This guideline is designed to assist practitioners by providing the framework for colorectal cancer (CRC) screening, and is not intended to replace a practitioner’s judgment. Following are the guidelines Medical Associates Clinic and Health Plans recommend for initial screening and follow-up management. The options below are suggested by strong evidence of effectiveness, and personal preferences may be utilized, as the goal is to increase the likelihood that screening will occur.

**Average Risk Patients:** (Average risk is defined as those individuals who are age 50 or older with no history of adenoma, colorectal cancer, or inflammatory bowel disease, and with no family history of CRC). Other subgroups of this average population may warrant initial screening at an earlier or later age, depending on their risks.

Offer screening for both genders beginning at age 50 (and at age 45 for African Americans). The USPSTF (United States Preventive Services Task Force) recommends against routine screening for CRC in adults age 76-85 years, and screening not be done in adults older than 85 years of age. American College of Physicians recommends adults older than 75 as well as individuals with a life expectancy of less than 10 years should not receive routine colorectal screening.

Alternate cancer detection tests should be offered to patients who decline colonoscopy or other prevention test, due to unavailability of the test or for those whom it is not feasible to undergo a colonoscopy.

**The preferred CRC Prevention Tests are:**
- A quality colonoscopy every ten years.
- iFOB test (Immunological Fecal Occult Blood) or FIT (fecal immunochemical test) screening each year. The iFOB test only requires one specimen and because it is specific to human hemoglobin, patients are not required to adhere to strict dietary or medication restrictions. Immunological Fecal Occult Blood tests are more analytically sensitive than traditional guaiac based methods. This test could precede any of the other testing as a positive result usually requires colonoscopy. The CPT code for this test is 82274.
  *A fecal occult blood test or a fecal immunochemical test done during a digital rectal exam in the doctor’s office is not adequate for screening.*

**Note:** average risk individuals should be screened either with an annual iFOB test or once every 10 years with colonoscopy. If the patient has a normal colonoscopy, a repeat colonoscopy will be recommended in 10 years (or earlier if patient has symptoms that warrant additional screening). Also, in the event of a normal colonoscopy an annual iFOB is not necessary, unless the patient becomes symptomatic.
**Alternative CRC Prevention Tests:**
- Flexible sigmoidoscopy every five years. All polyps should be biopsied. If adenomatous polyps or cancer are found, a colonoscopy for full evaluation should be offered. Patients with tubular adenomas should discuss possible colonoscopy with their physician.
- CT colonography every 5 years*

**Alternative Cancer Detection Tests** (to replace the older guaiac-based Hemoccult II cards):
- Annual FOBT (fecal occult blood test) with Hemoccult Sensa (higher sensitivity guaiac based test)
- Fecal DNA testing every 3 years*
  *iFOB is the preferred strategy for CRC screening over CT colonography and Fecal DNA testing (with respect to cost).*

Current trends in the United States reflect the American College of Gastroenterology’s recommendations in that colonoscopy procedure volumes have risen dramatically, whereas flexible sigmoidoscopy and double-contrast barium enema (DCBE) procedure volumes have decreased as have FOBT’s.

**Patients at risk: 5 Risk Factors for colon neoplasms**

Start colorectal cancers screening earlier and/or screen more often if the patient has any of the following colorectal cancer risk factors:

- A personal history of colorectal cancer or adenomatous polyps
- A personal history of any type of cancer
- A personal history of chronic inflammatory bowel disease (Crohn’s disease or ulcerative colitis)
- A strong family history of colorectal cancer or advanced adenomatous polyps (cancer or polyps in a first degree relative [parent, sibling, or child] younger than 60 or in 2 or more first degree relatives of any age)
- A known family history of hereditary colorectal cancer syndromes such as familial adenomatous polyposis (FAP) or hereditary non-polyposis colon cancer (HNPCC)

*There is consistent evidence to support the concept that both overweight and obese statuses as well as smokers (male and female) are at higher risk for CRC. These combined factors may benefit from earlier initial CRC screening and more frequent screening intervals.*
Special Cases:

- **Family history of familial adenomatous polyposis (FAP)**
  - Consider genetic tests
  - Carriers or suspicious cases should have a sigmoidoscopy every year beginning at puberty
  - Refer to GI specialist
- **Family history of hereditary non-polyposis colon cancer (HNPCC)**
  - Consider genetic tests
  - Colon evaluation every 1-2 years starting between age 20 and 30 and every year after age 40 (requires colonoscopy)
- **Inflammatory bowel disease**
  - Colonoscopy every 1-2 years after eight years of disease or after 15 years if only the left colon is involved.
- **Personal history of CRC**
  - Initial full colonoscopy screening prior to or after initial surgery
  - Subsequent colonoscopy every 3-5 years
- **Surveillance of polyps**
  - Patients with large (>1cm in diameter) or multiple adenomatous polyps removed at colonoscopy
    - repeat colonoscopy in 3 years
    - subsequent follow-up dependent on risk of new lesions appearing

Repeat in 3 years for the following:
- Patients with multiple adenomas, a large (>1cm) adenoma, an adenoma with villous histology or high-grade dysplasia, and with a family history of CRC

  ***In the event that a patient had a high grade dysplastic adenoma and it is uncertain if the entire lesion was removed the procedure may need to be rechecked earlier than 3 years***

Repeat in 5 years for the following:
- Patients with low risk and no family history of CRC

After one negative follow up colonoscopy, intervals may increase to 5 years.

Repeat colonoscopies for patients aged ≥ 65 with a history of polyps:
- The previous polyp(s) must be “adenomatous” to be considered high risk.
  A colonoscopy should be performed every two years on the high risk patient.
- If the previous polyp(s) were hyperplastic or unknown, the repeat colonoscopy is considered to be screening, NOT high risk, and the patient should be scheduled for the next colonoscopy in ten years.

NOTE: For any specifics on interpretation, refer to the “NCCN – National Comprehensive Center Network; Guidelines “Colorectal Cancer Screening” Version 2.2011, 10/22/10
Algorithm for Colorectal Cancer Cancer (CRC) Screening and Surveillance in Average-Risk and Increased-Risk Populations

Symptom assessment

- Symptoms of CRC?
  - Yes → Diagnostic Studies
  - No

Risk assessment

- Average
  - Risk?
    - Yes → Increased
    - No → Symptom assessment
  - <50 yr
    - Age?
      - ≤50 yr → Adenomatous polyps
      - ≥50 yr → CRC
    - Options:
      - Annual iFOB *1
      - Flexible sigmoidoscopy every 5 yr
      - iFOB and flexible sigmoidoscopy
      - DCBE every 5-10 yr
      - Colonoscopy every 10 yr
    - Screening
      - Negative
      - Screening genetic counseling, genetic testing
  - History?
    - Yes
      - Adenomatous polyps
      - CRC
      - IBD *2
      - Genetic syndromes (FAP, HNPCC)
        - Consider surveillance colonoscopy (see protocol)
        - Refer to colorectal expertise.
  - Family History

Diagnosis

- Positive
  - Colonoscopy
  - -Alternative:
    - DCBE preferably with flexible sigmoidoscopy
  - Adenomatous polyps > 1 cm or multiple adenomatous polyps, or high risk polyp, or family hx of CRC
  - Repeat in 3 yrs in patients with multiple adenomas, a large (>1cm) adenoma, an adenoma with villous histology or high grade dysplasia, and with a family history of CRC. In the event a patient had a high grade dysplastic adenoma and it is uncertain if the entire lesion was removed the procedure may need to be rechecked earlier than 3 yrs.
  - Repeat in 5 yrs for patients with low risk and no family history of CRC.
  - Patients with large (>1cm in diameter) or multiple adenomatous polyps removed at colonoscopy a) repeat colonoscopy every 3 yrs, OR b) subsequent follow-up dependent on risk of new lesions appearing.

Surveillance

- Patients with 1st degree relative older than 60 yrs of age at time of diagnosis should be screened at age 50 then every 10 yrs if screening is normal.

- Patients with 1st degree relative younger than 60 yrs of age with CRC or adenomatous polyps OR two 1st degree relatives diagnosed at any age, screening should begin at age 40 (or 10 yrs prior to age of earliest diagnosis) and be repeated every 5 yrs.

- Patients with 2nd degree relative should be screened as an average risk patient.

First degree relative is defined as: a parent, sibling or child.

*1. Always do prior to any invasive procedure or positive test may change recommendation.

*2. Colonoscopy every 1-2 years after eight years of disease or after 15 years if only the left colon is involved.

Second degree relatives are defined as: grandparents, aunts, uncles, nieces, nephews, and half siblings.
References


Continuing Medical Education, University of Florida; Risk Assessment Essential to Determine Colonoscopy Screening Intervals: “Screening Colonoscopy: A Focus on Updated Guidelines and Enhancing Procedure Quality” @ www.peerviewpress.com/y/r94


National Comprehensive Cancer Network; “NCCN Updates Colorectal Screening Guidelines to Include Additional Primary Screening Modality”; November 2, 2009.

USPSTF: U.S. Preventive Services Task Force; Screening for Colorectal Cancer, 10/08 @ www.uspreventiveservicestaskforce.org

Clinical Guidelines ACP, “Screening for Colorectal Cancer: A Guidance Statement From the American College of Physicians, Annals of Internal Medicine, vol. 156 no. 5 378-386 @ http://annals.org/content/156/5/378.abstract