Diseases of the Colon & Rectum

Practice Parameters

Practice Parameter for the Detection of Colorectal Neoplasms: An Interim Report (Revised)

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In 2003, an updated review of the colorectal cancer screening and surveillance guidelines was performed by the U.S. Multisociety Task Force on Colorectal Cancer.[1] The report summarized and updated the evidence pertaining to guidelines for colorectal cancer screening. The task force is a consortium of representatives and the resources of multiple different societies, including The American Society of Colon and Rectal Surgeons (ASCRS).

The most recent practice parameter for the detection of colorectal neoplasms published by ASCRS was in 1999.[2] The Standards Committee has decided to provide a summary of the task force guidelines to serve as an interim updated practice parameter. Two emerging technologies, including fecal DNA screening and CT colonography, are discussed at the end of this summary. A MEDLINE search of the literature since the 2003 Guideline Report was accomplished using the keywords "screening, colorectal cancer, fecal, stool, and DNA" with related articles to ensure that new data did not exist to substantively modify the Task Force recommendations. If so, the new evidence is cited.

Reprints are not available.

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GENERAL RECOMMENDATIONS

- People with symptoms or signs that suggest the presence of colorectal cancer or polyps fall outside the domain of screening and should be offered an appropriate diagnostic evaluation.
- Screening programs should begin by classifying the individual patient's level of risk based on personal, family, and medical history, which will determine the appropriate approach to screening for that person.
- They should be offered options for screening, with information about the advantages and disadvantages associated with each approach, and should be given an opportunity to apply their own preferences in selecting how they should be screened.
- If the result of a screening test is abnormal, physicians should recommend a complete structural examination of the colon and rectum by colonoscopy (or flexible sigmoidoscopy and double-contrast barium enema if colonoscopy is not available).
- Surveillance with colonoscopy should be considered for patients who are at increased risk because they have been treated for colorectal cancer, have

an adenomatous polyp diagnosed, or have a disease that predisposes them to colorectal cancer, such as inflammatory bowel disease.
- Health care providers who perform the tests should have appropriate proficiency, and the tests should be performed correctly. To achieve these goals, care systems should establish standards and operating procedures.
- Screening should be accompanied by efforts to optimize the participation of patients and health care providers—both with screening tests and appropriate diagnostic evaluation of abnormal screening test results—and to remind patients and providers about the need for rescreening at recommended intervals.

RECOMMENDATIONS FOR AVERAGE RISK PEOPLE

- Offer yearly screening with fecal occult blood test (FOBT) using a guaiac-based test with dietary restriction or an immunochemical test without dietary restriction. Two samples from each of three consecutive stools should be examined without rehydration. Patients with a positive test on any specimen should be followed up with colonoscopy.
- Offer flexible sigmoidoscopy every five years
- Offer screening with FOBT every year combined with flexible sigmoidoscopy every five years. When both tests are performed, the FOBT should be done first.
- Offer colonoscopy every ten years
- Offer double-contrast barium enema (DCBE) every five years.

RECOMMENDATIONS FOR INCREASED RISK PEOPLE

- People with a first-degree relative (parent, sibling, or child) with colon cancer or adenomatous polyps diagnosed at younger than age 60 years or two first-degree relatives diagnosed with colorectal cancer at any age should be advised to have screening colonoscopy starting at age 40 years or 10 years younger than the earliest diagnosis in their family, whichever comes first, and repeated every 5 years.
- People with a first-degree relative with colon cancer or adenomatous polyp diagnosed at age 60 years or older or two second-degree relatives with colorectal cancer should be advised to be screened as average risk persons, but beginning at age 40 years.
- People with one second-degree relative (grandparent, aunt, or uncle) or third-degree relative (great grandparent or cousin) with colorectal cancer should be advised to be screened as average-risk persons.

FAMILIAL ADENOMATOUS POLYPOSIS

- People who have a genetic diagnosis of familial adenomatous polyposis (FAP), or are at risk of having FAP but genetic testing has not been performed or is not feasible, should have annual sigmoidoscopy, beginning at age 10 to 12 years, to determine whether they are expressing the genetic abnormality. Genetic testing should be considered in patients with FAP who have relatives at risk. Genetic counseling should guide genetic testing and considerations of colectomy.

HEREDITARY NONPOLYPOSIS COLORECTAL CANCER

- People with a genetic or clinical diagnosis of hereditary nonpolyposis colorectal cancer (HNPCC) or who are at increased risk for HNPCC should have colonoscopy every 1 to 2 years beginning at age 20 to 25 years, or 10 years earlier than the youngest age of colon cancer diagnosis in the family—whichever comes first. Genetic testing for HNPCC should be offered to first-degree relatives of persons with a known inherited mismatch repair (MMR) gene mutation. It also should be offered when the family mutation is not previously known, but one of the first three of the modified Bethesda Criteria is met.

SURVEILLANCE OF PEOPLE AT INCREASED RISK

People With a History of Adenomatous Polyps

- Patients who have had one or more adenomatous polyps removed at colonoscopy should be managed according to the findings on that colonoscopy. Patients who have had numerous

adenomas, a malignant adenoma (with invasive cancer), a large sessile adenoma, or an incomplete colonoscopy should have a short interval follow-up colonoscopy based on clinical judgment. Patients who have advanced or multiple adenomas (≥3) should have their first follow-up colonoscopy in three years. Patients who have one or two small (<1 cm) tubular adenomas should have their first follow-up colonoscopy at five years. It is not unreasonable, given available evidence, to choose even longer intervals. However, the evidence is still evolving. Future evidence may clarify the interval more precisely.

- The timing of the subsequent colonoscopy should depend on the pathology and number of adenomas detected at follow-up colonoscopy. For example, if the first follow-up colonoscopy is normal or only one or two small (<1 cm) tubular adenomas are found, the next colonoscopy can be in five years.

People With a History of Colorectal Cancer

- Patients with a colon cancer that has been resected with curative intent should have a colonoscopy around the time of initial diagnosis to rule out synchronous neoplasms. If the colon is obstructed preoperatively, colonoscopy can be performed approximately six months after surgery. If this or a complete preoperative examination is normal, subsequent colonoscopy should be offered after three years, and then, if normal, every five years.

People With Inflammatory Bowel Disease

- In patients with long-standing, extensive inflammatory bowel disease, surveillance colonoscopy with systemic biopsies should be considered. This applies to both ulcerative colitis and Crohn's colitis, because the cancer risk is similar in both diseases.

EMERGING SCREENING TESTS

CT Colonography

- At the time of the consensus panel, the conclusion regarding CT colonography was that the technology was still improving but not yet ready for widespread screening outside the research setting. Since publication of these guidelines, several studies have been performed to investigate the use of CT colonography for colorectal cancer screening. The majority of these studies still show that further improvements in the technique are required.[3,4]

Fecal DNA Tests

The panel acknowledged that screening tests searching for altered DNA in the stool may be a promising approach. Trials measuring the performance of the test in large numbers of average-risk people are needed. No literature since the publication of the 2003 report changes these conclusions.

REFERENCES

1. Winawer S, Fletcher R, Rex D, *et al*. Colorectal cancer screening and surveillance: clinical guidelines and rationale—update based on new evidence. Gastroenterology 2003;124:544–60.
2. Simmang C, Senatore P, Lowry A, *et al*. Practice parameters for the detection of colorectal neoplasms. Dis Colon Rectum 1999;42:1123–9.
3. Cotton PB, Durkalski VL, Pineau BC, *et al*. Computed tomographic colonography (virtual colonoscopy): a multicenter comparison with standard colonoscopy for detection of colorectal neoplasia. JAMA 2004;291 1713–9.
4. Rockey DC, Paulson E, Niedzwiecki D, *et al*. Analysis of air contrast barium enema, computed tomographic colonography, and colonoscopy: prospective comparison. Lancet 2005;365:305–11.