Overview of Colorectal Cancer

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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.
How many people get colorectal cancer and die from it?

- It is estimated that about 154,000 people developed colorectal cancer and 52,180 died from the cancer in US in 2007*

- In Maryland in 2007:
  - 2,870 individuals were projected to develop colorectal cancer and
  - 970 estimated to die from the cancer *

* American Cancer Society's Cancer Facts and Figures 2007
Colorectal Cancer Age-Specific Incidence Rates by Race, Maryland and the United States, 1995-1999

Age-specific rate per 100,000 population

Source: Maryland Cancer Registry, 1995-1999; SEER, National Cancer Institute, 1995-1999
Colorectal Cancer Mortality Rates by Race and Sex in Maryland, 1995-2001

Age-adjusted rate per 100,000 population

Black men
White men
Black women
White women

Source: Maryland Cancer Registry, 1995-1999
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 or eliminated---tobacco use, obesity, inactivity
What are the personal and family risk factors?

• Age
  – More than 90% of colorectal cancer is found in people ages 50 and over.

• Family history (in a mother, father, brother, sister, or child):
  – Colorectal cancer
  – Adenomatous polyps or “adenomas”
What are the personal and family risk factors (cont.)?

Personal history of:

- Colorectal cancer
- Adenomatous polyps or “adenomas”
  - An adenoma is a growth that can turn into cancer
- Ovarian or endometrial cancer before age 50
- Inflammatory bowel disease
  - Ulcerative colitis and Crohn colitis

Source: American Cancer Society

Source: NCI
Adenoma - Carcinoma Sequence

- Normal mucosa
  - Hyperproliferation
  - DNA hypomethylation

- Adenoma
  - Oncogene mutations

- Severe dysplasia
  - Allelic deletions
  - Aneuploidy

- Cancer
Other risk factors

- Other risk factors for colorectal cancer include:
  - Smoking
  - Diets high in fat
  - Obesity in premenopausal women

Source: American Cancer Society
Race and colorectal cancer

• Compared to Caucasians, African-Americans...
  – Develop colon cancer at a younger age
  – Have decreased access to screening
  – Have more ‘aggressive’ colon cancer
  – Have a reduced response to chemotherapy for advanced disease
  – Have reduced survival (30% mortality increase)

Am J Gastroenterol 100:515, 2005
What are the signs and symptoms for colorectal cancer?

• Early stages of 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

Source: American Cancer Society
Who should be screened for colorectal cancer?

- People ages 50 and over
- People under 50 with:
  - Personal or family risk factors

Source: American Cancer Society

Colorectal Cancer Screening Saves Lives!
How do we test for colorectal cancer?

Tests used to look for colorectal cancer:
- Colonoscopy
- Flexible Sigmoidoscopy
- Fecal Occult Blood Test (FOBT)
- Double contrast barium enema
- Other

Source: Oncolink
Current CRC Screening Status of Marylander’s ≥50 years old
Maryland Cancer Survey, 2004

- 23% Never Tested
- 10% Tested, Not UTD
- 9% UTD with FOBT only
- 5% UTD with Sig only
- 3% UTD Sig/FOBT
- 50% UTD Col +/-FOBT

*UTD—Up to date per Am. Cancer Society options for screening
Current CRC Screening Status of Marylander’s ≥50 years old
Maryland Cancer Survey, 2006

*UTD—Up to date per Am. Cancer Society options for screening
People reporting a provider’s recommendation for endoscopy…

got screened

Source: Maryland Cancer Survey, 2006
Colonoscopy

- **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 and remove polyps or to find cancer.
- The procedure takes about 30 minutes unless polyps need to be removed.

Source: American Cancer Society
Different types of polyps

Sessile polyp

Tubulovillous adenoma

Biopsy forceps
Different types of adenomas

- Sessile polyp
- Tubular adenoma
- Polyp removal
- Sessile polyp
- Tubulovillous adenoma
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 adenomas

Pedunculated polyp
Tubular adenoma

Pedunculated polyp
Tubular adenoma
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 (bleeding, perforation).
Can I reduce my risk for colorectal cancer?

- You can reduce your risk for colorectal cancer:
  - Get screened for colorectal cancer
  - Achieve and maintain a healthy weight
  - Exercise at least 30 minutes on five or more days each week
  - Eat at least five servings of vegetables and fruits each day
  - Avoid tobacco and alcohol

Source: American Cancer Society
Colorectal Cancer Screening Saves Lives!

THE END