

RSNA Statement on Colon Cancer Screening **Reviewed: 5/9/2024**

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

- Colorectal cancer is a leading cause of cancer death among men and women in the U.S.
- 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 which provide structural evaluation of the colon and rectum for polyp and cancer detection 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 Preventive 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. Stool tests for blood (gFOBT or FIT tests) are done yearly. Additionally, stool DNA testing has recently become widely popular and offers screening for cancer (not polyps) with no bowel preparation. Other stool testing includes a fecal immunochemical test (FIT-DNA test) done every 1-3 years.
- 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. A small tube is inserted into the rectum, and the colon is filled with air to distend it. Some facilities also have you drink some contrast material as part of a virtual colonoscopy to make detection of polyps easier. With CT colonography screening, there is a much lower risk of bleeding and perforation of the colon. There is no need for intravenous sedation so you can go home immediately after the test, and the procedure is less costly than conventional colonoscopy. If the CT colonography examination identifies clinically significant polyps or other abnormalities, conventional colonoscopy or biopsy may need to be performed. CT colonography can also evaluate thickening of the colon wall and surrounding structures but is less accurate in diagnosing flat polyps compared to a regular colonoscopy.

- Unlike routine CT of the body, CT colonography uses an extremely low dose of radiation. 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 colonography is an exceptional tool for early detection of disease. With screening tests, the best test is usually the one that the patient is most likely to complete and tolerate.

RSNA is a strong advocate for quality, safety, equity and strict adherence to appropriateness criteria in medical imaging and radiation oncology. Through its peer-reviewed journals, education programs and annual scientific assembly, 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.