Update on CRC Screening

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this year
50,000 PEOPLE
are expected to
DIE of
colorectal cancer

Screening could
SAVE more than HALF
of those lives*

find out how the other half LIVES —
ask your doctor about a
colonoscopy

*American Cancer Society Cancer Facts & Figures 2013

American College of Gastroenterology
www.gi.org
Why talk about it?

One of the most preventable cancers!

- 2nd leading cause of cancer deaths
- 2nd most common cancer diagnosed in women
- 1 in 3 people diagnosed will die
- Lifetime incidence (average risk): 4.4%

Nationwide: 147,500 new cases
57,100 deaths

2003 Cancer Death Estimates

- Lung 157,200
- Colon 57,100
- Breast 39,800
- Prostate 28,900

Data represents 2003 colorectal cancer estimates from the SEER database
Women are...

- Diagnosed with colon cancer at rates **EQUALLY** as men
- **Less likely** to get screening than men
Does Screening Help?

- Death rates from CRC are declining on average 2.7 percent each year between 2004 and 2013.
- A microsimulation model, MISCAN-Colon, suggests that screening may account for 53 percent of the observed reduction in CRC mortality.

Current GI Association Screening Guidelines:
Who and When To Screen

- Average risk: start regular screening at age 50
- Begin screening of African Americans at age 45
- People who are in good health and with a life expectancy of more than 10 years should continue regular colorectal cancer screening through the age of 75.
- For people ages 76 through 85, the decision to be screened should be based on a person’s preferences, life expectancy, overall health, and prior screening history.

Current Screening Guidelines: Who and When To Screen

- For screening, people are considered to be at average risk if they **do not** have:
  - A personal history of colorectal cancer **or** certain types of polyps
  - A family history of colorectal cancer
  - A personal history of inflammatory bowel disease (ulcerative colitis or Crohn’s disease)
  - A confirmed or suspected hereditary colorectal cancer syndrome, such as familial adenomatous polyposis (FAP) or Lynch syndrome (hereditary non-polyposis colon cancer or HNPCC)
  - A personal history of getting radiation to the abdomen (belly) or pelvic area to treat a prior cancer

Types of Colon Cancer

- Sporadic: 80%
- Familial: 15%
- Hereditary: 4%
- IBD: 1%
Current Screening Guidelines: Who and When To Screen

| Family History | Recommended Screening Interval |

Current Screening Guidelines: Who and When To Screen

- HNPCC (Lynch Syndrome)
  - Patients who meet the Bethesda criteria should undergo microsatellite instability testing of their tumor or a family member’s tumor and/or tumor immunohistochemical staining for mismatch repair proteins (Grade 2 B)
    - Note: we reflexively test ALL tumors at UH for MSI
  - Those with positive genetic testing, or those at risk when genetic testing is unsuccessful in an affected proband, should undergo colonoscopy every 2 years beginning at age 20 – 25 years,
  - Endometrial cancer at a young age (<50)
Average risk: start regular screening at age 45
Microsimulation Screening Analysis-Colon (MISCAN-Colon) model was used to inform the US Preventive Services Task Force colorectal cancer (CRC) screening guidelines.

Life-years gained (LYG; benefit), the number of colonoscopies (COL; burden) and the ratios of incremental burden to benefit (efficiency ratio \([\text{ER} = \Delta \text{COL}/\Delta \text{LYG})\) were projected for different screening strategies.

- These values were also corrected for life years lost due to screening complications.

Consequently, the balance of burden to benefit of screening improved and now 10-yearly colonoscopy screening starting at age 45 years resulted in an ER of 32.
A total of 132 unique screening strategies were evaluated.
Lifetime number of colonoscopies and life-years gained (LYG) for colonoscopy screening strategies

9 efficient strategies identified

Why 45?

- It was efficient (1 of the 9)
- Highest # of LYG among the strategies with ERs <40 and 45
- Compared with the current recommendation (screening every 10 years from ages 50-75 years), this strategy resulted in 25 (+6.2%) additional LYG

Screening Options

- Direct Visualization
  - Colonoscopy every 10 years
  - CT Colonography every 5 years
  - Flexible Sigmoidoscopy every 5 years
  - Flexible Sigmoidoscopy every 10 years with FIT every year
**Stool Testing**

- FOBT every year
- FIT every year
- Cologuard (Stool DNA) every 3 years

FIT vs Cologuard vs Colonoscopy

- 9989 patients enrolled and each underwent FIT, Cologuard AND colonoscopy
- **Cologuard**: sensitivity for CRC of 92%, 40% sensitivity for SSPs >1 cm in size
- **FIT**: 73.8% sensitivity for cancer, sensitivity for SSPs = to the false-positive rate, indicating no sensitivity.

- **Cost effectiveness**: many many modeling studies have been done, and they all show ALL screening tests are cost effective as cost of cancer treatment far outweighs cost of screening (for both colonoscopy AND stool based testing)
Cologuard

- Covered by Medicare, every 3 years, age 50-85, as a SCREEN
- If positive → need colonoscopy
- Cannot go back to Cologuard
Who CANNOT use Cologuard

• Patients with a history of colorectal cancer, adenomas, or other related cancers.

• Patients who have had a positive result from another colorectal cancer screening method within the last 6 months.

• Patients who have been diagnosed with a relevant familial (hereditary) cancer syndrome, such as Hereditary non-polyposis colorectal cancer syndrome (HNPCCC or Lynch Syndrome), Peutz-Jeghers Syndrome, MYH-Associated Polyposis (MAP), Gardner’s syndrome, Turcot’s (or Crail’s) syndrome, Cowden’s syndrome, Juvenile Polyposis, Cronkhite-Canada syndrome, Neurofibromatosis, Familial Hyperplastic Polyposis.

• Patients who have been diagnosed with a condition that is associated with high risk for colorectal cancer. These include but are not limited to:
  • Inflammatory Bowel Disease (IBD) Chronic ulcerative colitis (CUC)
  • Crohn’s disease
  • Familial adenomatous polyposis (FAP)
  • Family history of colorectal cancer**
Colonoscopy

Advantages
- Detects >95% polyps and 100% cancers
- Provides diagnosis and therapy
- Medicare covers average-risk

Limitations
- Risks
- Availability
- Cost
- Compliance

Get the polyp. Get the cure.
Natural History of Colorectal Cancer

Normal Colon

Adenoma (pre-cancer)

Early

Intermediate

Late

Cancer

~ 10 – 15 years

Most colorectal cancers (CRCs) arise from adenomas
The progression from adenoma to carcinoma takes about 10 years
Removal of adenomatous polyps prevents cancer

- The National Polyp Study followed 1418 patients in whom colonoscopic examination led to the removal of one or more polyps.
- During a mean follow-up of six years, the incidence of colon cancer was 88 to 90 percent lower than in patients reported in other studies who had polyps that were not removed and 76 percent lower than in the general population.

Benefits of Screening

Polypectomy prevents cancer

BUT

90% survival if cancer found early

Five-Year Relative Survival Rates for Colorectal Cancer by Stage at Diagnosis, 1995-2000
Is your provider doing a good job?

Table 3. Tools for patients to enhance colonoscopy quality

<table>
<thead>
<tr>
<th>Questions for patients to ask prospective colonoscopists to help ensure a high-quality examination</th>
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<tbody>
<tr>
<td>1. What is your adenoma detection rate? (should be $\geq 25%$ overall or $\geq 30%$ for male patients and $\geq 20%$ for female patients)</td>
</tr>
<tr>
<td>2. What is your cecal intubation rate (should be $\geq 95%$ for screening colonoscopies and $\geq 90%$ overall)</td>
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<tr>
<td>3. Do you use split-dosing of bowel preparations? (effective bowel preparation requires that at least half the preparation be ingested on the day of the colonoscopy)</td>
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<table>
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<tr>
<th>Checks of the endoscopy report after the procedure</th>
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<tr>
<td>1. Does the report include photographs of the end of the colon, including the appendiceal orifice and ileocecal valve/terminal ileum? (this demonstrates that the full extent of the colon was examined)</td>
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<tr>
<td>2. Is the bowel preparation quality described? (the preparation must be adequate to ensure effective examination)</td>
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SEE HOW A SMALL DIFFERENCE can make all the difference

Did you know that your risk of colon cancer increases dramatically after the age of 50? But with regular screening, over 90% of cases can be stopped before the cancer advances.

If detected early, colon cancer is highly treatable.

AVOID CANCER

COLON CANCER SURVIVAL STATISTICS

<table>
<thead>
<tr>
<th>Stage</th>
<th>Survival Rate</th>
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<tbody>
<tr>
<td>Stage I</td>
<td>94%*</td>
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<tr>
<td>Stage II</td>
<td>82%*</td>
</tr>
<tr>
<td>Stage III</td>
<td>67%*</td>
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<tr>
<td>Stage IV</td>
<td>11%*</td>
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* Based on 5-year survival rate
Are people getting tested?

Testing rates remain far too low

- Fewer than half of Americans over age 50 report having had a recent colorectal cancer screening test
- Because of low testing rates, only 39% of colorectal cancers are detected at the earliest, most treatable stage
Colon cancer is the second leading cause of cancer deaths in the U.S. yet it can be prevented by finding and removing precancerous polyps and the best way to find precancerous polyps is to perform screening colonoscopy on asymptomatic individuals.

The dilemma is that at least 40 percent of people eligible to be screened do not get screened. The reasons are numerous, including costs of time and money, access to care, not being aware of screening recommendations and, frankly, just not wanting to have a colonoscopy.

If the detection rate of dangerous polyps is 42 percent, what is left unsaid is that 58 percent of the most dangerous polyps are not detected by Cologuard, and that is unacceptable.

It is the last group of patients for which Cologuard is best suited. For people who just do not want to get a colonoscopy, knowing that it can prevent colon cancer, Cologuard is an option. 42 percent is much better than nothing.
COLON CANCER is:

Preventable.

Treatable.

BEATABLE.

Regular testing can prevent colon cancer or find it early.
If you’re 50 and older, go get tested!
Also... many thanks to these OBs