Transcript Details
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The Changing Landscape of CRC Screening and Prevention

Announcer:
You're listening to *On the Frontlines of Colorectal Cancer* on ReachMD. And now, here's your host, Ryan Quigley.

Ryan Quigley:
Welcome to *On the Frontlines of Colorectal Cancer* on ReachMD. I'm Ryan Quigley, and joining me to explore the future of colorectal cancer screening is Dr. Samuel Muench. He's a board-certified gastroenterologist at Capital Digestive Care in Maryland and Washington, DC.

Dr. Muench, welcome to the program.

Dr. Muench:
Thanks for having me.

Ryan Quigley:
Dr. Muench, to start us off, what do you see as the biggest drivers of change in colorectal cancer screening right now?

Dr. Muench:
The elephant in the room, so to speak, is really the rise in early-age and early-onset colon cancer screening. And there's various definitions that some may use for what's considered early, young-age, or young-onset colon cancer. But what we're seeing is that there is an increase in not just colon cancer, but colon polyps as well.

And how do we address this? We know right before the COVID pandemic, there was a shift in screening from the age of 50 universally for all average-risk American adults to 45. And when we looked at models of incidence of colon cancer in even younger age groups, we did see that it was really rising, even in that 35-to-50-year-old age group. And unfortunately, while we would love to drop the age to 40 or 35 and lower, it may crowd out some of those who are really at high risk—those 50 and older—from getting screened.

But really, that drop in age does signify and note how the colon cancer incidence and story is changing. We thought this was a disease of older age, and we're finding that this doesn't discriminate according to age. I've seen 35 year olds and beyond diagnosed with both colon cancer as well as pre-cancerous colon polyps. So I do think that's a big driver of this.

We're also seeing just a large rise in the total prevalence of colon cancer, whether that's because more people are getting screened, there's better detection methods, or our techniques have gotten better. I think those also drive numbers. And I'd be remiss not to say I think that celebrities in the news and awareness on social media play a very big role in not just awareness of colon cancer, but awareness and screening methods and demystifying colon cancer and screening—especially screening that relates to colonoscopy, which is involving a very intimate area of the body. We've had these high-profile celebrities unfortunately diagnosed with colon cancer, some early onset, who unfortunately passed from the disease. So we're learning not to ignore this and to take this very seriously.

Ryan Quigley:
Given that rising prevalence, it's certainly never too early to get tested for colorectal cancer. Now, in terms of blood-based screening tests, those are generating pretty significant attention right now. What promise do they hold, and what questions remain?

Dr. Muench:
So this is something that we've been waiting on for some time. This was largely considered the holy grail, so to speak, of colon cancer screening. One simple blood test: you're already in your primary care doctor's office, they draw some blood, and they get an answer. Yes or no. If yes, it leads to a colonoscopy. If no, then you're good for x amount of time, whether it's a year or a couple years. But

adherence is mostly taken out of the equation. Why? Your patient's already right in front of your face. You bring in your phlebotomist, he or she draws blood, and then you have an answer pretty quickly.

While it does seem like this would be a really wonderful screening strategy, we often look at the limitations of this, and I think that's critically important here. The biggest shortfall in these, at the present time, is the detection of early colon cancers. And it really relates to stage one colon cancers. Overall, they're not bad. And I don't want to quote numbers because really the range is considerable—all the way from 50 percent to 80 percent and above for sensitivity detecting colon cancers. Some are into the 90s. But really, there's quite a range, and they are very good at detecting late-stage colon cancers—stage three and stage four—but that's not the goal of screening. The goal of screening is not just to find late cancer; it's to prevent cancer and find early cancer.

So we affect morbidity and mortality not just using this as a diagnostic tool but really improving societal outcomes. And because of the theoretical limits that early cancers have, you're taking a really small cancer or a relatively small polyp. We have to rely on that polyp to shed enough cells into the bloodstream and the capillaries that are feeding that polyp or cancer that are then detectable by the instruments that we have in these laboratories. And really there's a theoretical limit to how many cells are shed. Our detection limits will improve gradually over time. Will they ever reach a threshold of stool-based colon cancer screening methods, which rely on cells easily shed into stool? Probably not. Will they ever reach the threshold of colonoscopy? Also probably not. That’s a direct exam of the colon itself. But they do remain a wonderful addition to the colon cancer screening toolkit in the sense of improving adherence and actually getting patients screened.

Ryan Quigley:
Now, as I understand it, artificial intelligence is increasingly being integrated into colonoscopy. How might AI-assisted detection impact outcomes for patients with colorectal cancer?

Dr. Muench:
What we call AI, some may call more just advanced pattern recognition and, to some degree, machine learning. At the end of the day, most of us employ an overlay, essentially. We have a computer overlay screen on top of our visual screen that detects polyps in real time. This uses various algorithms for pattern recognition, and it can help clue a physician into finding a polyp and really focusing on an area that he or she might have missed while they were going through the colon. The data do show that this does improve adenoma detection rate, and we do know that’s inversely proportional to interval colon cancer rates in that when we have a higher adenoma detection rate, we actually have lower interval cancer rates. That means that we're probably missing fewer polyps and thus, preventing and missing fewer early cancers and certainly later cancers.

We do use this in real time, and I do think that this will get better with time. This does not substitute for a high quality endoscopist. You still have to have someone who's paying attention and really focusing. But this is yet another tool that we have in our toolkit to improve our detection methods.

Ryan Quigley:
For those just tuning in, you're listening to *On the Frontlines of Colorectal Cancer*on ReachMD. I'm Ryan Quigley, and I'm speaking with Dr. Samuel Muench about how colorectal cancer screening is evolving.

Dr. Muench, if we focus on real-world implications here, how do you think new avenues in colorectal cancer screening could impact disparities?

Dr. Muench:
I would say with a lot of tests, especially screen tests, there's three things that really matter: Increased accessibility, increased availability, and increased reliability. With colonoscopy alone, and some of the procedural-based colon cancer screening strategies—we've used things like flexible sigmoidoscopy every few years or virtual colonoscopies, which really don't play as big of a role—we're looking at not just the entry, but the improvement of existing noninvasive colon cancer screening strategies. We've talked a little bit about the blood-based screening tests. We talked a bit about the stool-based colon cancer screening tests. But what these will allow us to do is, within those three features I described, improve accessibility. We're going to improve availability of colon cancer screening, not just to those who live in major areas where there are ample doctors and ample endoscopies available, but also to those who may live in rural areas and those who may live in areas where the wait time is two or three years. Also, accessibility for those who are unwilling or unable to currently get a colonoscopy.

And then we talk about reliability. We talk about the considerable lack of reliability in some of these older, particularly stool-based colon cancer screening strategies. But with the advent of these newer DNA and biomarker-based colon cancer screening strategies, we really see this marked increase in reliability. So not only do we have a colon cancer screening test that's noninvasive and that's covered; we also have one that's highly reliable. And, again, when compared to the gold standard, it still doesn't meet that same exact threshold. But

it is still quite a wonderful test to have, and it really will help us bridge the gap in those who are not screened and getting them screened for colon cancer.

Ryan Quigley:
Dr. Muench, before we wrap up here, what should clinicians look out for as our approach to colorectal cancer screening continues to evolve over the years?

Dr. Muench:
There's a couple thoughts I have here. One is we're seeing a lot of younger people have colonoscopies at younger ages, whether that's for rectal bleeding that we ultimately attributed to hemorrhoids or inflammatory bowel disease, or abdominal pain, or what have you. And we're finding polyps in younger and younger people. We don't really know what this signifies, but we do know that the incidence of colon cancer is rising in younger people. In that age group, we don't really know how to handle them once they reach screening age. Do we continue the colonoscopy route? Do we go down or offer the stool-based or blood-based colon cancer screening strategies? And the jury is still out. Most people would err on the side of caution and continue colonoscopies. But I think that's going to be a very big question as we move on because we're going to see, unfortunately, younger and younger people, and higher numbers of them, diagnosed with colon cancer. And that will change our approach to screening and ultimately result in lowering the age of screening for the entire population at large. But I do think it's something that we're going to see evolve over even the next five and certainly 10 years.

I do think while colonoscopy technique and equipment will only get better and serve to get better, and AI, as we just mentioned, gets better and our detection methods get better, I ultimately see a rise in the use of adjunctive—not as a replacement, but adjunctive—noninvasive colon cancer screening tests. And again, we have 60 to 70 million American adults who are not up to date with their screening. There are simply not enough doctors in the United States alone to do colonoscopies for all 60 to 70 million people who need to be screened. We really must rely on these noninvasive tests adjunctively to support our ability to screen patients and not see patients as colonoscopy or nothing. We really need to use whatever tools we have to get patients screened to make a bigger dent in colon cancer incidence, especially in that younger population.

Ryan Quigley:
I want to thank my guest, Dr. Samuel Muench, for joining me to look ahead toward the future of colorectal cancer screening.

Dr. Muench, thank you so much for doing this. It was great having you on the program.

Dr. Muench:
Thank you so much for having me. I know when we have this discussion again, I'm sure we'll have even newer data and may even discuss newer methods. So I look forward to chatting again.

Announcer:
You've been listening to *On the Frontlines of Colorectal Cancer* on ReachMD. To access this and other episodes in our series, visit *On the Frontlines of Colorectal Cancer* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!