

RSNA Statement on Colon Cancer Screening

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The Radiological Society of North America (RSNA) is committed to excellence in patient care through education and research.

- Colorectal cancer is the third leading cause of cancer death among men and women combined in the U.S., and the American Cancer Society estimates that annually there are approximately 134,490 new cases diagnosed and 49,190 deaths.
- The disease is largely preventable through screening for colon polyps, which are benign growths that may develop into cancer if not removed. The American Cancer Society recommends that both men and women at average risk for colorectal cancer begin regular colorectal cancer screening at age 45. RSNA supports this recommendation.
- The number of deaths from colorectal cancer has been dropping in both men and women for more than 20 years. Since 2008, rates have declined by about 4 percent per year. The decline in the death rate is largely attributable to screening. As a result of screening, polyps can be removed before developing into cancer, and more colorectal cancers can be found earlier when the disease is easier to cure. However, only up to two-thirds of people who should be screened actually undergo appropriate colorectal cancer screening.
- Two of the main screening examinations for colorectal cancer are conventional colonoscopy and CT colonography, or “virtual colonoscopy.” Both tests currently require the patient to undergo similar preparations. Both examinations have been shown to be effective in identifying polyps or early signs of disease and are endorsed by the American Cancer Society (ACS). In 2016, CT colonography was endorsed by the United States Preventative Services Task Force (USPSTF) with its highest “grade A” designation (mandating reimbursement for individuals covered under the Affordable Care Act). The ACS recommends men and women over age 45 be screened with conventional colonoscopy every 10 years or with CT colonography every 5 years. Additionally, testing the stool for blood is recommended yearly with either guaiac based (gFOBT) or an immunochemical test (FIT).
- In conventional colonoscopy, a scope—a long flexible tube with a light and camera—is inserted into the rectum and advanced through the colon. The inner colon lining can be directly visualized in images transmitted from the camera to a television monitor. Biopsy of abnormalities is possible. The patient is sedated for the procedure and requires a recovery time in the facility; therefore, someone must accompany the patient to the exam location and drive the patient home. Risks associated with conventional colonoscopy include adverse reaction to the sedative used during the exam, bleeding after biopsy or polyp removal and perforation of the colon.
- CT colonography uses a CT scanner to produce precise and detailed images of the entire colon without having to insert a scope. With CT colonography screening, there is a much lower risk of bleeding or of perforating the colon. There is no need for intravenous sedation and no need for in-facility recovery, and the procedure is less costly than conventional colonoscopy. The patient can return to normal activities after this test. If the CT colonography examination identifies clinically significant polyps or other abnormalities, conventional colonoscopy for biopsy may need to be performed. CT colonography can also evaluate thickening of the colon wall and surrounding structures.
- Unlike routine CT of the body, CT colonography uses an extremely low dose of radiation. Some studies have found that there can be an increased lifetime risk of cancer due to ionizing radiation exposure from CT scans. The ultra-low-dose protocols used for CT colonography are in accordance with the “As Low As Reasonably Achievable (ALARA)” principle.

- As with any screening examination, it is important to weigh the benefits versus the risks of the procedure. CT is an exceptional tool for early detection of disease, and screening with CT may help reduce colorectal cancer deaths in people at high risk for the disease.

RSNA is a strong advocate for quality, safety and strict adherence to appropriateness criteria in medical imaging and radiation oncology.

Through its peer-reviewed journals and education programs, RSNA continually informs radiologists, medical physicists, radiation oncologists and other radiology professionals of the latest technologies and research developments designed to optimize dose and improve patient safety.