An Update on Evolving Colorectal Screening Issues
May 19, 2011

This first part today will be presented by:

Stanley H. Weiss, MD, FACP, FACE
- Professor, Preventive Medicine & Community Health, UMDNJ-NJMS
- Professor, Quantitative Methods, UMDNJ School of Public Health
- Director & Principal Investigator, Essex County Cancer Coalition (ECCC)
  weiss@umdnj.edu

And this part is based on a teaching presentation designed by the American Cancer Society
These initial slides and overview are largely courtesy of Dr. Durado Brooks at the American Cancer Society

Colorectal Cancer: Update 2011

Durado Brooks, MD, MPH
Director, Prostate and Colorectal Cancers
Colorectal Cancer – “CRC”

- The third most common cancer in U.S., and the third deadliest
  - Nearly 150,000 new cases each year
  - Close to 49,000 deaths nationwide each year
- More than 1 million Americans living with colorectal cancer
Trends in Colorectal Cancer Death Rates by Race and Gender, 1975-2004
Colorectal Cancer Risk Factors

- **Age**
  - 90% of cases occur in people 50 and older

- **Gender**
  - slight male predominance, but common in both men and women

- **Race/Ethnicity**
  - African Americans have highest incidence and mortality
  - Increased rates also documented in Alaska Natives, some American Indian tribes, Ashkenazi Jews

- **Reasons??** *The reasons for these racial and ethnic differences in disease incidence are unclear...*
Risk Factors

- Increased risk with:
  - **Personal** history of inflammatory bowel disease, adenomatous polyps or colon cancer
  - **Family** history of adenomatous polyps, colon cancer, other conditions
- Individuals with these risk factors may require earlier and more intensive screening

*Remainder of this talk will focus on screening recommendations for those at average risk*
Colorectal Cancer

- Sporadic (average risk) (65%–85%)
- Family history (10%–30%)
- Hereditary nonpolyposis colorectal cancer (HNPCC) (5%)
- Familial adenomatous polyposis (FAP) (1%)
- Rare syndromes (<0.1%)
Risk Factor - Polyps

Types of polyps:

- **Hyperplastic**
  - minimal cancer potential

- **Adenomatous**
  - approximately 90% of colon and rectal cancers arise from adenomas

(c) 2011, American Cancer Society
Normal to Adenoma to Carcinoma

Human colon carcinogenesis progresses by the dysplasia/adenoma to carcinoma pathway
When is testing “Screening”?

• In the public health context, **screening** is performed on designated group(s) in the absence of symptoms or signs.
• If someone has a clinical problem or suspicion of disease, that is “**diagnostic**” testing, NOT screening per se.
• Our public health programs, such as NJCEED, may test persons who come in due to health concerns – so their work is a mixture.

• Screening is recommended in the public health context when:
  • the methodology has been proven to be life-saving, or
  • occasionally when the body of evidence suggests it will be PLUS
    • cost-benefit analysis judges it to be “worth” it to society.

© 2011, SH Weiss
Benefits of CRC Screening

- Cancer Prevention
  - Removal of pre-cancerous polyps prevents cancer (unique aspect of colon cancer screening)

- Cost-effective
  - Cost of CRC screening compares favorably to many other common interventions (i.e. mammograms)
  - Treatment costs for advanced disease have risen greatly in recent years

- Improved survival
  - Early detection markedly improves chances of long term survival

(c) 2011, American Cancer Society
Benefits of Screening

Survival Rates by Disease Stage*

5-yr Survival

1996 - 2003
CRC Screening Guidelines
Colorectal Cancer Screening
(from the 2008 “Consensus” Guidelines)

Average risk adults age 50 and older

**Tests That Detect Adenomatous Polyps and Cancer**

- **Flexible sigmoidoscopy** (FSIG) every 5 years, or
- **Colonoscopy** every 10 years, or
- **Double contrast barium enema** (DCBE) every 5 years, or
- **CT colonography** (CTC) every 5 years

**Tests That Primarily Detect Cancer**

- **Guaiac-based fecal occult blood test** (gFOBT) with high test sensitivity for cancer, or
- Fecal immunochemical test (FIT) with high test sensitivity for cancer, or
- **Stool DNA test** (sDNA), with high sensitivity for cancer
Tests for Polyps and Cancer
Colonoscopy allows doctors to directly see inside the entire bowel.
Colonoscopy
Colonoscopy

- Provides opportunity to find both cancer and polyps
- Growth can be biopsied and polyps can be completely removed
- Has become the most common test used for CRC screening in the US

(c) 2011, American Cancer Society
Colonoscopy

Some of its Limitations

- Expense
- Limited access in some settings
- Logistics (time off work, need driver,...)
- Prep issues
- Complications (sedation, bleeding, perforation,...)
- May miss up to 10% of significant lesions, especially very small, flat or ulcerative lesions
Flexible Sigmoidoscopy (FSIG)

- Similar to colonoscopy, but uses a shorter instrument
- FSIG allows doctor to directly see the lower one-third of the colon
Colon and Rectum

Maximal reach of Flex. Sig. is towards the splenic flexure
Anatomy and CRC Distribution

- Transverse: 15%
- Descending: 5%
- Ascending: 25%
- Cecum
- Sigmoid: 25%
- Rectosigmoid: 10%
- Rectum: 20%
Double Contrast Barium Enema

- Use as a screening tool has fallen dramatically over the past decade.
- X-ray study using barium (white) and air (dark) in colon to look for irregularities.
CT Colonography (CTC)*

*AKA “Virtual Colonoscopy”

Images courtesy of Beth McFarland, MD
CT Colonography

Rationale

- Allows detailed evaluation of the entire colon
- High sensitivity for cancer and large polyps (similar to that of colonoscopy)
- No sedation required
- Minimally invasive (rectal tube for air insufflation)
CT Colonography

Limitations

- Requires **full bowel prep** (which most patients find to be the most distressing element of colonoscopy)
- Colonoscopy is required if abnormalities detected, sometimes necessitating a second bowel prep
- Steep learning curve for radiologists
- Limited availability to high quality exams in many parts of the country
- Extra-colonic findings

(c) 2011, American Cancer Society
Avoiding Your “Garden Hose” Colon Exam?

INTRODUCING
Virtual Colonoscopy

Virtual Colonoscopy is safe, fast and just as accurate in the detection of colon cancer and early colon polyps—without passing an endoscope through your colon.

INTRODUCTORY OFFER: SAVE $50!

AmeriScan
1-866-4 MY SCAN

(c) 2011, American Cancer Society
Tests That Mainly Detect Cancer
Stool Tests

That's not quite the stool sample we had in mind
Fecal Occult Blood Tests

Rationale

- Detect blood in the stool
- Cancers tend to bleed
- Large polyps also may bleed (although less likely to bleed than cancers)
Fecal Occult Blood Tests

Two methods:
- Guaiac (gFOBT)
- Immunochemical (FIT)
Guaiac Tests (gFOBT)

- Most common type used in U.S. for several decades
- Best evidence - from long term studies
- Need specimens from 3 different bowel movements
- Non-specific
- Results may be influenced by some foods and medications

*It is important to be aware of the LIMITATIONS to this form of testing*

2011, SH Weiss
Immunochemical Tests (FIT)

- Specific for human blood and for lower GI bleeding
- Results not influenced by foods or medications
- Some types require only 1 or 2 stool specimens
- Slightly more costly than guaiac tests

FIT use in the US will likely increase due to recent elimination of guaiac-based testing by LabCorp and Quest Labs.

The 2008 ACG Guidelines for CRC Screening had explicitly recommended that if (stool) tests that only detect cancer are used, annual FIT for blood in stool is preferred over guaiac.
Stool DNA Test (sDNA)

Rationale

- Fecal occult blood tests detect blood in the stool – which is intermittent and non-specific
- Colon cells are shed continuously
- Polyp and cancer cells contain abnormal DNA
- Stool DNA tests look for abnormal DNA from cells that are passed in the stool
Stool DNA

Limitations

- Misses some cancers
- **Sensitivity for adenomas is low**
- Technology and test versions are in transition
- Costs much more than other forms of stool testing (approximately $300 - $400 per test)
- Not covered by most insurers
Collection bucket inserted into bracket and installed under toilet seat

Patient supplies whole stool sample; no diet or medication restrictions

Patient seals sample in outer container and freezer pack

Patient seals container and ships back to designated lab (all packing materials and labels supplied)
CRC Screening Rates REMAIN Sub-Optimal

Reasons (according to Patients)

- “My doctor never talked to me about it!”
- Low awareness of CRC as a personal health threat
- Lack of knowledge of screening benefits
- Fear, embarrassment, discomfort
- Time
- Cost
- Access
- Structural issues

(c) 2011, American Cancer Society
Are Physician’s Recommendations Consistent with CRC Screening Guidelines?

National survey of CRC screening practices among primary care physicians by the NCI in 2006-2007

Physicians’ CRC screening recommendations reflect both overuse and underuse, and few (< 20%) made guideline-consistent CRC screening recommendations across all modalities.

(c) 2011, American Cancer Society
Four Essentials for Improved Screening Rates

Physician Recommendation
An Office Policy
An Office Reminder System
An Effective Communication System

(c) 2011, American Cancer Society
Evidence-Based Toolkit and Guide to Increase Colorectal Cancer Screening Rates

How to Increase Colorectal Cancer Screening Rates in Practice:
A Primary Care Clinician’s* Evidence-Based Toolbox and Guide

*Including Family Physicians, General Internists, Obstetrician Gynecologists, Nurse Practitioners, Physician Assistants and their Office Managers

Mona Sarfaty, MD
EDITORS
Karen Peterson, PhD
Richard Wender, MD

*NCCRT = National Colorectal Cancer Roundtable

Goals of this Guide:

- To inform clinicians and their office managers who deliver primary care about their opportunity to prevent colorectal cancer with appropriate screening
- To encourage primary care providers to decrease the mortality and morbidity of colorectal cancer (CRC) and other cancers through appropriate screening
- To facilitate efforts of office-based clinicians to reduce disparities by applying screening guidelines on a universal basis to the age-appropriate population
- To improve preventive care in primary care practices through use of the strategies and tools presented in this guide
The ACS Tool Kit Contains Ready to Use “Tools”

- Interactive web based and PDF versions available
- Both provide:
  - Step-by-step guidance on how to implement office systems
  - Forms and templates
  - Useful web sites

Available at www.cancer.org/colon
Talking to a lay audience about colon cancer screening

Daniel M. Rosenblum, PhD
Program Coordinator & Assistant Professor,
Department of Preventive Medicine & Community Health,
New Jersey Medical School, UMDNJ
Co-coordinator, Essex County Cancer Coalition
# Lifetime Invasive Colorectal Cancer Risks (Nationwide %)

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Ever Getting Diagnosed</th>
<th>Dying</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>Black (includes Hispanic)</td>
<td>4.97</td>
<td>5.18</td>
</tr>
<tr>
<td>White (includes Hispanic)</td>
<td>5.40</td>
<td>4.98</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>5.54</td>
<td>5.03</td>
</tr>
<tr>
<td>Hispanic (can be any race)</td>
<td>5.21</td>
<td>4.43</td>
</tr>
<tr>
<td>Amer. Indian/Alaskan Native</td>
<td>3.73</td>
<td>4.90</td>
</tr>
</tbody>
</table>

2004-2006 data from SEER 17 areas
## Probability of Being Diagnosed with Colorectal Cancer, NJ vs US

<table>
<thead>
<tr>
<th></th>
<th>Age Range</th>
<th>Ever (Birth to Death)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-39</td>
<td>40-59</td>
</tr>
<tr>
<td><strong>Men</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>0.08% (1/1250)</td>
<td>0.91% (1/110)</td>
</tr>
<tr>
<td>NJ</td>
<td>0.08% (1/1184)</td>
<td>0.96% (1/104)</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>0.08% (1/1250)</td>
<td>0.72% (1/139)</td>
</tr>
<tr>
<td>NJ</td>
<td>0.09% (1/1096)</td>
<td>0.76% (1/131)</td>
</tr>
</tbody>
</table>

2004-2006 data from NJDHSS CES, accessed 05/18/2011
How does colorectal cancer compare to other cancer risks?

• Colorectal cancer is the third most common type diagnosed (first is prostate in men, breast in women, second is lung)

• Colorectal cancer is the third most common cause of cancer death (first is lung, second is breast in women, prostate in men; fourth is pancreas)
# Colorectal Cancer Incidence Rates, 2003-2007

(Age-adjusted to US 2000 standard population)

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>NJ</th>
<th>Essex Co.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>57.1</td>
<td>63.1</td>
<td>62.8</td>
</tr>
<tr>
<td>Black</td>
<td>66.9</td>
<td>67.6</td>
<td>70.9</td>
</tr>
<tr>
<td>White</td>
<td>56.1</td>
<td>63.2</td>
<td>59.0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>48.6</td>
<td>56.3</td>
<td>52.5</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td></td>
<td>63.5</td>
<td>63.7</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>42.4</td>
<td>46.3</td>
<td>47.4</td>
</tr>
<tr>
<td>Black</td>
<td>50.7</td>
<td>52.6</td>
<td>53.3</td>
</tr>
<tr>
<td>White</td>
<td>41.3</td>
<td>45.6</td>
<td>42.9</td>
</tr>
<tr>
<td>Hispanic</td>
<td>34.5</td>
<td>39.4</td>
<td>32.6</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td></td>
<td>46.8</td>
<td>49.0</td>
</tr>
</tbody>
</table>

National figures from CDC/NPCR US Cancer Statistics – An Interactive Atlas; NJ & Essex County figures from NJDHSS NJ Cancer Registry; all accessed 5/18/2011
Colorectal Cancer Mortality Rates, 2003-2007

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>NJ</th>
<th>Essex Co.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>21.2</td>
<td>23.3</td>
<td>23.2</td>
</tr>
<tr>
<td>Black</td>
<td>30.5</td>
<td>29.2</td>
<td>25.3</td>
</tr>
<tr>
<td>White</td>
<td>20.6</td>
<td>23.4</td>
<td>23.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>15.6</td>
<td>15.8</td>
<td>17.1</td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>14.9</td>
<td>16.7</td>
<td>17.8</td>
</tr>
<tr>
<td>Black</td>
<td>21.0</td>
<td>22.0</td>
<td>22.8</td>
</tr>
<tr>
<td>White</td>
<td>14.4</td>
<td>16.5</td>
<td>15.0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10.5</td>
<td>10.1</td>
<td>11.4</td>
</tr>
</tbody>
</table>

All rates are age-adjusted to the US 2000 standard population

All figures from NCI/CDC State Cancer Profiles web site, accessed 05/18/2011 05:35 PM
Preventing Screening for Colon Cancer

• *Stool Sample Tests for cancer*
  – Collect stool samples & test for immunochemicals in blood or (with guaiac) for hidden (occult) blood; cancer can bleed!

• *Flexible Sigmoidoscopy*
  – Look only in the distal colon for lesions

• *Colonoscopy*
  – Look through the *whole* colon for lesions and remove any that could later *turn into* cancer. Thus, *prevent* cancer!
Screening options for average risk patients

Start at age 50. (American College of Gastroenterology recommends 45 for African Americans)

• **Preferred:** Tests that *prevent* cancer
  – *Best:* Colonoscopy at least every 10 years (research ongoing on how often)
  – *Others:* Flexible sigmoidoscopy or CT colonography or double contrast barium enema every 5 years (if either of latter two are positive, follow up with colonoscopy)

• **Suboptimal:** Tests that only *detect* cancer
  – Fecal immunochemical or Hemoccult Sensa (high sensitivity guaiac) every year
  – Fecal DNA every 3 years?
I TURN 50 NEXT WEEK, DOC. I'M REALLY DEPRESSED.

SO IT'S PROBABLY NOT A GOOD TIME TO TELL YOU ABOUT COLONOSCOPY.
Colonoscopy vs Flexible Sigmoidoscopy

Colonoscopy examines the entire length of the colon; sigmoidoscopy examines only the lower third.

From MedlinePlus, a service of the US National Library of Medicine of the NIH © A.D.A.M.
Colon polyps

From www.gastro.org/patient-center/procedures/colonoscopy
© American Gastroenterological Association
Snaring a polyp

A wire loop removes a colon polyp and cauterizes the stalk to prevent bleeding.

From the Mayo Clinic: [www.mayoclinic.org/colon-polyps/treatment.html](http://www.mayoclinic.org/colon-polyps/treatment.html) © Mayo Foundation for Medical Education and Research
Colonoscopy – what it’s like

• Let’s be honest — prep is no fun, but also not painful!
  – Cleans you out completely!
• At time of exam, sedation makes you blissfully unaware of what’s going on.
• Not eating + sedation leaves you tired!
• Day off from work!
“OK. You turned 50. You know you're supposed to get a colonoscopy. But you haven't. Here are your reasons:

1. You've been busy.
2. You don't have a history of cancer in your family.
3. You haven't noticed any problems.
4. You don't want a doctor to stick a tube 17,000 feet up your butt.

“Let's examine these reasons one at a time. No, wait, let's not. Because you and I both know that the only real reason is No. 4. This is …”

©2008 Dave Barry

To read the rest of Dave Barry’s classic humorous retelling of his colonoscopy experience and learn why you should get a colonoscopy, go to www.miamiherald.com/2009/02/11/v-fullstory/427603/dave-barry-a-journey-into-my-colon.html
Colonoscopy sometimes not appropriate

- If patient can’t tolerate prep (also rules out CT colonography and DCBE);
- If patient’s condition is such that exam might be risky;
- If patient’s remaining life expectancy is too short (due to co-morbidities, etc.) to be worth risks and expense.

(In such situations, can still use fecal blood tests — FIT or sensitive guaiac — &/or flex sig as second-best options.)

_Unsure? Discuss with your doctor!_
Screening guidelines on the web

- **US Preventive Services Task Force:**
  http://www.uspreventiveservicestaskforce.org/uspstf/uspscolo.htm

- **National Cancer Institute:**

- **American Cancer Society:**

- **American College of Gastroenterology:**

- **Comparison of 2008 ACS/USMSTF/ACR Guidelines with those of the USPSTF (from American Cancer Society):**
Evolving Issues in Colonoscopy
May 19, 2011

This 3rd part of the lectures today will be presented by:

Stanley H. Weiss, MD, FACP, FACE
– Professor, Preventive Medicine & Community Health, UMDNJ-NJMS
– Professor, Quantitative Methods, UMDNJ School of Public Health
– Director & Principal Investigator, Essex County Cancer Coalition (ECCC)
  weiss@umdnj.edu
Benefits of Screening

• Cancer Prevention
  – Removal of pre-cancerous polyps *prevents* cancer
  – Key aspect of current colon cancer screening
  – However, some tests detect cancer but not polyps

• Improved survival
  – Early detection of either polyps or cancer improves chances of long-term survival
Protection From Colorectal Cancer After Colonoscopy
Brenner H, Chang-Claude J, Seiler CM, Rickert A, Hoffmeister M. 

Background:
• Colonoscopy with detection and removal of adenomas is considered a powerful tool to reduce colorectal cancer (CRC) incidence.
• Degree of protection achievable in a population setting with high-quality colonoscopy resources needs to be quantified.

Objective: Assessed association between previous colonoscopy & risk for CRC.
Design: Population-based case-control study in Germany.
Patients: A total of 1688 case patients with colorectal cancer and 1932 control participants aged ≥50 years old.
Results:
• Overall, colonoscopy in the preceding 10 years was associated with 77% lower risk for CRC.
• Adjusted odds ratios for any CRC, right-sided CRC, and left-sided CRC were 0.23 (95% CI, 0.19 to 0.27), 0.44 (CI, 0.35 to 0.55), and 0.16 (CI, 0.12 to 0.20), respectively.
• Strong risk reduction was observed for all cancer stages and all ages, except for right-sided cancer in persons aged 50 to 59 years.
• Risk reduction increased over the years in both the right and the left colon.
Protection From Colorectal Cancer After Colonoscopy.
Brenner H, Chang-Claude J, Seiler CM, Rickert A, Hoffmeister M.

Limitations:
The study was observational, with potential for residual confounding and selection bias.

Conclusions:
• Colonoscopy with polypectomy can be associated with strongly reduced risk for CRC in the population setting.
• **Strong** risk reduction with respect to left-sided CRC
• Risk reduction of more than 50% also seen for right-sided colon cancer
If tests such as colonoscopy that can prevent CRC are preferred, why aren’t ONLY these recommended?

Rationales given include:

• Greater patient requirements for successful completion
  • Endoscopic and radiologic exams require a bowel prep and an office or facility visit

• Higher potential for patient injury than fecal testing
  • Risk levels vary between tests, facilities, practitioners

• Patient preference
  • Individuals may not want an invasive test or a test that requires a bowel prep
  • Some prefer to have screening in the privacy of their home
  • Some may not have access to the invasive tests due to lack of coverage or local resources

(c) 2011, SH Weiss, MD
Time Interval Issues

If at colonoscopy a polyp is found:
the time for the next colonoscopy is a clinical decision which is based on the findings.

If no lesion is found:
If no clinical issues arise, when should the next SCREENING colonoscopy be performed?
• What is the right interval?
• On what evidence is that based?

© 2011, SH Weiss
### Table. A Comparison of Recommendations

<table>
<thead>
<tr>
<th>Strategy</th>
<th>ACS-MSTF (5)</th>
<th>USPSTF (2)</th>
<th>USPSTF Modeling Findings (4)</th>
<th>Other Modeling Studies (8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemoccult II annually</td>
<td>No</td>
<td>Yes</td>
<td>Suboptimal</td>
<td>Mixed</td>
</tr>
<tr>
<td>High-sensitivity Hemoccult or fecal immunochemical test annually</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Flexible sigmoidoscopy alone every 5 years</td>
<td>Yes</td>
<td>Yes</td>
<td>Suboptimal</td>
<td>Suboptimal</td>
</tr>
<tr>
<td>Computed tomographic colonography every 5 years</td>
<td>Yes</td>
<td>Insufficient evidence</td>
<td>Not evaluated</td>
<td>Yes (10, 11)</td>
</tr>
<tr>
<td>Colonoscopy every 10 years</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Stool DNA every 5 years</td>
<td>Yes*</td>
<td>Insufficient evidence*</td>
<td>Not evaluated</td>
<td>Suboptimal (12)</td>
</tr>
</tbody>
</table>

ACS-MSTF = American Cancer Society–U.S. Multi-Society Task Force; USPSTF = U.S. Preventive Services Task Force
* Interval not stated.

Genetic Model of Colorectal Cancer

Mutation

- **Bat-26 (HNPCC)**
  - APC
  - K-ras
  - p53

- **Bat-26 (Sporadic)**

Dwell Time:
- Many decades
- 2-5 years
- 2-5 years

Optimum phase for early detection

Courtesy of Barry M. Berger, MD, FCAP, EXACT Sciences
Colonoscopy SCREENING Interval

• Based on these concepts, a period was chosen
  – NOT data based
  – Relatively high cost, resources, and absence of cost-efficacy data were probably considered
• In practice, the “every 10 year” recommendation is not always followed by clinicians or patients
Time Interval Issues


• This study suggests that approximately 1 in 13 CRCs may be an early/missed CRC, diagnosed after an index colonoscopy in usual clinical practice.
• Women are more likely to have early/missed CRC.
• Unclear if this relates to differences in procedure difficulty, bowel preparation issues, or tumor biology between men and women.
Time Interval Issues


**Background:** The rate of new or missed colorectal cancer (CRC) after colonoscopy and their risk factors in usual practice are unknown.

**Methods:** Analyzed data from Canada with a new diagnosis of right-sided, transverse, splenic flexure/descending, rectal or sigmoid CRC in Ontario from April 1, 1997 to March 31, 2002, who had a colonoscopy within the 3 years before their diagnosis. Patients with new or missed cancers were those whose most recent colonoscopy was 6 to 36 months before diagnosis.
Time Interval Issues


**Results:** identified diagnosis of CRC in 3288 (right sided), 777 (transverse), 710 (splenic flexure/descending), and 7712 (rectal or sigmoid) patients. Rates of new/missed cancers: 5.9%, 5.5%, 2.1%, and 2.3%, respectively.

**Conclusions:** Having an office colonoscopy and certain patient, procedure, and physician characteristics were independent risk factors for new or missed CRC. There is a [small] risk (2% to 6%) of these cancers after colonoscopy.

© 2011, SH Weiss
Lesion Location

• Several studies have reported:
  Right-sided lesions more common
  • In women cp. men
  • In African-Americans cp. Caucasians
• And in a study of patients undergoing colonoscopy in our region at UMDNJ University Hospital*,
  • Right-sided lesions were ALSO more common in Latino’s cp. Caucasians

Presentation based on a review of 2,698 colonoscopies performed at the University Hospital in Newark, NJ from 2005-2006. Of these, 756 were screening colonoscopies performed on asymptomatic patients.

© 2011, SH Weiss
SUMMARY

• Colonoscopy reduces risk of CRC
• Other studies document finding polyps or CRC on repeat colonoscopies much sooner than 10 years.
• Ulcerative lesions found to be among those particularly missed.
• Gender, racial and ethnic disparities exist in lesion location within the colon.
• A recent study has documented decreased MORTALITY after colonoscopy – so that it is now a proven “life-saving” screening modality

© 2011, SH Weiss
Contact Information

• Website for ECCC:
  – www.umdnj.edu/EssCaWeb

• Older website related to cancer evaluation
  – www.umdnj.edu/EvalCWeb/

• Email: weiss@umdnj.edu

• Telephone: 973-972-4623
YOU ARE INVITED TO JOIN THE ECCC!

Questions?

“The Essex County Cancer Coalition (ECCC) is made possible by a grant from the New Jersey Department of Health and Senior Services’ Office of Cancer Control and Prevention. The mission of the ECCC is to implement the New Jersey Comprehensive Cancer Control Plan in Essex County. For more information on Comprehensive Cancer Control in NJ, please visit: www.njcancer.gov.”

“The ECCC receives significant in-kind support from the University of Medicine and Dentistry of New Jersey. The ECCC works closely with the Essex Cancer Education & Early Detection programs at UMDNJ-University Hospital & St. Michaels Medical Center.”

For more information on the Essex County Cancer Coalition and useful Internet links, please visit: www.umdnj.edu/EssCaWeb/

(c) 2011, SH Weiss, MD
Supplemental Slides
Colorectal Screening

• Just 40% of colorectal cancers are detected at the earliest stage.
• A little more than half* of Americans over age 50 report having had a recent colorectal cancer screening test --
• Slow but steady improvement in these numbers over the past decade (but not all groups are benefiting to the same degree)
• Disparities exist

© 2011, SH Weiss
Colorectal Screening Rates Low: Reasons (according to Patients)

- Low awareness of CRC as a *personal* health threat
- Lack of knowledge of screening benefits
- Fear, embarrassment, discomfort
- Time
- Cost
- Access
- “My doctor never talked to me about it!”

*Family members can help encourage discussion and screening*