Complete Summary

GUIDELINE TITLE

American Cancer Society guidelines on screening and surveillance for the early detection of adenomatous polyps and colorectal cancer-update 2003. In: American Cancer Society guidelines for the early detection of cancer, 2003.

BIBLIOGRAPHIC SOURCE(S)

Smith RA, Cokkinides V, Eyre HJ. American Cancer Society guidelines for the early detection of cancer, 2003. CA Cancer J Clin 2003 Jan-Feb;53(1):27-43. [57 references]

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SCOPE

DISEASE/CONDITION(S)

Colorectal cancer

GUIDELINE CATEGORY

Prevention
Screening

CLINICAL SPECIALTY

Colon and Rectal Surgery
Family Practice
Gastroenterology
Internal Medicine
Medical Genetics
Obstetrics and Gynecology
Oncology

Preventive Medicine
Radiology

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Health Plans
Hospitals
Managed Care Organizations
Nurses
Patients
Physician Assistants
Physicians
Public Health Departments

GUIDELINE OBJECTIVE(S)

- To update the American Cancer Society guideline pertaining to colorectal cancer screening
- To review emerging technologies for colorectal cancer screening
- To address growing evidence concerning the benefits of early detection of colorectal cancer and adenomatous polyps
- To offer recommendations to health care professionals and the public for the early detection of colorectal cancer and precancerous lesions in asymptomatic individuals

TARGET POPULATION

- Adults at average risk of colorectal cancer: people 50 years or older who are not otherwise defined as being at increased risk
- Adults at increased risk of colorectal cancer: people with single, small (<1 cm) adenomatous polyps; people with a large (1 cm+) adenoma, multiple adenomas, or adenomas with high-grade dysplasia or villous change; personal history of curative-intent resection of colorectal cancer; colorectal cancer or adenomatous polyps in first-degree relative younger than 60 years or in two or more first-degree relative of any age (if not a hereditary syndrome)
- Adults at high risk of colorectal cancer: people with a family history of familial adenomatous polyposis; people with a family history of hereditary non-polyposis colon cancer; people with inflammatory bowel disease, chronic ulcerative colitis, or Crohn's disease

INTERVENTIONS AND PRACTICES CONSIDERED

1. Fecal occult blood testing (FOBT)
2. Digital rectal examination (DRE) at time of sigmoidoscopy or colonoscopy
3. Flexible sigmoidoscopy
4. Total colon examination (TCE) by colonoscopy or double-contrast barium enema (DCBE)
5. Colonoscopic removal of all polyps from the colorectum

6. Endoscopic surveillance with biopsy for dysplasia
7. Surgical excision of the colon (prophylactic colectomy) with a diagnosis of familial adenomatous polyposis syndrome (FAP) or in the presence of persistent dysplasia in individuals with extensive inflammatory bowel disease
8. Genetic testing for mutations associated with FAP and hereditary non-polyposis colorectal cancer syndrome (HNPCC)
9. Immunochemical FOBT (e.g., !nSure™ immunochemical test)
10. Technologies considered but not recommended:
    - Computed tomography (CT) colonography (virtual colonoscopy)
    - Stool screening using molecular markers
    - Capsule video endoscopy (the camera in a capsule)

MAJOR OUTCOMES CONSIDERED

- Colorectal cancer incidence, morbidity, and mortality
- Sensitivity and specificity of emerging technologies

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Searches of Electronic Databases
Searches of Unpublished Data

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

During the guideline review, published articles related to colorectal cancer, screening risk, and risk factors were identified using MEDLINE (National Library of Medicine) for the years 1995 through 2000, bibliographies of identified articles, and through the personal files of the advisory group and expert panel members.

For the 2003 update, published articles were identified using MEDLINE and other sources (National Library of Medicine bibliographies of identified articles, personal files of panel members, and unpublished manuscripts), and leading experts in these new technologies were invited to a one-day workshop to present the latest data related to new screening tests.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

In April 2002, the ACS Colorectal Cancer Advisory Group organized a workshop to review emerging technologies in colorectal cancer screening. Advisory Group members reviewed literature in advance of the meeting, and also considered unpublished evidence presented at the workshop to inform deliberations about the current state of evidence for these new screening technologies. When evidence was insufficient or lacking, the final recommendations incorporated the expert opinions of the panel members. During the workshop and subsequent conference calls, consensus was reached on the key issues within the guideline recommendations.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Guidelines on colorectal cancer screening from the US Preventive Services Task Force, (USPSTF) updated in 2002, were discussed in the guideline document.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

American Cancer Society (ACS) Guidelines for Screening and Surveillance for the Early Detection of Colorectal Adenomas and Cancer: Average-Risk Women and Men Ages 50 and Older

The following options are acceptable choices for colorectal cancer screening in average-risk adults. Since each of the following tests has inherent characteristics related to accuracy, prevention potential, costs, and risks, individuals should have an opportunity to make an informed decision when choosing a screening test.

Test or Procedure	Frequency (beginning at age 50 for men and women)
Fecal Occult Blood Test (FOBT)*	Annually
Flexible Sigmoidoscopy	Every 5 years
FOBT* and Flexible Sigmoidoscopy**	Annual FOBT and flexible sigmoidoscopy every 5 years
Double Contrast Barium Enema	Every 5 years
Colonoscopy	Every 10 years

*FOBT as it is sometimes done in physician's offices, with the single stool sample collected on the fingertip during a digital rectal examination, is not an adequate substitute for the recommended at-home procedure of collecting two samples from three consecutive specimens. Toilet bowl FOBT tests also are not recommended. In comparison with guaiac-based tests for the detection of occult blood, immunochemical tests are more patient-friendly and are likely to be equal or better in sensitivity and specificity. There is no justification for repeating fecal occult blood test in response to an initial positive finding.

**Flexible sigmoidoscopy together with FOBT is preferred compared with FOBT or flexible sigmoidoscopy alone.

American Cancer Society Guidelines on Screening and Surveillance for the Early Detection of Colorectal Adenomas and Cancer: Women and Men at Increased Risk or at High Risk

Risk Category	Age to Begin	Recommendation	Comment
INCREASED RISK			
People with single, small	3-6 years after the initial	Colonoscopy*	If the exam is normal, the patient can

Risk Category	Age to Begin	Recommendation	Comment
INCREASED RISK			
(<1 cm) adenoma	polypectomy		thereafter be screened as per average risk guidelines.
People with a large (1 cm+) adenoma, multiple adenomas, or adenomas with high-grade dysplasia or villous change	Within 3 years after the initial polypectomy	Colonoscopy*	If normal, repeat examination in 3 years; if normal then, the patient can thereafter be screened as per average risk guidelines.
Personal history of curative-intent resection of colorectal cancer	Within 1 year after cancer resection	Colonoscopy*	If normal, repeat examination in 3 years; if normal then, repeat examination every 5 years.
Either colorectal cancer or adenomatous polyps, in any first-degree relative before age 60, or in two or more first-degree relatives at any age (if not a hereditary syndrome).	Age 40, or 10 years before the youngest case in the immediate family	Colonoscopy*	Every 5-10 years. Colorectal cancer in relatives more distant than first-degree does not increase risk substantially above the average risk group.
HIGH RISK			
Family history of familial adenomatous polyposis (FAP)	Puberty	Early surveillance with endoscopy, and counseling to consider genetic testing	If the genetic test is positive, colectomy is indicated. These patients are best referred to a center with experience in the management of familial

Risk Category	Age to Begin	Recommendation	Comment
INCREASED RISK			
			adenomatous polyposis (FAP)
Family history of hereditary non-polyposis colon cancer (HNPCC)	Age 21	Colonoscopy and counseling to consider genetic testing	If the genetic test is positive or if the patient has not had genetic testing, every 1-2 years until age 40, then annually. These patients are best referred to a center with experience in the management of hereditary non-polyposis colon cancer (HNPCC)
Inflammatory bowel disease, chronic ulcerative colitis, or Crohn's disease	Cancer risk begins to be significant 8 years after the onset of pancolitis, or 12-15 years after the onset of left-sided colitis	Colonoscopy with biopsies for dysplasia	Every 1-2 years. These patients are best referred to a center with experience in the surveillance and management of inflammatory bowel disease.

*If colonoscopy is unavailable, not feasible, or not desired by the patient, double contrast barium enema (DCBE) alone, or the combination of flexible sigmoidoscopy and DCBE are acceptable alternatives. Adding flexible sigmoidoscopy to DCBE may provide a more comprehensive diagnostic evaluation than DCBE alone in finding significant lesions. A supplementary DCBE may be needed if a colonoscopic exam fails to reach the cecum, and a supplementary colonoscopy may be needed if a DCBE identifies a possible lesion, or does not adequately visualize the entire colorectum.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Decreased Colorectal Cancer Mortality Due to Early Detection

Colorectal cancer is a type of cancer for which screening is particularly effective. Screening can detect adenomatous polyps, precursors to cancer that can be successfully removed, thereby preventing the cancer from occurring. Screening can also detect early stage colorectal cancer when it is very amenable to treatment, as evidenced by the fact that 90 percent of patients diagnosed with localized disease are alive five years after diagnosis.

Advantages of !nSure™ Fecal Occult Blood Test (FOBT)

Advantages of an immunochemical FOBT compared with a guaiac test include:

- Improved specificity. Immunochemical tests will not react with non-human hemoglobin, vitamins, drugs, or peroxidase from food sources. !nSure™ FOBT has also been shown to be non-reactive with blood from the upper gastrointestinal tract when bleeding is occult.
- Potential increase in patient compliance. Since no dietary restrictions are needed, and since !nSure™ requires collection from only two stool specimens and is performed by swirling a brush in the toilet water with the stool, it may be more acceptable to the consumer than current FOBT tests with their higher testing and stool handling requirements.

POTENTIAL HARMS

Limitations of !nSure™ Fecal Occult Blood Test (FOBT)

Disadvantages of an immunochemical FOBT compared with a guaiac test include:

- Limited clinical testing. !nSure™ FOBT has not been tested in a large screening population of average-risk individuals, although trials are underway in Queensland, Australia, and Chicago, Illinois, with additional studies being planned.
- Sensitivity limitations. While immunochemical tests have advantages over guaiac tests, they are still tests for occult blood, which may leak intermittently and may occur from sources in the colon or rectum other than cancers or large adenomas. Data indicate that the problem for detection created by intermittency is less marked with immunochemical than with guaiac tests because higher test sensitivity is not accompanied by significant degradation of specificity, as is the case with guaiac-based tests. In addition, because bleeding from adenomas occurs infrequently, the potential for colorectal cancer (CRC) prevention through adenoma detection and removal is likely to be lower with this and all FOBT methods than with endoscopic and imaging screening modalities. However, when used annually, as recommended, the program sensitivity of FOBT is very high.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

The Advisory Committee strongly asserts that if fecal occult blood test (FOBT) alone is chosen, individuals should be tested annually using the recommended take-home multiple sample method. It is important to realize that it is the repeated use of this screening method in a properly implemented screening program that has proven effectiveness.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Smith RA, Cokkinides V, Eyre HJ. American Cancer Society guidelines for the early detection of cancer, 2003. CA Cancer J Clin 2003 Jan-Feb;53(1):27-43. [57 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2001 (revised 2003 Jan-Feb)

GUIDELINE DEVELOPER(S)

American Cancer Society - Disease Specific Society

SOURCE(S) OF FUNDING

American Cancer Society

GUIDELINE COMMITTEE

American Cancer Society's Colorectal Cancer Advisory Group

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Smith RA, Cokkinides V, von Eschenbach AC, Levin B, Cohen C, Runowicz CD, Sener S, Saslow D, Eyre HJ. American Cancer Society guidelines for the early detection of cancer. CA Cancer J Clin 2002 Jan-Feb;52(1):8-22.

Each year the American Cancer Society publishes a summary of existing recommendations for early cancer detection, including updates, and/or emerging issues that are relevant to screening for cancer.

GUIDELINE AVAILABILITY

Electronic copies: Available from the American Cancer Society Web site.

Print copies: Available from the American Cancer Society, 1599 Clifton Rd NE, Atlanta, GA 30329; Web site: www.cancer.org.

AVAILABILITY OF COMPANION DOCUMENTS

These guidelines are published as a component of the following:

- Smith RA, Cokkinides V, Eyre HJ. American Cancer Society guidelines for the early detection of cancer, 2003. CA Cancer J Clin 2003 Jan-Feb;53(1):27-43.

  Electronic copies: Available from the American Cancer Society Web site.

The following companion is also available:

- Levin B, Brooks D, Smith RA, and Stone A. Emerging technologies in screening for colorectal cancer: CT colonography, immunochemical fecal occult blood tests, and stool screening using molecular markers. CA Cancer J Clin 2003 Jan-Feb;53(1):44-55.

Electronic copies: Available from the American Cancer Society Web site.

Print copies: Available from the American Cancer Society, 1599 Clifton Rd NE, Atlanta, GA 30329; Web site: www.cancer.org.

PATIENT RESOURCES

The following is available:

- Guidelines for the early detection of cancer.

Electronic copies: Available from the American Cancer Society (ACS) Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This summary was completed by ECRI on April 29. 2001. The information was verified by the guideline developer on September 10, 2001. This summary was updated by ECRI on January 14, 2004.

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