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Colorectal Cancer Screening – Average Risk

Note: This algorithm is not intended for individuals with a personal history of colorectal cancer.

Screening for adults ages 76-85 years old should be evaluated on an individual basis to assess the risks and benefits of screening. Colorectal cancer screening is not recommended over age 85 years.

PRESENTATION

1. Average Risk:
   - Age ≥ 45 years
   - No personal history of adenoma, inflammatory bowel disease, or family history of colorectal cancer

RECOMMENDED SCREENING INTERVAL

Colonoscopy (preferred)

Normal findings?

Yes

Repeat colonoscopy every 10 years

No

If adenomatous polyps found, see Page 3 for screening interval

Multifocal (MF) stool DNA test

Normal findings?

Yes

Repeat MF stool DNA test every 3 years or other screening tests as clinically indicated

No

Refer for colonoscopy

Fecal immunochemical test (FIT)

Normal findings?

Yes

Repeat FIT annually or other screening tests as clinically indicated

No

Refer for colonoscopy

Computed tomographic (CT) virtual colonoscopy

Normal findings?

Yes

Repeat CT virtual colonoscopy every 5 years

No

Polyp(s) ≥ 6 mm?

Yes

Refer for colonoscopy

No

Discuss findings with patient and individualize recommendations

1 See the Colon Cancer, Rectal Cancer, Survivorship - Colon Cancer, or Survivorship - Rectal Cancer algorithms

2 Because there are multiple options for screening, the choice of a particular screening modality should include a conversation with the patient concerning their preference and availability. Colonoscopy and CT virtual colonoscopy are utilized in identification and removal of precancerous polyps. FIT and MF stool DNA are utilized in early detection of colon cancer.

3 Preauthorization with patient’s insurance carrier is advised
### Colorectal Cancer Screening – Increased Risk

**Disclaimer:** This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care. This algorithm should not be used to treat pregnant women.

**Note:** This algorithm is not intended for individuals with a personal history of colorectal cancer.

Screening for adults ages 76-85 years old should be evaluated on an individual basis to assess the risks and benefits of screening. Colorectal cancer screening is not recommended over age 85 years.

#### PRESENTATION

<table>
<thead>
<tr>
<th>Increased Risk - personal history of adenomas from prior colonoscopy</th>
<th>RECOMMENDED SCREENING INTERVAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 adenomas &lt; 1 cm</td>
<td>7-10 years after most recent polypectomy or normal exam</td>
</tr>
<tr>
<td>3-4 adenomas &lt; 1 cm</td>
<td>3-5 years after most recent polypectomy</td>
</tr>
<tr>
<td>5-10 adenomas or 1 adenoma &gt; 1 cm or any adenoma with villous features or high grade dysplasia</td>
<td>3 years after most recent polypectomy</td>
</tr>
<tr>
<td>&gt; 10 adenomas on a single examination</td>
<td>1 year after most recent polypectomy</td>
</tr>
<tr>
<td>Adenomas &gt; 2 cm or sessile serrated polyps (SSP) that are removed piecemeal</td>
<td>6 months to verify complete removal</td>
</tr>
<tr>
<td>Colorectal cancer or adenomatous polyps in a first-degree relative before age 60 years or in 2 or more first-degree relatives at any age</td>
<td>Age 40 years or 10 years before the youngest case in the immediate family</td>
</tr>
</tbody>
</table>

#### Increased Risk - family history

| Colorectal cancer or adenomatous polyps in a first-degree relative 60 years or older or in 2 second-degree relatives with colorectal cancer | Begin screening at age 40 years |

#### Screening options

- **Screening options** at intervals recommended for average-risk individuals

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1. See the Colon Cancer, Rectal Cancer, Survivorship - Colon Cancer, or Survivorship - Rectal Cancer algorithms
2. Precise timing based on clinical factors, patient and physician preference
3. Subsequent follow-up is based on the number and size of polyps at the time of colonoscopy as well as the degree of dysplasia. If negative for adenomatous polyps, follow-up in 5 years is recommended.
4. Genetic testing for a polyposis syndrome is recommended for patients with > 10 adenomas
5. Surveillance individualized based on Endoscopist’s judgment
6. Counseling to consider genetic testing. See the Genetic Counseling algorithm for additional information.
7. Individuals may be screened with any recommended form of testing
**Colorectal Cancer Screening – High Risk**

**PRESENTATION**
- Genetic diagnosis of FAP or suspected FAP without genetic testing evidence
- Genetic or clinical diagnosis of HNPCC (Lynch syndrome) or individuals at increased risk of HNPCC (Lynch syndrome)
- Inflammatory bowel disease (chronic ulcerative colitis or Crohn’s disease)

**AGE TO BEGIN SCREENING**
- Age 10-12 years

**RECOMMENDED SCREENING INTERVAL**
- Annual flexible sigmoidoscopy (FSIG) to determine if the individual is expressing the genetic abnormality
- Depending on gene mutation, colonoscopy:
  - Age 20-25 years for MLH1/MSH2/EPCAM
  - Age 30-35 years for MSH6/PMS2
  - 2-5 years prior to the youngest colorectal cancer diagnosis in the family if diagnosed before age 25 years for MLH1/MSH2/EPCAM
  - Before age 30 years for MSH6/PMS2
- Colonoscopy with biopsies for dysplasia every 1-2 years

**Cancer risk begins to be significant 8 years after the onset of pancolitis or 12-15 years after the onset of left-sided colitis**

**FAP** = familial adenomatous polyposis  
**HNPCC** = hereditary nonpolyposis colorectal cancer

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1. See the Colon Cancer, Rectal Cancer, Survivorship - Colon Cancer, or Survivorship - Rectal Cancer algorithms
2. Counseling to consider genetic testing. See the Genetic Counseling algorithm for additional information.
3. If the genetic test is positive, colectomy should be considered
4. Lynch syndrome represents a heterogeneous group depending on the specific genetic alteration. Screening and surveillance should be individualized based on expert consultation, including review by a Genetic Counselor.
5. First degree relative of known mutation carriers, obligate carriers of a family history concerning for HNPCC (Lynch syndrome)
6. Genetic testing for HNPCC (Lynch syndrome) should be offered to first-degree relatives of persons with a known inherited MMR gene mutation. It should also be offered when the family mutation is not known, but 1 of the first 3 of the modified Bethesda Criteria is present.
7. These patients are best referred to a center with experience in the surveillance and management of inflammatory bowel disease

Note: This algorithm is not intended for individuals with a personal history of colorectal cancer. Screening for adults ages 76-85 years old should be evaluated on an individual basis to assess the risks and benefits of screening. Colorectal cancer screening is not recommended over age 85 years.
SUGGESTED READINGS


DEVELOPMENT CREDITS

This screening algorithm is based on majority expert opinion of the Colorectal Cancer Screening workgroup at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following:

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