



March is National Colorectal Cancer Awareness Month

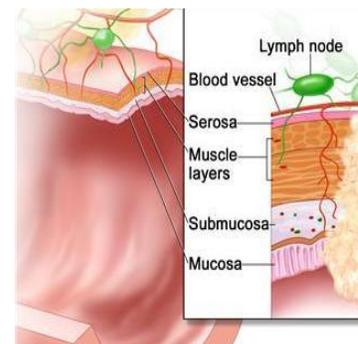


Key Inforbits

- What is colon cancer?
- Important Facts
- Screening
- Treatment
- Did you know?

What is colorectal (colon) cancer?

- ⚡ Colorectal cancer may begin as a malignant (cancerous) or a benign (noncancerous) polyp which may transform into cancer over time.
 - A malignant polyp invades the submucosa
- ⚡ The most common type of polyp is an adenoma, which originates in the glandular cells lining the colon.
 - Most of these are benign but if left undetected, up to 10% may become malignant within a 10 year period
- ⚡ Colorectal cancer is typically staged after a surgical examination using the TNM staging system which evaluates
 - Primary tumor invasion (T)
 - Metastasis to regional lymph nodes (N)
 - Presence or absence of distant metastasis (M)



<http://www.cancer.gov/cancertopics/pdq/treatment/colon/Patient/page2>

1. Colorectal cancer: What is colorectal cancer [Internet]. American Cancer Society; 2011[cited 5 Mar 2011]. Available from <http://www.cancer.org/CancehColonandRectumCancer/DetailedGuide/colorectal-cancer-what-is-colorectal-cancer>
2. Engstrom PF, Arnoletti JP, Benson AJ, et al. NCCN clinical practice guidelines in oncology: colon cancer [Internet]. National Comprehensive Cancer Network; c2009. [cited 2011 Mar 7]. Available from: http://www.nccn.org/professionals/physician_gls/f_guidelines.asp
3. Colon polyps: colon adenomatous polyps. College of American Pathologist; c2010. [cited 7 Mar 2011]. Available from http://www.cap.org/apps/docs/reference/mybiopsy/colon_adenomatous_polyps.pdf

Important Facts

- ⚡ The mortality rate for colorectal cancer is second only to lung cancer in the US.
- ⚡ 2011 estimates include approximately 140,000 new cases of colorectal cancer and an expected 49,000 deaths.
- ⚡ The lifetime risk of developing colorectal cancer is 5.2% in men and 5% in women.
- ⚡ General risk factors for colon cancer include
 - Men and women older than 50 years of age
 - African Americans
 - Tobacco smokers
 - Those who are obese, get little exercise, or have poor dietary habits
- ⚡ Highest risk patients
 - Persons with inflammatory bowel syndrome have a greater than 50% chance of developing colon cancer
 - Those with one or more first-degree family members who have been diagnosed with colon cancer have a 10-15% of developing colorectal cancer themselves

1. Colorectal (colon) cancer [Internet]. Atlanta: Centers for Disease Control; 2011 Mar 1 [Cited 2011 Mar 4]. Available from: <http://www.cdc.gov/cancer/colorectal/index.htm>
2. Colorectal cancer: What is colorectal cancer [Internet]. American Cancer Society; 2011[Cited 5 Mar 2011]. Available from: <http://www.cancer.org/Cancer/ColonandRectumCancer/DetailedGuide/colorectal-cancer-what-is-colorectal-cancer>
3. National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology: Colorectal Cancer Screening; 2010 [Cited 3 Mar 2011]. Available from: http://www.nccn.org/professionals/physician_gls/pdf/colorectal_screening.pdf

Screening Saves Lives

- ⚡ Colon cancer is both preventable and treatable if it is detected early, yet almost 40% of those who should be screened regularly are not.
- ⚡ Generally, colon cancer screening should begin at age 50 for Caucasians and age 45 for African-Americans
- ⚡ High risk patients should begin at age 40 **OR** ten years before the earliest age at which colon cancer occurred in the first degree relative (whichever age comes first).
- ⚡ There are many screening tools available for colon cancer, including
 - **Fecal occult blood test:** Analyzes stool samples for blood (which may be an early sign of cancer). Inexpensive and noninvasive screening tool that must be repeated yearly. A positive test is not diagnostic of cancer, and should be followed up with a colonoscopy for appropriate diagnosis.
 - **Barium enema:** Imaging procedure that uses x-rays to examine the lining of the colon for polyps or other abnormalities. Can identify late-stage cancer but does not detect pre cancerous lesions well. Must be performed every five years. If a positive result is obtained, a referral for colonoscopy should be made.



- CT (computed tomographic) colonography: Provides multiple cross-sectional images of the colon. Superior to a barium enema in detecting smaller polyps. Must be performed every 5 years. If a positive result is obtained, a referral for colonoscopy should be made.
- Sigmoidoscopy: Less invasive than a colonoscopy and does not require sedation; however, only evaluates the distal portion of the colon and requires repeat testing every 5 years. If a positive test result is obtained, a referral for colonoscopy should be made.
- Colonoscopy: The preferred screening test for colorectal cancer. This structural examination of the colon can remove polyps to test for cancerous cells and leads to decreased mortality rates when performed regularly. Invasive procedure that requires complete bowel evacuation, sedation, and special equipment/personnel to perform.

1. United States 2008. [Internet] Centers for Disease Control and Prevention; 2010 July [Cited 2 Mar 2011]. Available from <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm59e0706a1.htm>

2. National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology: Colorectal Cancer Screening; 2010 [Cited 3 Mar 2011]. Available from http://www.nccn.org/professionals/physician_gls/pdf/colorectal_screening.pdf

Treatment of Colon Cancer

- ⚡ Surgery is the most common type of treatment and may be the only treatment required for those with Stage 1 or low risk Stage 2 colorectal cancer. Some surgical procedures include
 - Local excision: The cancer or polyp is removed by an instrument which is inserted through the rectum into the colon.
 - Resection: Removal of the cancerous tissue and some healthy surrounding tissue.
 - Resection and colostomy: The colon is resected and an opening is made on the outside of the body (stoma). A colostomy bag is then attached to the opening.
 - Required when the 2 ends of the colon are not able to be sewn together.
 - Radiofrequency ablation: Abnormal tissue is heated and destroyed
 - Cryosurgery: Abnormal tissue is frozen and destroyed
- ⚡ Chemotherapy is often recommended for adjuvant treatment in those with stage 2 (at high risk of lymph node involvement), stage 3 and stage 4 colorectal cancer. Drugs commonly used include
 - 5-Fluorouracil (5-FU): As a bolus, it acts as a false base interfering with RNA function; as a continuous infusion it works to inhibit thymidine synthesis
 - Leucovorin: A reduced folate used to increase the cytotoxicity of 5-FU
 - Oxaliplatin: An organoplatinum compound which produces cytotoxicity by inhibiting DNA replication and transcription.
 - Bevacizumab (Avastin®): A humanized monoclonal antibody which blocks vascular endothelial growth factor-mediated angiogenesis.
 - Irinotecan: Camptothecin analog which inhibits topoisomerase I
 - Capecitabine: Oral prodrug metabolized to 5-FU
- ⚡ Some common chemotherapy regimens used in colon cancer
 - FOLFOX + Bevacizumab (Avastin®)

- FOLFOX: 5-fluorouracil (5-FU) bolus, Leucovorin, 5-FU continuous infusion, and Oxaliplatin
- FOLFIRI + Bevacizumab (Avastin®)
 - FOLFIRI: 5-FU bolus, Leucovorin, 5-FU continuous infusion, and Irinotecan
- CapOX + Bevacizumab (Avastin®)
 - CapOX: Capecitabine and Oxaliplatin

1. Medina PJ. Colorectal Cancer. In: Dipro JT, Talbert RL, Yee GC, Matzke GR, Wells BG and Posey LM. Pharmacotherapy: A Pathophysiologic Approach. New York: McGraw Hill; c2008. Chapter 133. Pg.2175-2202.
2. Engstrom PF, Arnoletti JP, Benson AJ, et al. NCCN clinical practice guidelines in oncology: colon cancer [Internet]. National Comprehensive Cancer Network; c2009. [cited 2011 Mar 7]. Available from: http://www.nccn.org/professionals/physician_gls/f_guidelines.asp
3. Colon cancer treatment [Internet]. Bethesda: National Cancer Institute; 2011 Mar 24 [cited 7 Mar 2011]. Available from: <http://www.cancer.gov/cancertopics/types/colon-and-rectal>

Did you know?

- ⚡ Alabama, along with 25 other states and tribal organizations, received a five-year grant from the CDC to help create a colorectal cancer screening and prevention program titled FITway Alabama.
- ⚡ This grant allows Alabama to provide screening and follow-up care to low-income patients between the ages of 50 and 64 years old.
- ⚡ Goals of the program
 - Increase colorectal cancer screening rates to greater than 80% in persons older than 50 years of age by the year 2014 by
 - Promoting U.S. Preventative Task Force screening guidelines
 - Reducing racial gaps in screening
 - Addressing structural barriers in patient navigation and access
 - Increasing patient adherence to screening recommendations
 - Reduce the overall incidence and death rates of colorectal cancer
- ⚡ More information on this topic can be found by calling (334)206-5324 or visiting
 - Alabama Department of Public Health at <http://adph.org/colon/>
 - Centers for Disease Control and Prevention at <http://www.cdc.gov/cancer/crccp/about.htm>

1. Fitway Alabama: Colorectal cancer prevention [Internet]. Montgomery: Alabama Department of Public Health. [Cited 4 Mar 2011]. Available from <http://adph.org/colon/>

 **The last “dose” ...** *“May you have the hindsight to know where you've been, the foresight to know where you're going, and the insight to know when you're going too far.”*

 *Irish Blessing*

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