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Why Adenoma Detection Rate Matters in Colorectal Cancer Screening

Announcer:
You're listening to *Clinician's Roundtable* on ReachMD, and this episode is sponsored by Exact Sciences. Here's your host, Dr. Brian McDonough.

Dr. McDonough:
This is *Clinician's Roundtable* on ReachMD, and I'm Dr. Brian McDonough. Today, we're breaking down a recent report, titled "Association Between Adenoma Detection Rate and Prevalent Colorectal Cancer Detection Rate in a National Colonoscopy Registry," which was published in *Gastroenterology* in 2025. Joining me for this conversation is Dr. Renee Williams, who's a Professor of Medicine and Associate Chair for Health Equity at the NYU Grossman School of Medicine.

Dr. Williams, thanks for being here today.

Dr. Williams:
Thanks for having me. We're discussing something near and dear to my heart.

Dr. McDonough:
So, I'd like to start off with some background. The study covered in this report analyzed more than 1.7 million colonoscopies from a national registry to investigate whether endoscopist adenoma detection rate, or ADR for short, was associated with the detection of prevalent colorectal cancer during colonoscopy. From your perspective, Dr. Williams, how does examining this relationship help us better understand the real-world effectiveness of colonoscopy?

Dr. Williams:
It gives us more data. We know about the impact of screening and the impact of polypectomy on the incidence and mortality of CRC; that data has been out there for a very long time. But what this is looking at specifically is individual characteristics of ADR. How does my ADR impact my ability to detect cancer? And ADR specifically refers to how many adenomas I am detecting in a screening colonoscopy.

In the paper, they're looking at screening colonoscopies and an endoscopist's ADR. We're looking at 1.7 million colonoscopies with 3,500 endoscopists using our GIQuIC registry, which is a registry that we use for quality metrics. ADR specifically is one of the most validated colonoscopy quality metrics, and it's known to correlate with lower post-colonoscopy CRC risk.

Here, they're linking ADR, or your individual performance, to your ability to detect cancer. I think understanding this relationship really helps us clarify how individual operator performance influences those real-world outcomes.

Dr. McDonough:
With that in mind, let's dig into the results. One of the key findings was that screening colonoscopies performed by endoscopists in the highest ADR quintile detected about 33 cancers per 10,000 procedures, compared with roughly 27 per 10,000 in the lowest quintile. What do results like this tell us about the link between adenoma detection and the ability to identify cancers that are already present during colonoscopy?

Dr. Williams:
Honestly, this is a great question. It makes sense. Your ability to detect adenomas or pre-cancerous lesions is directly linked to your ability to detect colorectal cancer. So, it makes sense that the higher your ADR, the higher your CRC detection rate, and it's speaking to detecting cancer in the moment. So, for the endoscopists in the lower quintile, if you're missing polyps and you're also missing cancer,

and I think that's really important for us to know.

They changed our quality metrics recently to give us more time. In the past, we had a six-minute withdrawal time for normal colons, meaning someone who comes in and has a completely clean prep and completely clean colon. And it's also, how much are you looking at the mucosal? How much are you seeing as you're coming out? In essence, they changed that from six minutes to eight minutes because they realized that makes a difference in terms of quality of colonoscopy.

So, this particular result is not surprising from my end, but it also gives us direct data to tell people or to say to our colleagues, “Make sure you're paying attention to your ADR. The higher your ADR, the higher your detection rate of CRC.”

Dr. McDonough:
It's an interesting perspective. Now, the investigators also estimated that approximately one-fifth to one-third of cancers present during screening colonoscopy may be missed by endoscopists with the lowest ADRs. So, what does that suggest about the ongoing challenge of missed cancers, even when colonoscopy is performed according to accepted quality benchmarks?

Dr. Williams:
It's interesting. If you look at the specificity of colonoscopy itself, it's about 90%. We tend to tell patients in consenting processes that we may miss 10 percent of cancers. This is saying 20 percent of cancers that may be present, may be missed. And the response always is, “Well, you're in there and you're looking. How can you miss it?” And I'd say, very easily, it's operator dependent, right? My ADR versus someone else's ADR may be very different. And certain lesions in the colon can be very small, subtle, and more difficult to detect. We do know that sessile serrated lesions are harder to detect. They're flatter, they have mucus, and they tend to have a much faster pathway from adenoma to cancer. Some of those lesions could easily be missed, and that could also impact your ADR.

So, it challenges a perception that missing CRC during colonoscopy is very rare because sometimes CRC may not be a large lesion. It could be something very small and flat with high grade dysplasia, or you may have an intramucosal carcinoma. So, it just goes back to the whole point about individual operator characteristics and how that makes a difference in the whole scheme of things.

Dr. McDonough:
For those just joining in, this is *Clinician's Roundtable* on ReachMD. I'm Dr. Brian McDonough, and I'm speaking with Dr. Renee Williams about using adenoma detection rates to understand colorectal cancer screening quality.

So, if we continue examining the study, Dr. Williams, it evaluated colonoscopies performed after abnormal stool-based screening tests, such as fecal immunochemical tests or stool DNA tests. It found that cancer detection rates were substantially higher in that setting but still varied across ADR levels. How should we interpret that variability when colonoscopy is used as a follow-up test after a positive noninvasive screening result?

Dr. Williams:
It drives home the fact that we should have a timely colonoscopy after a positive stool test. A fecal immunochemical test is a detection of human hemoglobins; it's just looking for blood. The stool DNA test has two components: fecal DNA and looking at certain biomarkers, and then also the fecal immunochemical antibody human hemoglobin.

So, essentially speaking, and interestingly enough, within our field, if someone comes in with a positive stool test, the ADR benchmark there is about 50 percent, which tells me as an endoscopist that if I'm doing a procedure on someone who has a positive stool test, half the time I should be finding a polyp or a cancer. And that recently came out in the last one or two years in more quality metrics. But it really drives home that if someone has a positive stool test, it's really important to get a timely colonoscopy, and we recommend about six months. There was a large study done in Taiwan where they looked at time to colonoscopy from positive stool testing, and they found that after six months, your risk ratio of having a lesion or an advanced lesion actually increases.

So, I think this is a higher-risk population. They should definitely get a colonoscopy as soon as possible. And in this particular case, they found that the CRC detection ranged from 108 to 165 cancers per 10,000, specifically depending on the ADR level. So again, it drives home how individual operator characteristics may make a difference in your ability to detect cancers.

The guidelines mentioned a timely colonoscopy, but I'm going to say that we think six months, or three months if possible, but it may be difficult. We see a lot of patients fall off after they have positive stool tests, and they may not come back for colonoscopy. But it's really important because, as you can see in this particular study, the diagnosis of CRC in this particular subgroup is much higher compared to the regular screening population.

Dr. McDonough:
A really important message. Now, taken together these findings highlight that while colonoscopy is effective, it's still operator dependent. So as screening includes more stool-based tests, how might these approaches work together to improve detection and reduce missed

cancers?

Dr. Williams:
One of the things I'm going to highlight is that by having the stool-based option, it gives people more choice. Not everyone wants to have a colonoscopy. From what I've heard and experienced, the prep is terrible. And essentially, if someone has a positive stool test, it really drives home that they need to have a timely colonoscopy. So, these tests can help identify individuals who should undergo a diagnostic colonoscopy, and you can target that particular population. What we've seen in our own data in GI is that people have a positive stool test, but there is a fall off. Not everyone comes back for colonoscopy.

So, having very organized and intentional outreach to those particular groups—together, these approaches may support screening pathways that come by standardized population screening and high-quality diagnostic colonoscopy. But I think it really does highlight how colonoscopy outcomes are influenced by operator performance. We, as endoscopists, need to know our ADR to let us know, are we doing a good job? Are we doing an okay job? Are we doing an excellent job? If my ADR is higher than average, I know that I'm going detect more cancers, but it also serves as a quality improvement for me to improve my colonoscopy skills.

Dr. McDonough:
Dr. Williams, what key takeaways should clinicians keep in mind when thinking about optimizing colorectal cancer screening and detection?

Dr. Williams:
I think number one is risk assessment. And the reason I say that is because sometimes, we may see patients getting stool-based testing who may be higher risk. So, essentially speaking, what's a patient's risk? Are they higher risk or are they average risk? For an average risk person, colonoscopy is okay. Stool-based testing is okay. We'll consider top tier testing if anyone is higher risk, meaning they have a family history of colon cancer, a personal history of colon cancer, inflammatory bowel disease, or a genetic predisposition, such as Lynch syndrome. Those patients should all go to colonoscopy; that's really important.

I think test selection is important. Again, average risk is when you have a variety: fecal immunochemical testing, or FIT testing, stool DNA testing, and colonoscopy.

And one thing I really want to highlight, as we mentioned earlier, is that a positive stool test should be followed by a timely colonoscopy. It's really important. If someone has a positive stool test, just make sure you're closing that loop, not just for the consult, but to make sure they actually go from to colonoscopy and get that completed. Those are really important. So, I think risk stratification, test selection, and closing that loop from a positive stool test to colonoscopy.

Dr. McDonough:
With those important takeaways in mind, I want to thank my guest, Dr. Renee Williams for joining me to discuss recent research on the relationship between adenoma detection rate and colorectal cancer screening quality.

Dr. Williams, it was great having you on the program.

Dr. Williams:
And thank you for having me. As I said, it is near and dear to my heart.

Announcer:
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