March 2019 | Healthcare Providers

Spotlight on Health

Quest Diagnostics™

Colorectal Cancer Screening: New Guideline Recommends Starting at a Younger Age

Colorectal cancer (CRC) is the fourth most commonly diagnosed cancer in the United States and one of the most common causes of cancer-related death.[1] Despite its prevalence and severity, effective screening methods make it one of the most preventable cancers.[1] Early detection of cancerous and precancerous lesions is key to survival, and in 2018 the American Cancer Society (ACS) lowered the recommended age to begin screening for individuals with average risk from 50 to 45 years old.[1]

This newsletter will review CRC and discuss the 2018 ACS screening recommendations and options for persons with an average risk of developing CRC.

How Colorectal Cancer Develops and Who Is at Risk

Most CRCs begin as adenomatous polyps that progressively enlarge, become dysplastic, and eventually become malignant.[2] This process can take 10 or more years.[2] The majority (70%) of colon cancers are sporadic and primarily linked to age and environmental factors.[3] Approximately 10% are due to inherited (genetic) syndromes (eg, familial adenomatous polyposis [FAP] and Lynch syndrome), and 20% present as familial clustering without an identifiable genetic cause.[3]

The most important risk factor for CRC is age: approximately 80% of CRC occurs in persons 55 years of age or older.[4] Another risk factor is family history; individuals with a first-degree relative with CRC have an approximately 2-fold greater risk than the average-risk population.[5] Other risk factors for CRC, such as being overweight or obese, are modifiable (see Sidebar).[1]

Why Screen for CRC?

Screening programs help reduce the incidence of CRC by allowing identification and removal of adenomatous polyps. They also reduce death from the disease because most early-stage cancers are curable (the 5-year relative survival for CRC confined to the primary site is approximately 90% vs 14% for individuals with distant metastasis[4]). Compared with no endoscopic screening, a colonoscopy is associated with a 67% reduction in the risk of death from CRC.[6] The effectiveness of screening is in large part due to the slow progression from formation of a polyp to malignant transformation.[5]

ACS CRC Screening Guidelines for Average-Risk Individuals

The ACS 2018 guidelines for CRC screening recommend that average-risk adults aged 45 years and older undergo regular screening with either a high-sensitivity stool-based test or a structural (visual) exam.[1] All positive results from non-colonoscopy screening tests should be followed up with a colonoscopy.[1] The ACS decision to lower the age to begin screening took into account a 51% increase in the incidence of CRC in adults younger than 55 years from 1994 to 2014, and an 11% increase in mortality from 2005 to 2015.[1]

Modifiable Risk Factors for CRC

The proportion of CRC incidence attributable to factors associated with a Western lifestyle is estimated to be around 50% to 60%.[1] These modifiable factors include

- Cigarette smoking
- Excess body weight
- High consumption of alcohol and red and processed meat
- Low consumption of fruits, vegetables, dietary fiber, and dietary calcium
- Physical inactivity

Hereditary Risk Factors for CRC

The National Comprehensive Cancer Network® (NCCN) provides criteria to identify individuals with no known personal or family history of a CRC-causing genetic mutation that should be assessed for hereditary CRC.[8] Examples of risk factors include

- >10 adenomatous polyps (possible FAP)
- A family member with colon cancer younger than 50 (Lynch syndrome)
- Multiple relatives with colon cancer or other related cancers such as endometrial, ovarian, and gastric (Lynch syndrome)

The ACS recommends that[1]

- Average-risk adults with a life expectancy of more than 10 years continue CRC screening through the age of 75 years.
- Screening decisions for individuals 76 through 85 years old should be based on patient preference, life expectancy, health status, and screening history.
- Screening for individuals older than 85 years should be discouraged.

Other organizations have not lowered the recommended age to begin screening for average-risk individuals, but are expected to do so. The United States Preventive Services Task Force (USPSTF) is currently reviewing its recommendations published in 2016; the period for public comment ended January 30, 2019.[7]

Importantly, the new ACS guidelines apply to individuals with an *average* risk of developing CRC. Persons at increased risk for CRC, such as those with a family history of CRC, polyps, and certain hereditary syndromes (eg, Lynch, FAP, see Sidebar on previous page[8]), should begin screening earlier.[5]

Screening Options for CRC

CRC screening options include direct visualization methods, such as colonoscopy, and stool-based tests. Colonoscopy allows direct visualization and subsequent removal of lesions in the colon. Stool-based testing detects occult blood related to polyp growth, as well as other conditions (eg, diverticulitis). For persons with *average risk* of CRC, the ACS recommends screening with one of the following options[1]

- Fecal immunochemical test (FIT) every year
- High-sensitivity, guaiac-based fecal occult blood test (gFOBT) every year
- Multitarget stool DNA test every 3 years
- Colonoscopy every 10 years
- Computed tomography colonography every 5 years
- Flexible sigmoidoscopy every 5 years

Any positive stool-based or imaging test should be followed up with colonoscopy.[1]

How Healthcare Providers Can Help

Healthcare providers can educate patients on the importance of screening for CRC, allay fears patients may have about undergoing a colonoscopy, and explain the alternatives to a colonoscopy, such as the gFOBT and FIT methods. They can also discuss modifiable risk factors for CRC (see Sidebar on previous page).

How the Laboratory Can Help

Quest Diagnostics offers the InSure® ONE™ FIT (test codes 11290 and 11293). The test only requires that a patient collect a sample from the toilet after a bowel movement by gently brushing the stool with the supplied brush. The patient then dabs the brush on the test card and then mails the card to the lab. Annual FIT testing is reported to be more effective and less costly than stool DNA testing.[5]

If patients decline recommended screening tests, Quest offers the ColoVantage® (methylated Septin 9) (test code 16983). This blood test detects DNA released from cells that are becoming malignant.[5] Quest also provides electronic delivery of test results, which facilitates their documentation. To find out more about InSure ONE, or to request kits, contact Quest at 866-MY-QUEST.

References

1. Wolf AMD, Fontham ETH, Church TR, et al. Colorectal cancer screening for average-risk adults: 2018 guideline update from the American Cancer Society. *CA Cancer J Clin.* 2018;68:250-281.
2. Hadjipetrou A, Anyfantakis D, Galanakis CG, et al. Colorectal cancer, screening and primary care: a mini literature review. *World J Gastroenterol.* 2017;23:6049-6058.
3. Recio-Boiles A, Cagir B. Cancer, Colon. *StatPearls [Internet].* Treasure Island, FL: StatPearls Publishing; 2017. https://www.ncbi.nlm.nih.gov/books/NBK470380/. Updated October 27, 2018. Accessed January 10, 2019.
4. Cancer stat facts: colorectal cancer. National Cancer Institute: Surveillance, Epidemiology, and End Results Program website. https://seer.cancer.gov/statfacts/html/colorect.html. Accessed January 8, 2019.
5. Rex DK, Boland CR, Dominitz JA, et al. Colorectal cancer screening: recommendations for physicians and patients from the U.S. Multi-Society Task Force on colorectal cancer. *Gastroenterology.* 2017;153:307-323.
6. Doubeni CA, Corley DA, Quinn VP, et al. Effectiveness of screening colonoscopy in reducing the risk of death from right and left colon cancer: a large community-based study. *Gut.* 2018;67:291-298.
7. Draft research plan: colorectal cancer: Screening. U.S. Preventive Services Task Force website. https://www.uspreventiveservicestaskforce.org/Page/Document/draft-research-plan/colorectal-cancer-screening3. Updated January 2019. Accessed January 8, 2019.
8. National Comprehensive Cancer Network: NCCN clinical practice guidelines in oncology (NCCN Guidelines®): genetic/familial high-risk assessment: colorectal v1.2018. http://www.nccn.org. Published July 12, 2018. Accessed January 29, 2019.