




A Call to Action: Prevention and Early Detection of Colorectal Cancer (CRC)



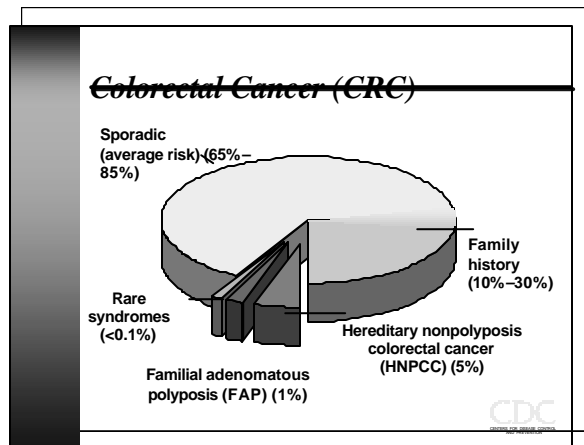
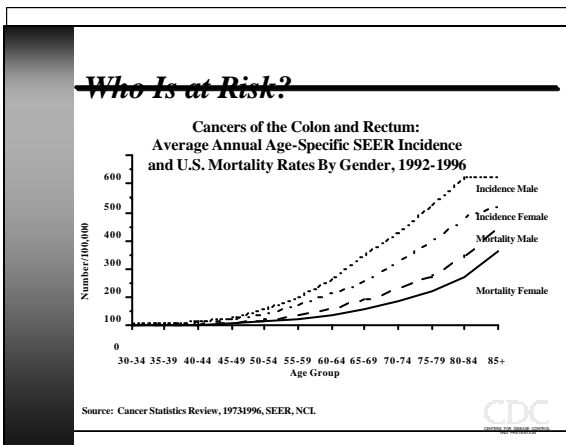

5 Key Messages

- ◆ Screening reduces mortality from CRC
- ◆ All persons aged 50 years and older should begin regular screening
- ◆ High-risk individuals may need to begin screening earlier
- ◆ Colorectal cancer can be prevented
- ◆ Several effective screening options are available; *not screening is no longer an option*

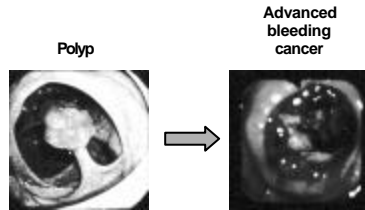


Burden of Disease

- ◆ Second leading cause of cancer death in US
- ◆ American Cancer Society estimates in 2000:
 - 130,200 new cases
 - 56,300 deaths
- ◆ Both women and men
- ◆ All races



Natural History



CDC
CENTERS FOR DISEASE CONTROL
AND PREVENTION

Screening = Prevention + Early Detection

- ◆ Prevention (polyp removal) → decreased incidence
- ◆ Early detection → decreased mortality

CDC
CENTERS FOR DISEASE CONTROL
AND PREVENTION

Evidence for Screening

- ◆ Fecal Occult Blood Test (FOBT)
- ◆ Flexible sigmoidoscopy
- ◆ FOBT + flexible sigmoidoscopy
- ◆ Double-contrast barium enema (DCBE)
- ◆ Colonoscopy
- ◆ Office FOBT after digital rectal exam (not recommended)

CDC
CENTERS FOR DISEASE CONTROL
AND PREVENTION

FOBT



CDC
CENTERS FOR DISEASE CONTROL
AND PREVENTION

FOBT Trials

	Minn	Minn	UK	Denmark
Frequency of testing	Annual	Biennial	Biennial	Biennial
Duration (years)	18	18	8	10
Hydration of slides	Yes	Yes	No	No
% requiring colonoscopy	30%	30%	5%	5%
Mortality reduction	22%	21%	15%	18%

CDC
CENTERS FOR DISEASE CONTROL
AND PREVENTION

Digital Rectal Exam

- ◆ Office FOBT after digital rectal exam not recommended as a stand-alone test
- ◆ Sensitivity and specificity are lower than at-home FOBT
- ◆ Digital rectal exam not recommended as a stand-alone test

CDC
CENTERS FOR DISEASE CONTROL
AND PREVENTION

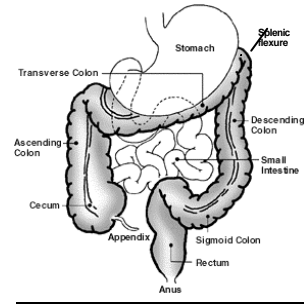
Flexible Sigmoidoscopy



Fiberoptic sigmoidoscope



Diagram of the Colon and Rectum



Flexible Sigmoidoscopy

- ◆ Case-control study (Selby et al. 1992)
- ◆ 60% reduction in deaths from colorectal cancers within reach of the sigmoidoscope
- ◆ No reduction in deaths from proximal cancers



EOBT + Flex Sig

- ◆ No direct evidence about the combination of the two tests
- ◆ Use of two independent tests potentially increases detection



DCBE

- ◆ No prospective trials of DCBE screening



Colonoscopy

- ◆ Most accurate test for detection of polyps and colorectal cancer
- ◆ No prospective trials of screening colonoscopy
- ◆ Several randomized trials are ongoing
- ◆ National Polyp Study supports the effectiveness of removing polyps to prevent colorectal cancer



Colorectal Cancer Screening Is Cost-Effective

- ◆ Office of Technology Assessment, US Congress, April 1995
- ◆ All screening strategies below an accepted benchmark value of \$40,000/added year of life
- ◆ Concluded CRC screening is a good societal investment



Cost-Effectiveness (Cost/Year Life Saved)

- ◆ Mandatory motorcycle helmets \$2,000
- ◆ Colorectal cancer screening \$25,000
- ◆ Breast cancer screening \$35,000
- ◆ Dual airbags in cars \$120,000
- ◆ Smoke detectors in homes \$210,000
- ◆ School bus seat belts \$1,800,000

(Slide courtesy John Bond, M.D.)



Colorectal Screening Rates Low: 1997 Survey of >50,000 Adults

Subjects Reporting	FOBT (Age [≥] 50)	Flex Sig (Age [≥] 50)	Mammography (Age [≥] 40)
Ever completed	40%	42%	85%
Up to date	20% (1 yr)	30% (5 yrs)	71% (2 yrs)

Source: Behavioral Risk Factor Surveillance System, 1997



When Not To Screen

- ◆ Don't apply screening guidelines to symptomatic patients
- ◆ Screening patients with terminal illness is unwarranted
- ◆ Benefits of polyp detection decrease with advanced age



Factors to Consider in Choosing a Strategy

- ◆ Patient's colorectal cancer risk
- ◆ Implementation issues
- ◆ Adverse effects
- ◆ Patient's preferences



Assessing Individual Risk

- ◆ Increased risk:
 - personal history of colorectal cancer or polyps
 - family history of colorectal cancer or polyps
 - inflammatory bowel disease
 - certain inherited cancer syndromes
 - signs/symptoms
 - rectal bleeding
 - iron deficiency anemia



Assessing Individual Risk (continued)



Average Risk:



Everyone Else 50 and Over



Screening Options for Average-Risk Individuals

- ◆ FOBT alone every year
- ◆ Flex sig alone every 5 years
- ◆ FOBT every year + flex sig every 5 years
- ◆ DCBE every 5 to 10 years
- ◆ Colonoscopy every 10 years

All national guidelines include some combination of these options



Overarching Implementation and Counseling Issues

- ◆ Benefits and adverse effects
- ◆ Patient education materials
- ◆ Insurance coverage information
- ◆ Explicit policy and mechanisms for follow-up



Potential Adverse Effects

- ◆ Vasovagal syncope
- ◆ Perforation
- ◆ Hemorrhage
- ◆ Death



Estimated Costs of Colorectal Cancer Screening Options

- | | |
|--------------------------|----------------|
| ◆ FOBT | \$10 – \$25 |
| ◆ Flexible sigmoidoscopy | \$150 – \$300 |
| ◆ Colonoscopy | \$800 – \$1600 |
| ◆ DCBE | \$250 – \$500 |



FOBT

- ◆ How it works
 - Detects blood from any GI source
 - Rehydration
- ◆ Preparation
 - Dietary/medication restrictions
- ◆ Periodicity
 - Annual testing most effective



FOBT (continued)

- ◆ Provider capacity
 - Special training not required
- ◆ Patient adherence
 - Patient education is critical
- ◆ Follow-up
 - Positive FOBT requires total colon exam
 - After a negative total colon exam, suspend annual FOBT for 5 to 10 years
 - Negative FOBT requires repeat FOBT in 1 year



To Begin a Home FOBT Screening Program

You will need

- ◆ FOBT card kits
- ◆ Assigned roles for office staff
 - Instructing and encouraging patients
 - Developing cards
 - Recording results
 - Notifying patient and clinician



FOBT—Counseling Your Patients

- ◆ Explain exactly what to do
- ◆ Don't rely solely on instructions in kit
- ◆ Consider using a reminder system to increase adherence



Flex Sig

- ◆ How it works
 - Provides direct view of distal portion of the colon
- ◆ Preparation
 - 2 enemas
- ◆ Periodicity
 - Every 5 years
- ◆ Provider capacity
 - Training and referral



Flex Sig (continued)

- ◆ Patient adherence
 - Provider recommendation leads to high patient acceptance
- ◆ Follow-up
 - 5% to 15% will have a positive result
 - Positive result requires total colon exam
 - To biopsy or not?
 - Which provider?
 - Which lesions?
 - Negative result requires repeat flex sig in 5 years



To Begin an Office Flexible Sigmoidoscopy Screening Program

You will need

- ◆ Trained clinician(s)
- ◆ Equipment
 - Light source
 - Suction device
 - Flexible sigmoidoscope
 - Videoscreen preferable
- ◆ Procedure room with bathroom nearby
- ◆ Assigned roles for office staff
 - Patient scheduling and instruction
 - Equipment setup, cleaning, and maintenance
 - Assistance with procedure
- ◆ Informed consent policy



To Begin a Program of Referring to Another Facility for Flexible Sigmoidoscopy or Colonoscopy

You will need

- ◆ Identified partner site
- ◆ Mechanism for direct referral for the procedure
 - Includes pre-procedure testing and risk assessment



Flex Sig—Counseling Your Patients

- ◆ Expect moderate discomfort (like gas pain)
- ◆ Most patients report that it's not as bad as they thought it would be
- ◆ Sedation not routinely used
- ◆ Exam lasts approximately 20 minutes
- ◆ Patients able to return to work and don't need a ride



DCBE

- ◆ How it works
 - Provides x-ray image of the colon
- ◆ Preparation
 - Clear liquids
 - Laxatives and enemas
- ◆ Periodicity
 - Every 5 to 10 years
- ◆ Provider capacity
 - Widely available but quality inconsistent



DCBE (continued)

- ◆ Patient adherence
 - Unknown adherence rates
- ◆ Follow-up
 - 5% to 15% will have a positive result
 - Positive result requires follow-up test, usually colonoscopy
 - Negative result requires repeat DCBE every 5 to 10 years



To Begin a Barium Enema Screening Program

You will need

- ◆ Identified experienced radiology site
- ◆ Assigned tasks for office staff
 - Patient education
 - Scheduling



DCBE—Counseling Your Patients

- ◆ Expect moderate discomfort
- ◆ Requires patient to change position during exam
- ◆ Sedation is not used
- ◆ Exam lasts about 20 to 30 minutes
- ◆ Patient could return to work but will have frequent barium stools or constipation



Colonoscopy

- ◆ How it works
 - One-step screening/treatment procedure
 - Provides direct view of entire colon
- ◆ Preparation
 - Clear liquids
 - Osmotic laxative
 - Enema
 - Sedation routinely used



Colonoscopy (continued)

- ◆ Periodicity
 - Every 10 years
- ◆ Provider capacity
 - Training and referral
- ◆ Patient adherence
 - Feasibility trials beginning



Colonoscopy (continued)

- ◆ Follow-up
 - Positive result frequently treated during screening exam
 - Negative result requires repeat colonoscopy in 10 years



Colonoscopy—Counseling Your Patients

- ◆ Expect moderate discomfort with preparation, but actual procedure performed under sedation
- ◆ Some patients experience discomfort during recovery
- ◆ Exam lasts approximately 30 to 45 minutes
- ◆ Patient requires ride home after procedure and usually is off work that day



Shared Decision Making vs. Provider-Directed Choice



Current Issues and Future Directions

- ◆ Reimbursement
- ◆ HEDIS
- ◆ Ongoing randomized trials
- ◆ Virtual colonoscopy



Current Issues and Future Directions (continued)

- ◆ National Colorectal Cancer Roundtable
- ◆ Public awareness campaigns
- ◆ Capacity



Primary Prevention of Colorectal Cancer

- ◆ Exercise
- ◆ Low-fat diet rich in fruits and vegetables
- ◆ Fiber?
- ◆ Chemoprophylaxis
 - NSAIDs
 - Calcium
 - Estrogen
 - Folate
 - Selenium



A Call to Action

- ◆ Screening reduces mortality from CRC
- ◆ All persons aged 50 years and older should begin regular screening
- ◆ High-risk individuals may need to begin screening earlier
- ◆ Colorectal cancer can be prevented
- ◆ Several effective screening options are available;
not screening is no longer an option

