
- **Personal history of cancer of colon, rectum, or ovary**





Colorectal Cancer Risks You Can Change

- Smoking - **doubles risk**
- Obese or overweight
- **Food choices** to avoid
 - High-fat diet
 - Charred meat, poultry, fish
 - Processed meats
- Alcohol use
- Physical inactivity

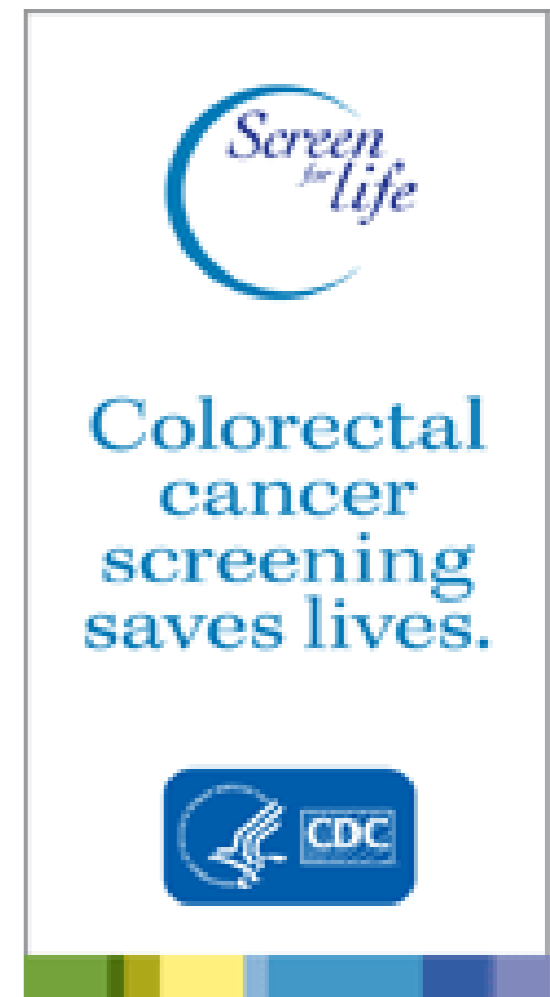




Colorectal Cancer Screening

Goal

- Look for cancer before symptoms appear
- Find precancerous polyps and remove
- Different kinds of screening are available
 - At home kits
 - Medical procedure with specialized equipment






Colorectal Cancer Screening

Recommendations

- 50 years begin screening
 - However, the American Cancer Society recommends that screening start at age 45
- 50-75 years - Screening at regular intervals
- 76-85 years - Ask your doctor
 - The decision to be screened should be based on a person's preferences, life expectancy, overall health, and results of prior screenings

**This birthday,
bottoms up!
It could save your life**

*Click to schedule
your colonoscopy!*

 Colon & Rectal
Specialists

A cupcake with blue frosting and a red candle shaped like the number 50.



Colorectal Cancer Screening

People at **high risk** of colorectal cancer might need to start colorectal cancer screening before age 45.

Start your screening earlier, if you have:

- Family members who have had colorectal cancer or certain types of polyps
- Personal history of colorectal cancer or certain types of polyps
- Hereditary colorectal cancer syndrome in the family
- Other bowel conditions
 - Inflammatory bowel disease (IBD)
 - Ulcerative colitis
 - Crohn's disease
- Had radiation therapy to the abdomen (belly) or pelvic area to treat an earlier cancer

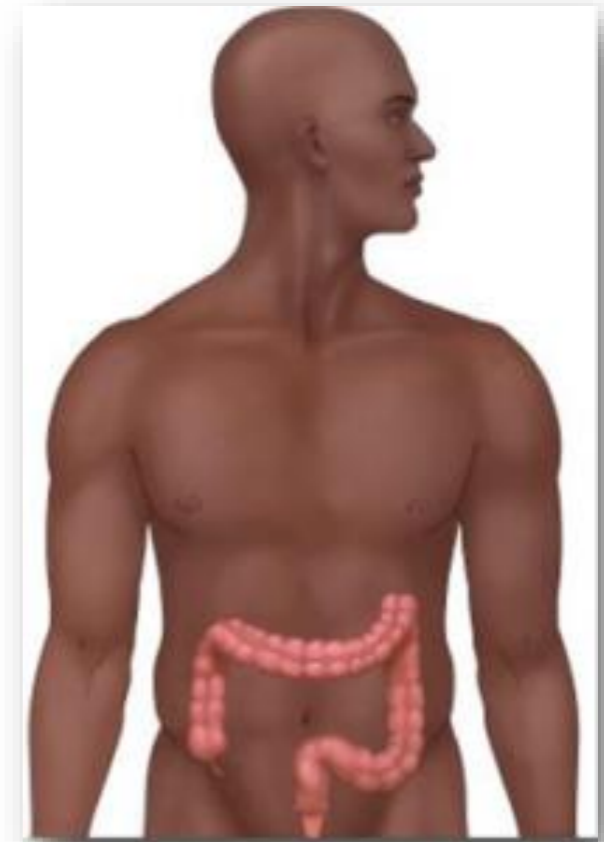


Types of Colorectal Cancer Screening



Stool (poop) Tests

- Fecal occult blood test (FOBT) - Once per year
- Fecal immunochemical test (FIT) - Once per year
- DNA stool test (FIT-DNA) - 1 or 3 years

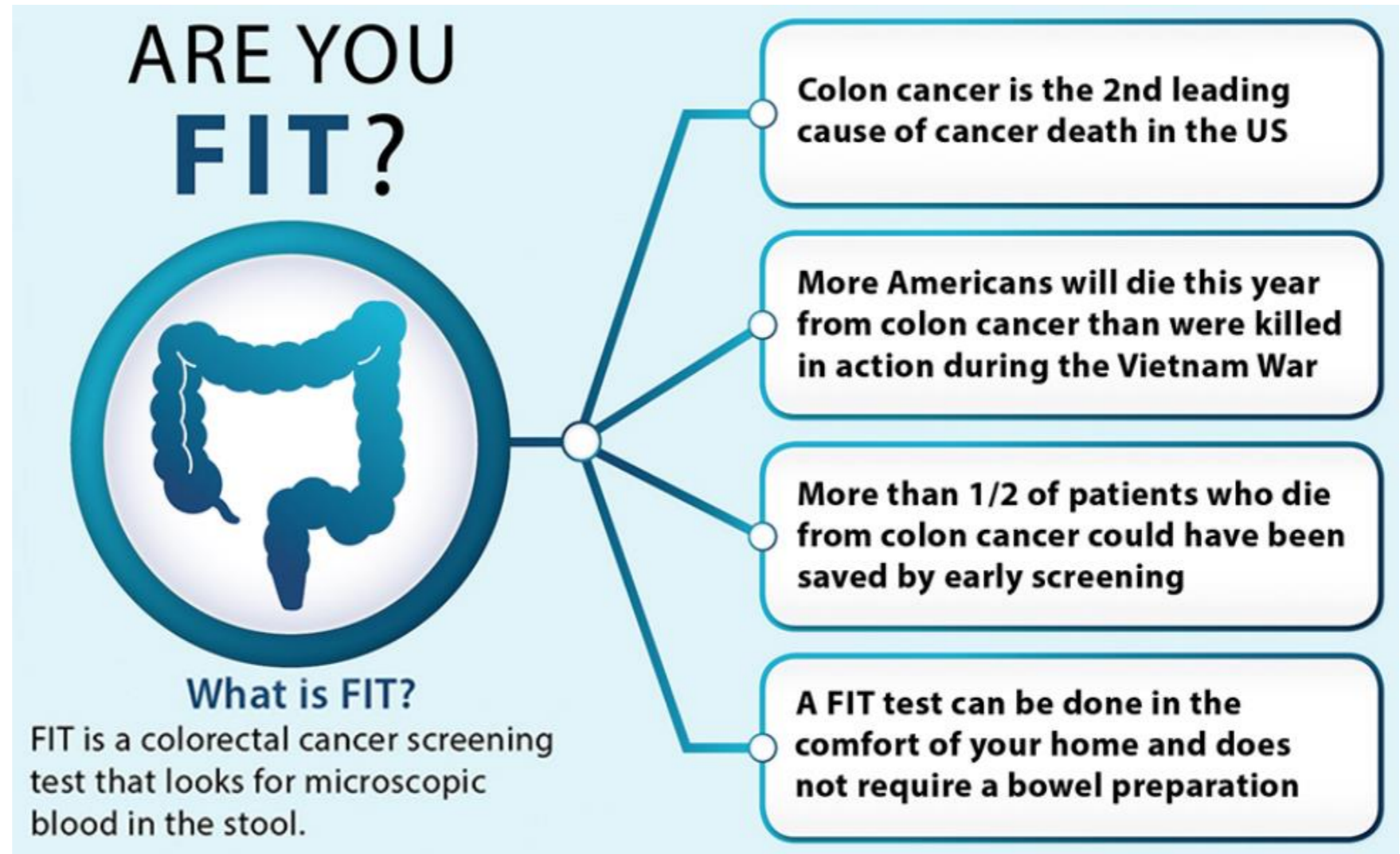


If you have a positive test result – follow-up with your doctor.

Types of Colorectal Cancer Screening



FIT Tests

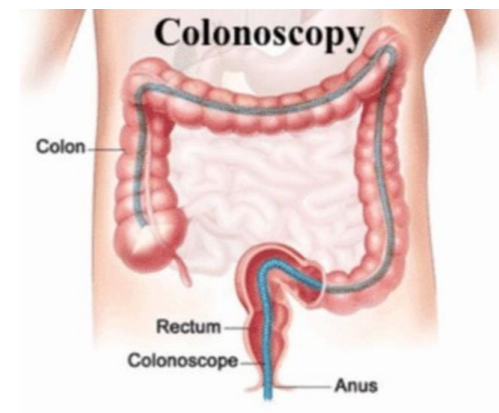
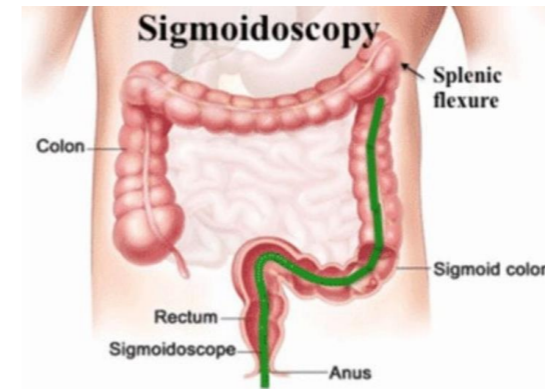


If positive result – follow-up with your doctor

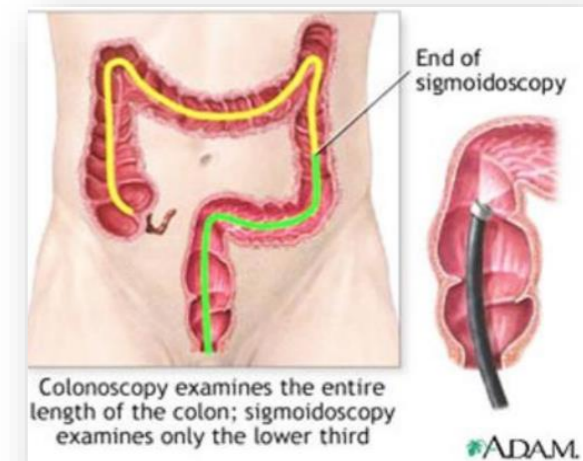
Types of Colorectal Cancer Screening

Medical Procedures

- **Sigmoidoscopy** - every 5 years
Scope inserted into lower part of large intestine
- **Sigmoidoscopy** every 10 years + **FIT** every year
- **Colonoscopy** - every 10 years
Scope inserted into entire large intestine
- **Virtual colonoscopy** - every 5 years
X-ray exam of colon using low dose computed tomography



Difference between the two screenings

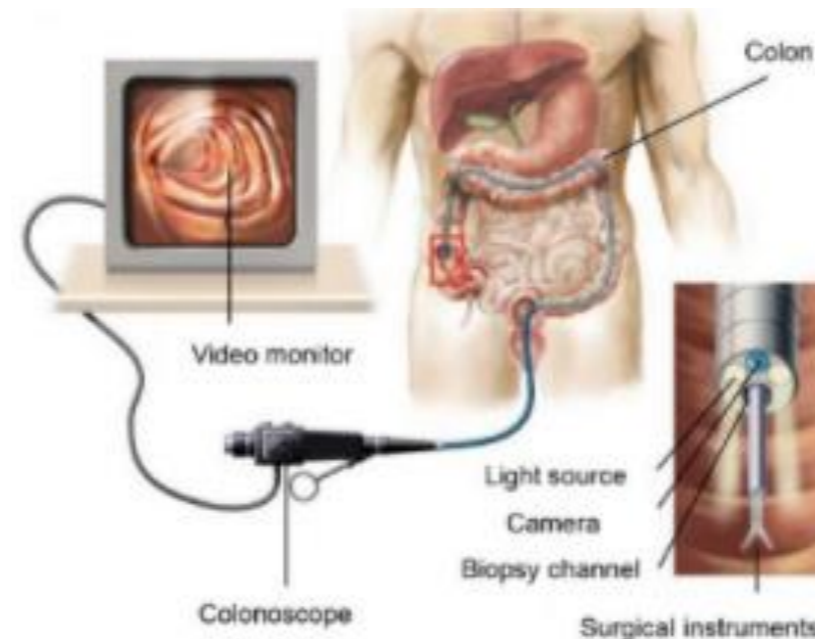




Colorectal Cancer Screening

Colonoscopy

- Flexible tube with a camera inserted into rectum, snakes through large intestine.
- Doctor views a video image of the inside lining of your large intestine.
- Surgical instrument can snip and remove growths (polyps).
- Polyp tissue cells are examined by a pathologist.
- Doctor provides you with results of the colonoscopy.

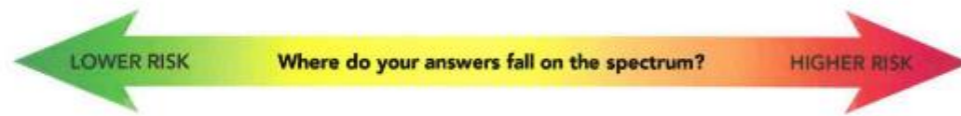


Colorectal Cancer Resources

To Access this educational material, click [here](#)



COLON & RECTUM CANCER RISKS



1. Your age	30s	40s	50s	60s	70s	80s
2. Smoke cigarettes or use other forms of tobacco	NO ----- YES					
3. Overweight or obese	NO ----- My weight is too heavy for my height ----- YES					
	NO ----- I have a "spare tire" of too much fat around my waist ----- YES					
4. Drinking, eating, food preparation, and physical activity	NO ----- Drink alcoholic beverages heavily, usually daily ----- YES					
	NO ----- Eat red meat at most meals ----- YES					
	NO ----- Often eat processed meats like hot dogs, lunch meats, salami etc. ----- YES					
	NO ----- Consume fatty foods such as bacon, ham, pork, beef ----- YES					
	NO ----- Eat grilled food that is burnt or charred ----- YES					
	YES ----- Eat fresh fruits, fresh vegetables, and whole grains daily ----- NO					
	YES ----- Physically active; get regular exercise during the week ----- NO					
5. Family history of colon or rectal cancer	NO ----- Colon or rectal cancer, especially if before 60 years of age ----- YES					
	NO ----- Colon or rectal polyps ----- YES					
6. Personal health history	NO ----- Polyps, growths on the inside of intestines or rectum ----- YES					
	NO ----- Inflamed bowels or inflammatory bowel disease ----- YES					
	NO ----- Ovarian cancer or breast cancer ----- YES					
	NO ----- Personal history of dysplasia (abnormal cells) in cervix, vagina, or vulva ----- YES					
	NO ----- Type 2 diabetes ----- YES					
	YES ----- Getting regular colon screening such as colonoscopy ----- NO					
7. Colorectal (Colon and Rectum) cancer symptoms	NO ----- Change in bowel habits (constipation or diarrhea) for several days ----- YES					
	NO ----- Blood in stool or bleeding from the rectum ----- YES					
	NO ----- Belly pain or cramping ----- YES					
	NO ----- Weight loss for no known reason ----- YES					
	NO ----- Feeling tired or weak ----- YES					

This list of colon and rectal cancer risk factors and symptoms is derived from information published by the National Cancer Institute (NCI) and the American Society of Clinical Oncologists (ASCO). Some of the symptoms may also come from other illnesses or conditions. Talk with your doctor if you experience these symptoms.

For more information about colon or rectal cancer, turn this page over and visit:

augusta.edu/cancer/community



CANCER OF THE COLON

- Adenocarcinoma**
- Forms in cells that make and release mucus and other fluids in lining of large intestines
 - Accounts for 96% of all colorectal cancers and 30%-40% of small intestine cancers (NCI)
- Carcinoid tumors**
- Forms in hormone-producing cells (neuroendocrine cells) that regulate digestive juices in the intestine

REFERENCES & RESOURCES

- American Cancer Society (ACS) www.cancer.org
- Cancer.Net www.cancer.net
- National Cancer Institute (NCI) www.cancer.gov
- Colon Cancer Coalition www.coloncancercoalition.org

MULTI-MEDIA

- Colon Cancer Alliance**
- Tools and support services for persons diagnosed with colon cancer, family caregivers and provider. Downloadable info and worksheets available for screening, colonoscopy prep, family health tree, treatment questions to ask your doctor, symptoms tracking, and others in English and Spanish. Offers survivor and caregiver videos, on-line Facebook chat, Buddy Program, and financial assistance for screening. Telephone HELPLINE 877-422-2030, M-F 9:00-5:00. www.ccalliance.org
- Colon Cancer MiniAtlas**
- Carcinogenesis and biological basis of cancer, colorectal anatomy and physiology, colorectal cancer risks, screening, treatment; from Amazon for Kindle

AUGUSTA UNIVERSITY SERVICES

- Georgia Cancer Center**
- Multidisciplinary team treats gastrointestinal cancers, including colorectal cancer www.augustahealth.org
- Digestive Health Center** 706.446.4887
1481 Laney Walker Blvd., AD-2226
Professional 1 Building, Augusta, GA 30912
- Colonoscopy and biopsy services

FOR MORE INFORMATION

augusta.edu/cancer

Georgia Cancer Center
Cancer Information and Awareness
1410 Laney Walker Blvd. CN-1179 D
Augusta, GA 30912

COLON (LARGE INTESTINE) & RECTUM

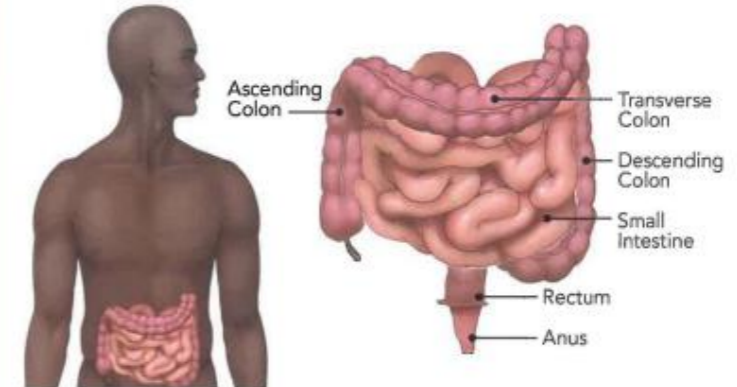


Illustration: Joshua Klein

GET THE FACTS ABOUT COLORECTAL CANCER IN THE U.S.

Colorectal cancer is cancer of the digestive system. Colorectal cancer refers to cancer of the colon and the rectum. The colon is the large intestine or large bowel. The rectum is the last 6-8 inches of the large intestine. Colorectal cancer is sporadic, which means it occurs by chance and its cause is unknown. Colon and colorectal cancer are very preventable. If discovered early these cancers are highly treatable.

- Colorectal cancer is the 3rd most common cancer in men and women
- 104,610 new cases of colon cancer and 43,340 rectal cancers
- Colorectal cancer is the 2nd leading cause of cancer deaths in men and women combined (ACS Cancer Facts & Figures 2020)
- 49,190 people die of colorectal cancer each year

Risks for colorectal cancer

Some risks associated with colorectal cancer can be modified and are based on lifestyle choices about our food, how we prepare it, and what we drink. Other risks are not modifiable.

- Aging - 90% of colorectal cancers are diagnosed at 50 years of age or older
- Family history of colorectal cancer
- Personal history of polyps in the colon or rectum; personal history of cancer
- Inflammatory diseases of the intestines like ulcerative colitis or Crohn's disease
- Obesity - 30% increased risk of colorectal cancer (NIH)

LOWER THE CHANCES OF COLON CANCER

You can help prevent colon cancer!

- Do not smoke
- Maintain a healthy weight for your height
- Keep physically active
- Limit the fat, red meats and processed meats you eat
- Eat fresh fruits, vegetables and whole grains every day
- Limit alcohol consumption
- Begin regular colon screening at age 50 if average risk. The American Cancer Society recommends colorectal cancer screening start at age 45

Screening & Early Detection Guidelines for people with average risk; common colon screening tests can start at age 45-50 to include:

- Fecal Immunochemical Test (FIT) checks for blood in stool samples; get every year
- Flexible sigmoidoscopy (FSIG) used to examine the lower colon; get every 5 years
- Colonoscopy, a procedure to examine the rectum and colon; get every 10 years

You Can Lower Your Risk & Prevent Cancer

Avoid tobacco, including secondhand smoke or e-cigarette vapor (aerosol)

If you smoke tobacco, including e-cigarettes or spit tobacco:

It's never too late to quit!



You Can Lower Your Risk & Prevent Cancer

Avoid tobacco



Protect your skin from the sun



Prevent infections (such as HIV/AIDS, HPV, Hepatitis B, and Hepatitis C)

Avoid or limit alcohol use



Follow Cancer Screening Guidelines

Promoting Health, Preventing Cancer

Maintain a healthy weight



Eat well balanced meals

(fresh fruits, vegetables
& whole grains)

Stay physically active

- Exercise regularly – 4 hrs. week
- 2.5 hours moderate exercise weekly
or
- 1.25 hours vigorous exercise a week



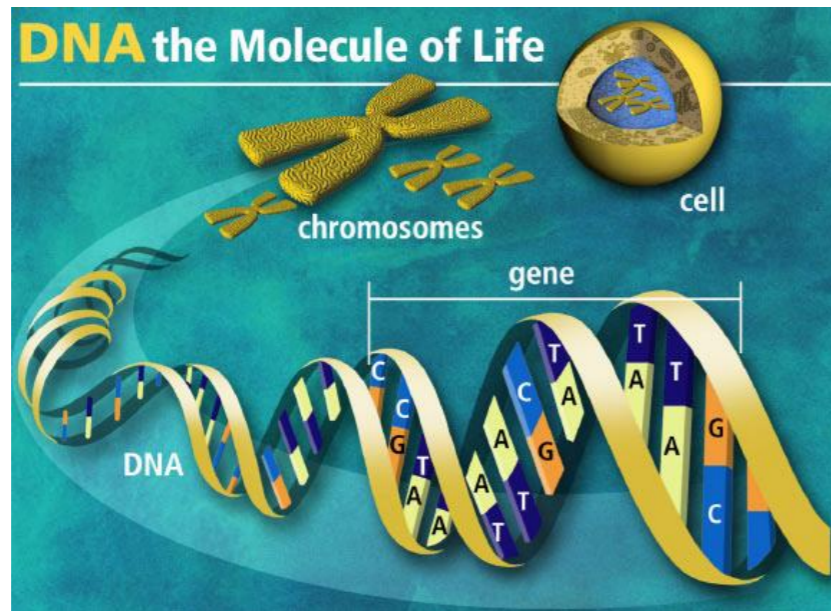
Promoting Health, Preventing Cancer



Sleep 8 hours

Know Your Family's Health History

Cancer risks vary;
May be related to inherited genes



Genetic Counseling

Assess risk of carrying a gene mutation or
developing a particular disease



Colorectal Cancer Resources



cancer.org/cancer/colon-rectal-cancer.html



Cleveland Clinic

health.clevelandclinic.org/colon-polyps-which-ones-are-riskiest-for-you



fightcolorectalcancer.org/about-colorectal-cancer/prevention/colon-polyps



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augustahealth.org/cancer-care/gastrointestinal-cancer



mayoclinic.org/diseases-conditions/colon-cancer/symptoms-causes/syc-20353669



MedicineNet

medicinenet.com/colon_polyps/article.htm



mdanderson.org/cancer-types/colorectal-cancer.html



NATIONAL CANCER INSTITUTE

cancer.gov/types/colorectal



mountsinai.org/health-library/diseases-conditions/colorectal-polyps



augusta.edu/cancer/community

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