Transcript Details
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Optimizing Colorectal Cancer Screening: A Stress Test of Current Guidelines

Announcer:

Welcome to *Clinician's Roundtable* on ReachMD. On this episode, we'll hear from Dr. Pedro Nascimento de Lima, who will be discussing his recent study, which stress-tested colorectal cancer screening guidelines. Dr. Nascimento de Lima is an Engineer at RAND, a Professor at the RAND School of Public Policy, and an investigator with the colorectal modeling group of the Cancer Intervention and Surveillance Modeling Network, or CISNET. Here he is now.

Dr. Nascimento de Lima:

What really prompted me to look at guidelines is first, that there are conflicting guidelines on colorectal cancer screening right now, right? So, we have the USPSTF-issued guideline that recommends screening starting at age 45 to 75, and for colonoscopy, we recommend it every 10 years. And then we have an ACP guideline that recommends screening starting at age 50, so a little bit later. And, you know, five years doesn't seem much, but if you look at the totality of people who are recommended to get screening, that's a lot.

With the USPSTF guidelines, they used modeling studies to recommend strategies, and those analyses were done by the CISNET group. I was not part of that study, but they used the same models that I'm using.

So the purpose here was to say, okay, we have these studies modeling the effectiveness of screening, they inform the guidelines, but let's take a more thorough look at this. Let's consider a set of "what ifs." So what if sensitivity is lower than expected and initially assumed, because sensitivity varies quite a bit, right? So what if that sensitivity was much lower than expected? And we did a previous paper showing that that's a very plausible scenario, and so we consider four screening sensitivity scenarios.

So if you start combining those things, we have four sensitivity scenarios; we have these 500 parameters; we have these two hypotheses about when adenoma starts occurring; and then you have 4,000 possible scenarios. Okay? And then we say, okay, now what we do is we'll test 26 different strategies, 26 different combinations of age to start, age to stop screening, and the frequency, the same strategies that were tested in that study that informed the USPSTF guidelines, and we test each of those on the 4,000 scenarios, and then you get 105,000 scenarios.

And then what we find was kind of surprising to me, because I expected that starting screening at age 45 may or may not be the best choice, meaning saving the most amount of life with a fewer amount of colonoscopies. I didn't expect that would hold up in all scenarios, but what actually happened was that there was just never ever—in the 4,000 scenarios—there was never a case where doing screening from age 50 to 70 every 10 years—which is the ACP recommendation—there was never a case where that was efficient.

And so what happened was, if you look at the results more closely, is that if you want to compare a strategy to start screening at age 50 to 70 years every 10 years, that was always dominated by something else, and so there are some alternatives, right? So you can think about starting screening at age 45, doing every 10 years, so 45, 55, 65 and then stopping there at 70. Right? Don't do the seventy-fifth: your fourth colonoscopy. That was better as well. And, there were also other alternatives that if you wanted to use fewer colonoscopies, you could also choose. For example, the other strategy was to start earlier at 45 and then do every 15 years. That was better than the ACP strategy. If you want to do only two colonoscopies, then at that point the model is saying, well, it might be better just to do two, one at age 55 and 70. But it was never a case where you did 50 to 70 every 10 years, so that was a very significant finding to us.

So I think the main points from the paper are pretty clear: that we didn't find any support for putting off screening until age 50, and there

are other strategies that are more efficient and can save more lives.

Announcer:

That was Dr. Pedro Nascimento de Lima breaking down when and how often we should screen for colorectal cancer. To access this and other episodes in our series, visit *Clinician's Roundtable* on ReachMD dot com, where you can Be Part of the Knowledge. Thanks for listening!