Overview of Colorectal Cancer

Maryland Department of Health & Mental Hygiene
Prevention and Health Promotion Administration
Center for Cancer Prevention and Control
Cigarette Restitution Fund Program
May 2013
MISSION AND VISION

MISSION

- The mission of the Prevention and Health Promotion Administration is to protect, promote and improve the health and well-being of all Marylanders and their families through provision of public health leadership and through community-based public health efforts in partnership with local health departments, providers, community-based organizations, and public and private sector agencies, giving special attention to at-risk and vulnerable populations.

VISION

- The Prevention and Health Promotion Administration envisions a future in which all Marylanders and their families enjoy optimal health and well-being.
Did you know that colorectal cancer is the second leading cause of cancer deaths in Maryland?
What is colorectal cancer?

- Cancer that begins in the colon (bowel or large intestine) or rectum is known as colorectal cancer.
- The colon is about 5 feet long.
- Colorectal cancer can occur any section of the colon or the rectum.

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ColonCheck CancerCare Manitoba
How many people get colorectal cancer and die from it?

It is estimated that:

- In the US in 2012,
  - 143,460 colorectal cancer cases are expected to occur
  - 51,690 deaths are expected to occur

- In Maryland in 2012,
  - 2,420 colorectal cancer cases are expected to occur
  - 940 deaths are expected to occur

American Cancer Society's Cancer Facts and Figures, 2012
What causes colorectal cancer?

- It is not known exactly what causes colorectal cancer
  - But there are **risk factors** that increase chances for colorectal cancer:
    - Some risk factors **cannot be changed**---age, personal and family history
    - Some risk factors **can be changed**---tobacco use, obesity, inactivity
What are the risk factors for colorectal cancer?

- **Age**
  - More than 90% of colorectal cancer is found in people after age 50

- Personal and family history of colorectal cancer or high-risk adenomas in a mother, father, brother, sister, or child)
Colorectal Cancer Rates by Age and Sex
Cancers of the Colon and Rectum:
Average Annual Age-Specific SEER Incidence and U.S. Mortality Rates by Gender, 2006-2010

Source: SEER Cancer Statistics Review 1975-2010. Colon and Rectum Cancer, SEER Incidence and U.S. Death Rates, Age-Adjusted and Age-Specific Rates, By Race and Sex (Rates based on SEER 18 areas)
What are the risk factors for colorectal cancer (cont.)?

Personal or family history of:
- Colorectal cancer
- Certain colorectal polyps especially “high risk adenomas”
  - An adenoma is a colon growth that can turn into cancer
- Familial adenomatous polyposis (FAP)
- Hereditary non-polyposis CRC (HNPCC)

Personal history of inflammatory bowel disease
- Ulcerative colitis
- Crohn’s colitis
Colorectal Cancer

Adenoma - Carcinoma Sequence

Normal mucosa → Adenoma → Severe dysplasia → Cancer

- Hyperproliferation
- DNA hypomethylation
- Oncogene mutations
- Allelic deletions
- Aneuploidy
Other risk factors for colorectal cancer include:
- Cigarette smoking
- Obesity
- Excessive alcohol use
Race and colorectal cancer

- African-Americans…
  - Develop colon cancer at a younger age than whites
  - Have more ‘aggressive’ colon cancer
  - Have a reduced response to chemotherapy for advanced disease
  - Have reduced survival (30% mortality increase), and
  - Have decreased access to CRC screening

Am J Gastroenterol 100:515, 2005
Colorectal Cancer Mortality Rates by Race and Sex in Maryland, 2001-2010

Source: NCHS Compressed Mortality File in CDC Wonder
What are the signs and symptoms for colorectal cancer?

- Early colorectal cancer may have NO signs or symptoms.
- If signs and symptoms are present, they may include:
  - Bleeding from the rectum or blood in the stool
  - Marked change in bowel habits
  - Abdominal mass
  - Abdominal cramps or pain
  - Iron deficiency anemia that is not due to other conditions
  - Unintended weight loss

American Cancer Society
Who should be screened for colorectal cancer?

- People ages 50 and over
- People under 50 who have certain personal or family risk factors

Colorectal Cancer Screening Saves Lives!

American Cancer Society
How do we test for colorectal cancer?

Tests used to look for colorectal cancer:

- Colonoscopy
- Flexible Sigmoidoscopy
- Fecal Occult Blood Test (FOBT)
- Fecal immunochemical test (FIT)
- Double contrast barium enema
- CT colonography
Current CRC Screening Status of Marylander’s ≥50 years old
Maryland Cancer Survey, 2004

Behavioral Risk Factor Surveillance System
UTD—Up to date per Amer. Cancer Society options for screening

Prevention and Health Promotion Administration
May 2013
Current CRC Screening Status of Marylander’s ≥50 years old
Maryland Cancer Survey, 2006

- 59% Never Tested
- 20% Tested, but not UTD
- 11% UTD FOBT only
- 6% UTD Sig only
- 3% UTD FOBT and Sig
- 2% UTD Colonoscopy

UTD—Up to date per American Cancer Society guidelines
Current CRC Screening Status of Marylander’s ≥50 years old
Maryland BRFSS, 2010

Behavioral Risk Factor Surveillance System
UTD—Up to date per American Cancer Society guidelines
People reporting having a provider’s recommendation for endoscopy…

got screened

Maryland Cancer Survey, 2008
Colonoscopy: doctor uses a flexible tube with a light to look inside your large intestine (colon or guts).
Colonoscopy (cont.)

- Colonoscopy looks at the whole colon
  - To find cancer early so it can be treated
  - To **remove** polyps from the colon
    - Some polyps are adenomas (benign tumors) which might become cancer if they are not removed
  - The procedure takes about 30 minutes—
    or longer if polyps need to be removed

American Cancer Society
Terms Used to Describe the Gross Appearance of Colon Tumors

- **Polyp**: a nonspecific term to describe any protuberance into the colon
- Terms used to describe the appearance of a polyp:
  - **Pedunculated** lesions protrude into the lumen and have a narrow stalk (like a mushroom)
  - **Sessile** lesions are broad based and raised and extend directly from the colon surface
  - **Flat** lesions are difficult to detect
Polyps in the Colon Need to be Removed

Sessile polyp (broad based)

Pedunculated polyp (on a stalk)

Biopsy forceps
Polyps Should be Looked at Under a Microscope

- Polyps cannot be diagnosed just by looking at them in the colon
- They need to be removed and looked at
  - Under a microscope
  - By a pathologist
- Then your doctor can tell you what type of polyp you had and when you need your next colonoscopy
More Polyps for Removal

Sessile polyp

Diagnosed as tubular adenoma by pathologist

Polyp removal

Sessile polyp

Diagnosed as tubulovillous adenoma by pathologist
What should I do to get ready for colonoscopy?

- **Bowel Preparation:**
  Before colonoscopy, the colon must be clean so the doctor can see inside the entire colon.
  - Clear liquid diet one to two days before the test
  - Laxatives to eliminate stool from the colon
Clean Colon Showing Polyps
What about during and after colonoscopy?

- Just before the test, you will be given medications to relax you.
- After the test, you will need someone to take you home.
- Although the procedure is safe, colonoscopy involves slight risk (for example, bleeding or perforation).
Can I reduce my risk for colorectal cancer?

YES, you can reduce your risk for colorectal cancer (and other cancers and chronic disease):

- Get screened
- Avoid cigarettes and tobacco
- Increase physical activity
- Keep a healthy weight
- Avoid excess alcohol

American Cancer Society, NCI PDQ, 10/12/12
Colorectal Cancer Screening Saves Lives!
Prevention and Health Promotion Administration

http://phpa.dhmh.maryland.gov