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The Promise of MCED Testing: Easing the Burden of Cancer Screening Anxiety

### Announcer:

You're listening to *Project Oncology* on ReachMD, and this episode is sponsored by Exact Sciences. Here's your host, Dr. Charles Turck.

### Dr. Turck:

Welcome to *Project Oncology* on ReachMD. I'm Dr. Charles Turck, and joining me to explore patient and provider perspectives on multi-cancer early detection, or MCED, testing, are Dr. Christopher Chambers and Mr. Adam Buchanan. Dr. Chambers is a Professor and Director of Clinical Trials at Thomas Jefferson University in Philadelphia. Dr. Chambers, thanks for being here today.

### Dr. Chambers:

Thank you. I appreciate the opportunity to participate in the discussion.

### Dr. Turck:

And Mr. Buchanan is an Associate Professor and Chair of the Department of Genomic Health at Geisinger in Danville, Pennsylvania. Mr. Buchanan, it's great to have you with us as well.

### Mr. Buchanan:

Thanks so much for having me.

### Dr. Turck:

So if we turn to you first, Dr. Chambers, would you give us some background on what MCED tests are and their potential impact on preventive care?

### Dr. Chambers:

Sure. I think I'll start with what you said second, which is what's the potential impact of this? And it's so important in our attempts to deal with cancer to discover things in early stages. And unfortunately, the screening tests that we currently have only account for about 30 percent of all the cancers that are diagnosed. So we've been looking for something better to help us identify cancers in the other 70 percent.

And this new technology of MCEds takes advantage of something we've known about tumor biology for some time, which is that tumors release small amounts of cell-free DNA into the blood. And identifying these pieces of DNA, along with some other biomarkers, has the potential to allow us to identify other cancers in very early stages when they may be more amenable to treatment and even cure. Patients have been asking us about this for a long time. They always say, "Isn't there a blood test that I could do to help me know if I have cancer?" The answer has always been no, but this new technology seems to give us an opportunity to take care of that big gap in our knowledge base.

### Dr. Turck:

Now as this is a new technology for broad cancer screening, it's my understanding that there's been some discussion in the field about the impact this type of testing may have on patients, especially in terms of potential psychological harm. So if we turn to you, Mr. Buchanan, what can you tell us about that?

### Mr. Buchanan:

This concern about psychological harm with cancer screening is an old one. It's been around as long as there's been cancer screening.

Really, we were worried about it with mammograms and with other types of cancer screening. It's been the subject of intense study in those other screening modalities, and it matters when you're doing a test like that on a recurring basis and when there's always a possibility for a positive test, particularly when that could be a false positive test, which is the case with screening tests. So that's a very legitimate concern with MCED testing as well. And since that's a much earlier stage type of technology, there's a lot left to learn about the psychological harms, like anxiety that might be related to positive test results, and particularly false positive test results. The early data that we have are, I think, favorable on those potential harms, but there's a lot left to gather there.

**Dr. Turck:**

With all that in mind, I'd like to zero in on a recent qualitative study that examined patient perspectives on MCED testing. Dr. Chambers, what insights did you uncover here?

**Dr. Chambers:**

It really is a nice follow-up to what Adam just said, which is, we were worried about how much patients might be afraid of this new technology, and we developed a survey that we distributed to patients throughout a very large health system. These were all primary care patients — patients who had a primary care physician—who were in the age group that these MCED tests are targeted towards, which is basically 50- to 80-year-olds without a current diagnosis of cancer. We further selected patients who had a planned visit to their primary care doctor within the next couple of weeks just to kind of take advantage of the opportunity to inquire, what would they think if there were such a test available? And we used the preventive health model to help us design a survey of these patients, which was delivered by research assistants over the phone. And there were three main components to it. There were cognitive components; that is, what did they think about this sort of thing? There was also affective questions — questions about their concerns and their fears. And then there were a couple of questions about support; what would it mean if their primary care provider recommended these tests and supported the idea?

And what we found was very interesting. The most important finding was that 79 percent of the patients said they'd be interested in such a test, and that was more than I expected, to be honest. And what was interesting was that things that looked at cognitive reasons for their thinking about doing it or not doing it, the patients scored very highly. On a Likert scale of 1 to 5, they were all in the 4.5 or greater, meaning that they thought this would be very relevant to their care. They thought that it might be very efficacious that if they could find something in early stages, it might help them. And they particularly were very interested in the convenience of a blood test. Remember, these are patients in the age group who are being asked to go get colonoscopies and other sorts of what they feel are invasive tests, and they loved the idea of a blood test.

It was interesting that the patients who decided that at this point they would not be interested in it, the items that looked at things that were affective—their fears, their concerns—those were the things that were associated with them choosing not to get this test if it were available. In fact, the only thing in the affective set of questions that scored more highly than middle of the road 3 was concern about whether insurance would cover the costs, and that's a very realistic concern for a test like this.

**Dr. Turck:**

For those just tuning in, you're listening to *Project Oncology* on ReachMD. I'm Dr. Charles Turck, and I'm speaking with Dr. Christopher Chambers and Mr. Adam Buchanan about how patients view multi-cancer early detection, or MCED, testing.

Now coming back to you, Mr. Buchanan, I believe you also have some insights on the topic of patient anxiety. So what did you learn from the DETECT-A study?

**Mr. Buchanan:**

So for a bit of background here, the DETECT-A study was the first prospective interventional trial of an MCED test, and we did that at Geisinger with a collaboration of investigators at Johns Hopkins. And the primary outcomes for that study were published in 2020, showing feasibility of testing and returning test results in a clinical setting and safety and performance profiles for the testing. Because those 10,000 women who were enrolled in the study continue to be enrolled to date — actually we're just wrapping up data collection now—we're able to learn over time how they've responded to information about being in the test and how they've made medical decisions accordingly as well.

So specific to this question about anxiety, roughly 3 years after participating in the trial we asked women what their experience was in terms of whether testing had caused them to become more or less anxious or more or less depressed and presented those data in 2023 at the European Society of Medical Oncology. And what we found is, I think, encouraging overall in terms of a take-home of pretty modest impact on anxiety and depression in this cohort. In particular, we didn't see any difference in anxiety reported on this survey for women who had a false positive test—in other words, a test that was positive on the MCED but follow-up diagnostic evaluation did not find cancer. And we didn't see among that group that the anxiety differed compared to those who had a true negative result, where the

MCED testing was negative and there was no follow-up testing that showed any evidence of cancer. So I think that subset of participants with a false positive result, again, is one of the ones that we're worried about the most with anxiety related to MCED testing, and so I think that's an encouraging finding.

We also saw that where there was a difference in anxiety, it was actually those with a false positive result had an improvement that was significantly at a higher rate in anxiety compared to those with a true negative result overall. So that's again, I think, encouraging for giving us some evidence that psychologically, this type of testing may not have a tremendously negative impact.

There are some caveats to the study as well. We asked women about their experience now several years after their initial reporting of results. So it's possible that there could be some recall bias going on there and those sorts of challenges. So always important to keep those caveats in mind.

We also learned a little bit about interest in continuing with standard-of-care screening. And one of the concerns about MCED testing is that if that testing is negative, it might discourage individuals from doing standard-of-care screening, like mammograms and colorectal cancer screening. And just focused on mammograms, we saw a high intention to continue with mammograms in the cohort of women who are eligible to continue with mammograms. So one of the key features of MCED testing is that it's intended to be complementary to standard-of-care screening, like mammograms, and so this is at least evidence of intention to continue with a behavior that's known to be beneficial.

**Dr. Turck:**

So based on these findings, let's focus for a moment on how we can optimize MCED testing to address the potential risks of patient anxiety. Mr. Buchanan, what are your thoughts on that?

**Mr. Buchanan:**

So part of it is a test design question. When we design tests and implement those tests that have a high positive predictive value and have a high specificity, that means that there's a lesser chance of a false positive and of any attendant concerns caused by that false positive. So I think that's a critical design component.

And then just like with any screening test, it's important to have substantive shared decision-making that occurs with a clinician and with that patient, and that helps to set the stage for what that test can and can't tell you, what a positive test result means, what a negative test result means, and what the next steps will be if a test is positive. I think that's a critical piece of managing any sort of psychological response to testing.

**Dr. Turck:**

Now before we close, Dr. Chambers, are there any other best practices for MCED testing you'd like to share with our audience today?

**Dr. Chambers:**

I think I would build on what Adam said, and that is, there's a lot of education to be done. Patients are never monolithic; some will have thought through carefully what are the implications of a false positive? What's a false negative mean? There are going to be others that are going to think that it's just one or the other. It's going to be you have cancer or you don't. And it's not that simple. So this is more analogous, I think, to when we order genetic testing on a patient, we don't just simply order the test; there's a lot of education that has to go on. And in this case, this technology is so new, the physicians who order the test are going to have to be really educated about how to follow through on test results with their patients because that's who the patients are going to go back to when they have an ambiguous test result, you know, one that's not followed by a clear answer of, 'Well, do I have cancer or not?'

**Dr. Turck:**

Well, with those reflections in mind. I want to thank my guests, Dr. Christopher Chambers and Mr. Adam Buchanan, for joining me to discuss how we can optimize our approach to MCED testing based on the patient perspective. Dr. Chambers, Mr. Buchanan, it was great speaking with you both today.

**Dr. Chambers:**

Thank you very much.

**Mr. Buchanan:**

Thanks for the chance to be here.

**Announcer:**

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