PRACTICE MANAGEMENT: THE ROAD AHEAD

Adding Value to the Conversation About Colorectal Cancer Screening: Practical Pearls For Gastroenterologists

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More often than not, colorectal cancer (CRC) screening is squarely in the domain of primary care. As gastroenterologists, we occasionally may encounter the patient who has never been screened (or offered a screening test), but this is becoming less common in our increasingly integrated health care system in which evidence-based preventive care is strongly incentivized. Moreover, our primary care colleagues bring substantial expertise in the optimal delivery of preventive services, routinely weighing the pros and cons of prevention in the context of individual health in patients who they often have followed up for decades. However, as experts, we also have unique responsibilities. One such responsibility is advocacy. As professionals who have dedicated our careers to diagnosing and treating gastrointestinal (GI) disorders, it is only natural that we seek to promote long-term GI health, particularly for a prevalent and morbid condition such as CRC. However, we also are disease experts and scientists. In this context, how can we as gastroenterologists bring added value to this space beyond simple advocacy? What are the salient knowledge gaps and nuances when it comes to screening? Here, we present several key points to consider when talking to our patients and our colleagues.

A Few Words About Terminology: Screening vs Surveillance, and So Forth

Before diving in, it is worth briefly reviewing what we mean by screening. It is common for our primary care colleagues, our trainees, and even our GI partners to use the term *screening* loosely. However, it is important to be precise. *Average-risk screening* refers to a screening test performed for an individual who is asymptomatic and has no personal or family history that indicates an increased risk for colorectal neoplasia (such as a prior history of adenomas, inflammatory bowel disease [IBD], hereditary CRC syndromes, or CRC itself). *High-risk screening* refers to screening that is performed in an individual with a family history of polyps or CRC. This is in contrast to (*postpolypectomy*) *surveillance*, which refers to colonoscopy performed in an individual with a personal history of adenomatous polyps. However, the term *surveillance* also is used for colonoscopy performed in an individual with prior CRC, or in an individual with IBD to assess for dysplasia (*IBD surveillance*). Finally, colonoscopy that is performed after a positive screening test such as a fecal immunochemical test (FIT), or for symptoms such as rectal bleeding, is referred to as *diagnostic*. The focus of this article is on average-risk screening, although we also briefly touch on high-risk screening.

When to Start Screening

From the standpoint of cancer prevention, it is always better to start screening sooner rather than later. A first-time screening colonoscopy at age 60 will prevent fewer cancers than screening at age 50 or 40 or 30. As a corollary, screening every 10 years in patients at average risk is less effective than screening every 5 years or annually. However, as we all know, there is a tradeoff—screening sooner (or more often) rather than later leads to more tests with fewer benefits. Making the determination about when to set the cut-off age is a value judgment. Ideally, we would present patients with the benefits and harms of screening tailored to their personal history and health state and allow them to make the decision in an informed way, but this is impractical and typically of insufficient priority compared with other, more complex, medical decisions. Therefore, in the United States (with occasional exceptions, such as Kaiser Permanente Northern California), we only offer screening to patients who happen to interact with the health care system and are of appropriate age (eg, opportunistic screening). Risk stratification is based primarily on family

Abbreviations used in this paper: CRC, colorectal cancer; FIT, fecal immunochemical test; GI, gastrointestinal; IBD, inflammatory bowel disease; USMSTF, US Multi-Society Task Force.

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Table 1. Examples of Available Risk Calculators for CRC

Calculator	Purpose of calculator	Factors included to determine risk	Practical application
Screeningdecision.com	Estimates benefit vs harm of CRC screening	Age, race, sex, prior screening, health status	May inform decision making for screening, particularly for older adults or those with multiple medical problems
ePrognosis (available at: ePrognosis.ucsf.com)	Estimates benefit vs harm of CRC screening	Age, sex, BMI, health status, smoking status, functional status	May inform decision making for screening, particularly for older adults or those with multiple medical problems
National Cancer Institute CRC Risk Assessment Tool (available at: www.cancer.gov/colorectalcancerrisk)	Estimates 5-year, 10-year, and lifetime CRC risk	Age, race, sex, BMI, diet, physical activity, family history, menstrual status for women, aspirin/NSAID use, prior screening history	May inform decision making for whether to pursue screening based on overall risk of CRC
Cleveland Clinic CRC Predicted Risk Online Assessment Tool (available at: www.r-calc.com)	Estimates 10-year CRC risk	Age, race, sex, BMI, smoking status, alcohol use, years of education, family history, multivitamin use, diabetes history, NSAID use, estrogen use	May inform decision making for whether to pursue screening based on overall risk of CRC

BMI, body mass index; NSAID, nonsteroidal anti-inflammatory drug.

history. The US Multi-Society Task Force (USMSTF) recommends starting screening at the age of 45 as opposed to age 50 for African Americans.[1] Similarly, the American Cancer Society recently recommended screening average-risk individuals starting at age 45. Modeling studies have suggested that the clinical benefit of early screening, or tailoring screening recommendations according to race and sex, is small. For understanding the trade-off between benefits vs harms, risk calculators may be helpful in decision making for CRC screening. Several examples of currently available risk calculators are provided in Table 1.

Family History and the Needle in the Haystack

Family history and its relevance to CRC prevention is a topic in and of itself. For practical purposes, however, the approach can be relatively simple. First, it is important to note that roughly 75% of CRC cases are sporadic in patients with no known family history. Second, of the remaining 25% in whom there is a familial association, a minority (5%–10% of all patients with CRC) have a known hereditary cancer syndrome, whereas the remainder have an unknown familial association.[2,3] We are more likely to miss or mishandle the former rather than the latter and continuously should remind ourselves and our colleagues of the importance of identifying patients with a probable or possible hereditary syndrome. Details about the management of such individuals (whether suspected or confirmed) is beyond the scope of this article. However, given the substantially increased risk of CRC (and other cancers), potentially early in life, we need strategies to identify these individuals in an effective and timely way. One practical way to do this is by integrating screening instruments such as the 3-item risk assessment for hereditary cancers, presented by Kastrinos et al,[3] into preprocedure discussions. This instrument comprises the following 3 questions: (1) Do you have a first-degree relative with CRC or Lynch syndrome–related cancer diagnosed before the age of 50? (2) Have you had CRC or polyps diagnosed before the age of 50? (3) Do you have 3 or more relatives with CRC? Any individual responding "yes" to at least 1 of these questions is considered to be high risk for CRC and warrants more detailed assessment for hereditary cancer syndromes. Screening tools such as this could be incorporated into our visits or, better yet, into our primary care providers' visits (perhaps in the electronic health record system via a patient portal or other patient-facing technology), because they are often the ones who decide when to start CRC screening.

Which Test to Choose

There are 3 main CRC screening modalities in use: endoscopy (colonoscopy, flexible sigmoidoscopy),

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