

## Guidelines for Screening for the Early Detection of Colorectal Cancer and Adenomas for Average-risk Women and Men Aged 50 or over

The following options are acceptable choices for colorectal cancer screening in average-risk adults beginning at age 50. Since each of the following tests has inherent characteristics related to prevention potential, accuracy, costs, and potential harms, individuals should have an opportunity to make an informed decision when choosing one of the following options.

In the opinion of the guidelines development committee, colon cancer prevention should be the primary goal of colorectal cancer screening. Tests that are designed to detect both early cancer adenomatous polyps should be encouraged if resources are available and patients are willing to undergo an invasive test.

Tests that Detect Adenomatous Polyps and Cancer		
Test	Interval	Key Issues for Informed Decisions
FSIG (flexible sigmoidoscopy) with insertion to 40 cm or to splenic flexure	Every 5 Years	<ul style="list-style-type: none"> <li>§ Complete or partial bowel prep is required</li> <li>§ Sedation is usually not used so there may be some discomfort during the procedure</li> <li>§ The protective effect of sigmoidoscopy is primary limited to the portion of the colon examined</li> <li>§ Patients should understand that positive findings on sigmoidoscopy usually result in a referral for colonoscopy</li> </ul>
Colonoscopy	Every 10 Years	<ul style="list-style-type: none"> <li>§ Complete bowel prep is required</li> <li>§ Conscious sedation is used in most centers; patients will miss a day of work and will need a chaperone for transportation from the facility</li> <li>§ Risks include perforation and bleeding, which are rare but potentially serious; most of the risk is associated with polypectomy</li> </ul>
DCBE (double contrast barium enema)	Every 5 Years	<ul style="list-style-type: none"> <li>§ Complete bowel prep is required</li> <li>§ If patients have one or more polyps <math>\geq</math> 6mm, colonoscopy will be recommended; follow-up colonoscopy will require bowel prep</li> <li>§ Risks of DCBE are low; rare cases of perforation have been reported</li> </ul>
CTC (computed tomography colonography)	Every 5 Years	<ul style="list-style-type: none"> <li>§ Complete bowel prep is required</li> <li>§ If patients have one or more polyps <math>\geq</math> 6mm, colonoscopy will be recommended; if same day colonoscopy is not available, a second complete bowel prep will be required before colonoscopy</li> <li>§ Risks of CTC are low; rare cases of perforation have been reported</li> <li>§ Extracolonic abnormalities may be identified on CTC that could require further evaluation</li> </ul>

Tests that Primarily Detect Cancer		
Test	Interval	Key Issues for Informed Decisions
gFOBT (guaiac-based fecal occult blood test) with high sensitivity for cancer	Annual	<ul style="list-style-type: none"> <li>§ Depending on manufacturer's recommendations, 2 to 3 stool samples collected at home are needed to complete testing; a single sample of stool gathered during a digital exam in the clinical setting is not an acceptable stool test and should not be done</li> <li>§ Positive tests are associated with an increased risk of colon cancer and advanced neoplasia; colonoscopy should be recommended if the test results are positive</li> <li>§ If the test is negative, it should be repeated annually</li> <li>§ Patients should understand that one-time testing is likely to be ineffective</li> </ul>
FIT (fecal immunochemical test) with high sensitivity for cancer	Annual	<ul style="list-style-type: none"> <li>§ Depending on manufacturer's recommendations, 2 to 3 stool samples collected at home are needed to complete testing; a single sample of stool gathered during a digital exam in the clinical setting is not an acceptable stool test and should not be done</li> <li>§ Positive tests are associated with an increased risk of colon cancer and advanced neoplasia; colonoscopy should be recommended if the test results are positive</li> <li>§ If the test is negative, it should be repeated annually</li> <li>§ Patients should understand that one-time testing is likely to be ineffective</li> </ul>
sDNA (stool DNA test) with high sensitivity for cancer	Interval Uncertain	<ul style="list-style-type: none"> <li>§ An adequate stool sample must be obtained and packaged with appropriate preservative agents for shipping to laboratory</li> <li>§ The unit cost of the currently available test is significantly higher than other forms of stool testing</li> <li>§ If test is positive, colonoscopy is recommended</li> <li>§ If the test is negative, the appropriate interval for a repeat test is uncertain</li> </ul>

Guidelines for Screening and Surveillance for the Early Detection of Colorectal Adenomas and Cancer in Individuals at Increased Risk or at High Risk

Risk Category	Age to Begin	Recommendation	Comment
<b>Increased Risk - Patients with History of Polyps at Prior Colonoscopy</b>			
Patients with small rectal hyperplastic polyps	N/A	Colonoscopy or other screening options at intervals recommended for average-risk individuals	An exception is patients with hyperplastic polyposis syndrome. They are at increase risk for adenomas and colorectal cancer and need to be identified for more intensive follow up.
Patients with 1 or 2 small tubular adenomas with low-grade dysplasia	5 to 10 years after the initial polypectomy	Colonoscopy	The precise timing within this interval should be based on other clinical factors (such as prior colonoscopy findings, family history, and the preferences of the patient and judgment of the physician.)
Patients with 3 to 10 adenomas or 1 adenoma > 1 cm or any adenoma with villous features or high-grade dysplasia	3 years after the initial polypectomy	Colonoscopy	Adenomas must have been completely removed. If the follow-up colonoscopy is normal or shows only 1 or 2 small, tubular adenomas with low-grade dysplasia, then the interval for the subsequent examination should be 5 years.
Patients w > 10 adenomas on a single examination	<3 years after the initial polypectomy	Colonoscopy	Consider the possibility of an underlying familial syndrome.
Patients with sessile adenomas that are removed piecemeal	2 to 6 months to verify complete removal	Colonoscopy	Once complete removal has been established, subsequent surveillance needs to be individualized based on the endoscopist's judgment. Completeness of removal should be based on both endoscopic and pathologic assessments.

Risk Category	Age to Begin	Recommendation	Comment
<b>Increased Risk - Patients with Colorectal Cancer</b>			
Patients with colon and rectal cancer should undergo high-quality perioperative cleaning	3 to 6 months after cancer resection, if no unresectable metastases are found during surgery; alternatively, colonoscopy can be performed intraoperatively	Colonoscopy	In the case of nonobstructing tumors, this can be done by preoperative colonoscopy. In the case of obstructing colon cancers, CTC with intravenous contrast or DCBE can be used to detect neoplasms in the proximal colon.
Patients undergoing curative resection for colon or rectal cancer	1 year after the resection (or 1 year following the performance of the colonoscopy that was performed to clear the colon of synchronous disease	Colonoscopy	This colonoscopy at 1 year is in addition to the perioperative colonoscopy for synchronous tumors. If the examination performed at 1 year is normal, then the interval before the next subsequent examination should be 3 years. If that colonoscopy is normal, then the interval before the next subsequent examination should be 5 years. Following the examination at 1 year, the intervals before subsequent examinations may be shortened if there is evidence of HNPCC or if adenoma findings warrant earlier colonoscopy. Periodic examination of the rectum for the purpose of identifying local recurrence, usually performed at 3- to 6- month intervals for the first 2 or 3 years, may be considered after low-anterior resection of rectal cancer.
<b>Increased Risk - Patients with a Family History</b>			
Either 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	Age 40 years or 10 years before the youngest case in the immediate family	Colonoscopy	Every 5 years
Either colorectal cancer or adenomatous polyps in a first-degree relative $\geq$ age 60 years or in 2 second-degree relatives with colorectal cancer	Age 40 years	Screening options at intervals recommended for average-risk individuals	Screening should begin at an early age, but individuals may choose to be screened with any recommended form of testing.