

High-Risk Screening (COLON-2)

- As the name implies higher risk screening translates to earlier and more frequent screening for colon cancer. The most recent AGA delineation of risk from average to high risk was derived from Best Practice Advice statements that were drawn from a review of the published literature and from expert opinion.
- Since the early 2000s, there has been a rapid decline in colorectal cancer (CRC) mortality, due in large part to screening and removal of precancerous polyps. Despite these improvements, CRC remains the second leading cause of cancer deaths in the United States.
- There are different factors that can give one a high risk status. Screening is imperative since early on in the disease symptoms are rare and if not previously identified often the CRC will have disseminated to the other areas of the body such as the lymph nodes or vital organs. The most common organ being the liver.
- In general high risk individuals have a family history of CRC and screening is recommended 10 years before the age at diagnosis of the youngest affected relative or age 40 years with colonoscopy which ever is first. Based on current evidence, risk stratification for initiating CRC screening or surveillance should be based on age, family history, predisposing hereditary CRC syndromes, prior screening, or other CRC predisposing conditions. Each area has specific recommendations for timing and frequency of screening.
- Colonoscopy is the gold standard of screening tests, and identifies approximately 95% of CRC. It is also the only method that allows a gastroenterologist to both detect and remove potentially precancerous colon polyps. Colonoscopies are considered low-risk procedures, but they do have a small risk of bleeding and perforation that increases in older age groups.
- Colonoscopy is the test of choice for screening in high risk individuals.
- FIT Testing: The fecal immunochemical test (FIT) is a lab test that looks for hidden blood in the stool. Patients use a kit to collect their stool and then use a probe to scrape the stool, which is then placed into a tube and mailed to the lab. FIT testing is repeated every year. A drawback of FIT testing is that it has a false positive rate of approximately 5%. It can effectively rule out CRC with 79% accuracy.
- Virtual colonoscopy, also called computed tomographic (CT) colonography, is a screening method that uses special x-ray equipment (a CT scanner) to produce a series of pictures of the colon and the rectum from outside the body. This is used when the patient is unable to have a colonoscopy due to other medical issues.

References

1. Issaka RB, Chan AT, Gupta S. AGA Clinical Practice Update on Risk Stratification for Colorectal Cancer Screening and Post-Polypectomy Surveillance: Expert Review. *Gastroenterology*. 2023 Nov;165(5):1280-1291. doi: 10.1053/j.gastro.2023.06.033. Epub 2023 Sep 21. PMID: 37737817; PMCID: PMC10591903.
2. Gammon A, Kohlmann W, Burt R. Can we identify the high-risk patients to be screened? A genetic approach. *Digestion*. 2007;76(1):7-19. doi: 10.1159/000108389. Epub 2007 Oct 19. PMID: 17947814.
3. Bernstein IT, Bülow S. Arvelig kolorektal cancer [Hereditary colorectal cancer]. *Ugeskr Laeger*. 2005 Oct 31;167(44):4159-63. Danish. PMID: 16266567.
4. Dominic OG, McGarrity T, Dignan M, Lengerich EJ. American College of Gastroenterology Guidelines for Colorectal Cancer Screening 2008. *Am J Gastroenterol*. 2009 Oct;104(10):2626-7; author reply 2628-9. doi: 10.1038/ajg.2009.419. PMID: 19806090.
5. Cunningham C, Leong K, Clark S, Plumb A, Taylor S, Geh I, Karandikar S, Moran B. Association of Coloproctology of Great Britain & Ireland (ACPGBI): Guidelines for the Management of Cancer of the Colon, Rectum and Anus (2017) - Diagnosis, Investigations and Screening. *Colorectal Dis*. 2017 Jul;19 Suppl 1:9-17. doi: 10.1111/codi.13703. PMID: 28632312.
6. Vasen HF. Can the identification of high risk groups increase the effectiveness of colon cancer screening programmes? *Z Gastroenterol*. 2008 Apr;46 Suppl 1:S41-2. doi: 10.1055/s-2007-963483. PMID: 18368642.
7. Gao J, Zhuang L, He C, Xu X, Zhu Z, Chen W. Risk and prognostic factors in patients with colon cancer with liver metastasis. *J Int Med Res*. 2023 Sep;51(9):3000605231191580. doi: 10.1177/03000605231191580. PMID: 37737100; PMCID: PMC10517611