

Challenges in Colorectal Screening: How to Improve Screening Rates

USPSTF Update: Making Recommendations Actionable Podcast Transcript

Adrian Banning:

Hello and thank you for joining us today. My name is Adrian Banning. I'm a PA and I'm an associate professor in the Delaware Valley PA Program in Doylestown, Pennsylvania, just outside of Philadelphia. I am happy to be joined today by PA Carol Antequera, Division of Gastroenterology Department of Medicine, University of Miami Miller School of Medicine. You are tuning into "The Challenges in Colorectal Cancer Screening: How to Improve Screening Rates" podcast series, developed by the American Academy Physician Associates and The France Foundation, and supported by an independent educational grant from Exact Sciences.

Carol Antequera:

The goal of this series is to provide education and tools to assist PAs and other clinicians by providing the latest screening recommendations, screening modalities, and patient-centric adherence techniques to improve colorectal cancer screening rates among all patients. This is the first episode in a three-part podcast series focused on breaking down barriers to colon cancer screening. To kick off this episode, Adrian, would you please set the background for our discussion?

Adrian Banning:

Happy to. In this first episode, we are going to review data on causes, incident rates, and risk factors associated with colorectal cancer and reflect how this pertains to clinical practice. We'll also describe the latest recommendations and guidance for screening, and its role in preventing progressive disease. We're going to review the various guidelines on colorectal cancer screening so you know exactly when to recommend it to your primary care patients. We're also going to review the guidelines by the USPSTF, the United States Preventive Services Task Force, the American College of Gastroenterology; and we're going to review a guideline update from the American Gastroenterological Association. So, let's jump in. Carol, will you tell us about some of the epidemiology of colorectal cancer?

Carol Antequera:

Yes Adrian, thank you so much. For patients and PAs, they should be aware of a few key statistics about colorectal cancer screening. First, in the United States colorectal cancer is the third leading cause of cancer related deaths in men and women, and the second most common cause of cancer deaths when numbers for men and women are combined. In 2022, it is estimated that there will be 151,000 new cases of colorectal cancer. This means that one in 20 of us will develop colon cancer. Of these, an estimated 52,580 people will die of this disease. It is estimated that about 10.5% of new colorectal cancer cases occur in persons younger than 50 years old.

Now, this is a little bit alarming. Colorectal cancer incidence is approximately 25% higher in males than in females, and is approximately 20% higher in African Americans than in white Americans. And in the United States, the incidence for colorectal cancer in males and females under the age of 50 has steadily increased at a rate of about 2% per year from 1995 through 2016.

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Adrian Banning:

It's a dangerous cancer that affects a lot of people, but it has a pretty nice five year survival rate of about 65% when we can treat it. So, it's so important to detect it early. Carol, you're a GIPA, and you take care of people with colorectal cancer all the time. What do you hope primary care PAs take away from this series and this episode in particular?

Carol Antequera:

Adrian what we really hope is that primary care PAs can take away from this series is that the best test is really the one that gets done. But beyond that, it's crucial to educate our patients on why they should have screening done and also educate them to the benefits of screening.

Adrian Banning:

Good point. Before we get into screening, how about a review of the anatomy we'll be discussing when we talk about colorectal cancer?

Carol Antequera:

Yes, of course. Very important. Okay, so first let's talk about the rectum. So, the rectum we know is the part of the colon closest to the anus and is about 12 centimeters from the anal verge. The rectum doesn't have the same protective outer layer as the colon does, called the serosa, so it's easier for a tumor that's located in the rectum to break through and spread locally. This makes rectal cancer 10 times more likely than colon cancer to come back after treatment when it's started.

Rectal cancer has about a 20% risk of local recurrence versus about 2% for colon cancer. Rectal cancer that grows or spreads in the pelvic area is especially dangerous because of the important organs that are located nearby. And depending on the size and position of the tumor, rectal cancer can pose a threat to essential bodily functions, from bowel movements, to urination, to sex.

Adrian Banning:

Good review of the anatomy Carol. Thank you. Can we now move into a review of treatment, morbidity, and mortality?

Carol Antequera:

Absolutely. So, treatment approaches for colon and rectal cancer differ based on the stage at which they are found. For rectal cancer, typically the patient will undergo chemotherapy and radiation prior to their surgery. In colon cancer, the initial approach is typically surgery to remove the lesion found, followed by chemo and or radiation if deemed necessary. For colon cancer, the overall five-year survival rate for people is about 64%. If the cancer is diagnosed at a localized stage, the survival rate can be up to 91%. If colon cancer has spread to distant parts of the body, the five-year survival rate then is only about 14%.

For rectal cancer, the overall five-year survival rate is about 67%. If the cancer is diagnosed at a localized stage, the survival rate is about 90%. If the cancer has spread to surrounding tissues or organs, and or

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the regional lymph nodes, the survival rate then is about 73%. If the cancer has spread to distant parts of the body, the survival rate is similar to that of colorectal cancer and is about 17%.

So let's discuss a little bit about the incidence of colon cancer. Cancer of the colon is the fourth most incident cancer in the world, while cancer of the rectum is the eighth most incidence. Together, colorectal cancers are the third most commonly diagnosed form of cancer globally, comprising of about 11% of all cancer diagnoses. A little bit about the mortality. The mortality of colorectal cancer is the second most deadly cancer worldwide with about 881,000 deaths estimated for the year 2018. Developed countries are the highest risk of colon and rectal cancer. North America also features among the highest incidents rates for both cancers.

Adrian Banning:

Interesting, Carol. Will you walk us through risk factors for colorectal cancer, and could you explain the disparities that exist in different groups? For example, which groups are more at risk or more prone to worse outcomes?

Carol Antequera:

Sure Adrian. And these can actually be broken down into two categories comprised of modifiable and non-modifiable risk factors that can predispose us to colorectal cancer. For example, race, sex, and ethnicity are what we would refer to as non-modifiable risk factors. However, modifiable risk factors include smoking, alcohol consumption, diet, obesity, and physical inactivity. These factors play a major role in our lifetime risk. In the U.S., African Americans and Native Americans have a higher incidence of colorectal cancer and suffer lower survival among all stages of colorectal cancer.

Meanwhile, Hispanic Americans show the same rates and survival for colorectal cancer as do white Americans. Racial differences likely have more to do with the disparity in access to quality healthcare, preemptive screenings, healthy foods, income, and education than a genetic component.

Colorectal cancer is more common in men than women, and among those of African American descent. Colorectal cancer incidence has been steadily rising worldwide, especially in developing countries that are adapting to the western way of life. Obesity, which is increasing worldwide, sedentary lifestyle, red meat consumption, specifically those processed meats, as well as alcohol and tobacco are considered the driving factors behind the growth of colorectal cancer.

Adrian Banning:

Okay, I just want to repeat that because it's so important. Carol I heard you say that modifiable lifestyle choices and habits are the biggest risk factors for colorectal cancer. So, while we're talking about screening today, prevention through lifestyle modification is very possible.

Carol Antequera:

Yes it is Adrian. And on the other side, improvements in colorectal cancer treatment have led to decreases in colorectal cancer mortality in the second and third categories of nations, even in the face of increased incidence.

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Adrian Banning:

Okay. So Carol, when we say colorectal, the difference is location obviously. But would all the screening tests that we're going to talk about screen for both?

Carol Antequera:

The screening tools that we have would be able to detect colon and rectal cancer. Adrian, before we get into the recommendations, can you remind us what makes a good screening tool?

Adrian Banning:

I'd be happy to. So, a screening test is one where if you do it, you can do something about the illness you're looking for. There's no point in screening for disease if there's nothing you can do to help if you do find it. The point of screening is to find a disease before it's symptomatic so that we can interrupt the pathophysiology and ideally stop the process altogether, or at least slow it.

Most of the time screening is a secondary prevention. Having the screening done doesn't prevent the disease from starting, it allows us to catch the disease early. But in the case of colorectal cancer, we can actually prevent a polyp from becoming cancerous by identifying pre-cancerous polyps and removing them during a screening colonoscopy because it takes about 10 to 15 years before a polyp mutates into cancer. Carol, can you tell us more about how fast or slowly colorectal cancer progresses?

Carol Antequera:

It's actually surprising to many to hear that colorectal cancer can actually take about 10 to 15 years before patients can have a cancerous lesion. Colorectal cancer usually begins with the non-cancerous proliferation of mucosal epithelial cells. These growths are commonly known as polyps and they can grow gradually for 10, 15, or even 20 years before becoming cancerous. The most common form is called an adenoma or polyp that originated from granular cells. And the function of these cells is to produce the mucus that lines the large intestine. So, only about 10% of all adenomas progress to invasive cancer, although the risk of cancer does increase as the polyp grows larger.

Adrian Banning:

Thank you. So, ideally we'll have some time between screening to find polyps or lesions, although that's not always the case. Let's turn back to screening and review. What makes a good screening tool. So, many argue that a good screening test ideally improves all cause mortality in the screened population. Improved mortality from the disease you're looking for is good, but even better is improved all cause mortality. This is hard to show though because it needs enormous trials and decades of follow up in the case of colorectal cancer especially.

Also cost. A good screening test is cost effective, meaning the test itself doesn't cost too much and it saves money by decreasing disease severity and the cost of treating cancer, as well as decreasing the cost of lost work and productivity from fighting the cancer. A good screening test is also timed appropriately. All in all, the test we have do see decreases in colorectal cancer from colorectal cancer screening.

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However, organizing any colorectal cancer screening program is complicated. It has lots of steps and lots of interactions between patients, their providers, and healthcare organizations. And the ball can get dropped during any one of those interactions. A good program needs the screening method, knowing the target population, inviting them to participate and informing them, knowing how often to screen, and then the patients have to be notified of the results. And if the screening is positive, specialist referral and treatment has to be arranged as well.

So, lots of different moving parts. And all of that needs to be monitored and there have to be quality checks and evaluation. In Europe, access to population-based screening in age eligible populations is increasing. Here in the U.S., we could use a great population-based screening model too but we don't have one.

Carol Antequera:

That's very interesting Adrian. Why is that?

Adrian Banning:

I know it is. Well, it's no secret that our system is fragmented and isn't really set up to implement nationwide programs for screening. The good news is that compliance with screening opportunistically, which is what we do, has gone up to about 65% and we have seen a reduction in colorectal cancer mortality and incidence. Fantastic. But there's still lots of room to go when that means that there's about 35% of eligible people who are remaining screened. So Carol, once someone has a positive colorectal cancer screening, this is when they meet you, right?

Carol Antequera:

Absolutely. In my practice, being that I'm already in a subspecialty, we typically get patients who are referred after being seen by their primary care PA with an either positive FIT test, or stool DNA screening test. However, sometimes patients will come directly to my clinic because they have been referred by their primary care PA for consultation on options for colorectal cancer screening.

Adrian Banning:

Okay. So, speaking of screening, FIT, and DNA test, Carol this seems like a great time to go over the recommendations for screening. We're going to cover three as a reminder. The United States Preventive Services Task Force, or USPSTF from here on out, the American College of Gastroenterology, and then finally a statement from the American Gastroenterological Association. Before we get into the USPSTF screening, a reminder that an A recommendation means the USPSTF recommends the service. There is certainty that the net benefit is substantial. A B recommendation on the other hand, is similar, but that definition is that the USPSTF recommends the service. There is high certainty that the net benefit is moderate, or there is moderate certainty that the net benefit is moderate to substantial.

So, A and B are both offer or provide the service, but they differ in the certainty of the net benefit and how big the benefit is. Okay. So, now that we went over the different grades from USPSTF, Carol, will you tell us about the guidelines from them for colorectal cancer screening?

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Carol Antequera:

In adults aged 50 to 75 years of age, the USPSTF recommends screening for colorectal cancer in all adults age 50 to 75 years of age. They also recommend screening for colorectal cancer in adults age 45 to 49 years of age. And this is what's changed. This is new. For adults age 76 to 85 years of age, the USPSTF recommends that clinicians selectively offer screening for colorectal cancer in adults age 76 to 85. Evidence indicates that the net benefit of screening all persons in this age group is small. In determining whether this service is appropriate in individual cases, patients and clinicians should consider the patient's overall health, prior screening history, and preferences.

Adrian Banning:

Okay, so adults age 50 to 75 is an A grade recommendation. And then the change, adults age 45 to 49, that's a B recommendation. And then 76 and over, that's a C recommendation. Carol, why did USPSTF guidelines add starting at 45 years old as a B level recommendation? What was the evidence behind that?

Carol Antequera:

These qualified recommendations were based on a predictive modeling analysis in age cohort epidemiological evidence of a relative increase of 51% in colorectal cancer incidents among individuals younger than 50 years, between the years 1974 and 2013. This was the driving force for the change in the recommendations.

Adrian Banning:

Okay. So, colorectal cancer incidence was going up in people younger than 50 from 1974 onward may be related to those Western lifestyle changes we were talking about before. All right, so that's USPSTF. What are the ACG recommendations, the American College of Gastroenterology?

Carol Antequera:

The American College of Gastroenterology updated their colorectal cancer screening guidelines in 2021 to go along with these new recommendations from the USPSTF, and they recommend colorectal cancer screening in average risk individuals between the ages of 50 and 75 years of age to reduce the incidence of advanced adenoma colorectal cancer and mortality. And these recommendations were given a strong recommendation with a moderate quality of evidence.

They also suggest colorectal cancer screening in average risk individuals starting at age 45 to 49 to reduce the incidence of advanced adenoma and colorectal cancer. These recommendations were given a conditional recommendation with very low quality evidence. And similar to the USPSTF guidelines, the decision to screen patients beyond the age of 75 is recommended to be done on an individualized approach. And the ACG gave this a conditional recommendation with a very low quality of evidence.

They also recommend colonoscopy and fecal immunohistochemical testing as the primary screening modalities for colorectal cancer. And these were given a strong recommendation with a low quality of evidence. Going a little further than the USPSTF, they suggested considerations for screening modalities

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in individuals unable or unwilling to undergo colonoscopy or FIT testing. These individuals can undergo flexible sigmoidoscopy, multi target stool DNA test, CT colonography, or a colon capsule. And these were given a conditional recommendation with a very low quality of evidence.

Adrian Banning:

Okay, and then one last statement. The American Gastroenterological Association gave a position statement in 2022 that basically supported the USPSTF and said that there should be more screening done, more money for it, and it should start beginning at age 45 to 49, but they don't say when to stop. So, moving on from who and when, let's talk about how screening should be done. What modalities do we have at our disposal, Carol?

Carol Antequera:

So, we do have some different screening modalities and they're divided into two categories. They can be invasive or non-invasive. Our non-invasive testing includes the fecal occult blood test, which is commonly known as FOBT, fecal immunohistochemical testing, commonly known as FIT testing. And we also have the multi targeted stool DNA test, which goes by the commercial name of Cologuard. NCT colonography. For invasive testing, this is comprised of flexible sigmoidoscopy and colonoscopy.

Adrian Banning:

Okay, so we heard that the colonoscopy and FIT testing are probably the preferred modalities. For all three of the guidelines reviewed, you and the patient can choose which modality makes the most sense for them. We're going to go through all the options, and we're going to go into more detail on those options in episode two. So, we hope that you'll come back and join us for that. So, just to list them out first, we have the FOBT, which again stands for fecal occult blood test. That really should not be used even though it's listed as an option in some places. Carol you agree that it shouldn't be used, but is it better than nothing?

Carol Antequera:

Yes, absolutely Adrian. This test is better than nothing. And if it's going to be used, it should be used once a year.

Adrian Banning:

Okay. We also have the FIT test. And again, that stands for fecal immunohistochemical testing. No surprise why we just say FIT. That's a mouthful. And that's recommended annually. One of the benefits of this is that you don't have to change your diet as you used to have to do with that FOBT test where you had to avoid meat, and beets, and a bunch of different things.

We also have the multi targeted stool DNA test. That's every three years. There's a CT colonography, that requires a really good prep. And then for those with direct visualization, we've got the Flex Sig, and that's a colonoscopy but just of the lower third of the colon and rectum, so not the whole thing. And

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then there's the whole thing, the colonoscopy, and again, this can be both screening and prevention at the same time. Carol, I just said Flex Sig. Does anyone even do those anymore?

Carol Antequera:

The flexible sigmoidoscopy is not typically recommended. It really is only used in patients who cannot tolerate or unable to have a full colonoscopy. And oftentimes at work, we use a very funny analogy, but we say that getting a flexible sigmoidoscopy is similar to having a mammogram of only one breast. So, typically this isn't your first modality of choice.

Adrian Banning:

Okay. So, Flex Sig is only doing half the job and we have better options. Got it. Great analogy. All right, so we just went over a lot of information all about colorectal cancer, all about the screening recommendations, and then we briefly touched on the options that we have for the screening modalities, which we're going to go into more detail on in episode two. But this does conclude episode one of our three part series.

Thank you so much for joining the discussion, "Challenges in Colorectal Screening: How to Improve Screening Rates." I also want to thank our listeners for joining us, and please join us for episode two where we will discuss the screening modalities in detail. As a reminder, listening to this podcast makes you eligible to receive CME. And to receive CME credit you must complete the post-test and evaluation in AAPA's Learning Central. Take care.