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Poster Pearl: Detecting Cancer with an MCED Test and Treating It Surgically Improves Outcomes

### Announcer:

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### Dr. Turck:

This is *Project Oncology* on ReachMD, and I'm Dr. Charles Turck. Joining me to share key findings from the poster he co-authored and presented at the 2023 American Society of Clinical Oncology Annual Meeting is Mr. Adam Buchanan. Mr. Buchanan is an Associate Professor and Chair of the Department of Genomic Health at Geisinger in Danville, Pennsylvania. And his poster presented findings from the longitudinal analysis from the DETECT-A study. Mr. Buchanan, thanks for being here today.

### Mr. Buchanan:

Thank you for having me.

### Dr. Turck:

Now if we start with some background, Mr. Buchanan, multi-cancer early detection, or MCED, testing, is an emerging area of interest in cancer screening. So would you share some insights on what these tests are and what role they play?

### Mr. Buchanan:

Sure. So these are blood tests that look for signals of cancer that might not otherwise be evident. They use things like circulating tumor DNA or sometimes certain proteins that might indicate that there's a cancer present. And what's notable about that technology is it can screen for multiple cancers at the same time and do so through a blood test, which is largely different from the other ways that we screen for cancer, which is typically one cancer at a time using things like imaging.

### Dr. Turck:

Now before we discuss the specific findings from the longitudinal analysis that were presented in this poster, what can you tell us about the DETECT-A study, which was published a few years back? What was the impetus for the study? And how was it designed?

### Mr. Buchanan:

We were working with collaborators from Johns Hopkins University, and that group had developed technology to find those needles in a haystack, those little bits of circulating tumor DNA that might indicate that there's a cancer present. And they wanted to know how well that technology worked in a healthcare system population. So we used that technology within a single site at Geisinger and looked for the presence of cancer using this early technology that was called CancerSEEK. And that's a type of MCED testing that uses both blood tumor DNA as well as protein biomarkers to screen for a variety of cancers.

And I think the impetus really was to first of all, examine both the feasibility of doing that and returning results in that fashion and the safety of doing so.

### Dr. Turck:

And what were the initial results from the DETECT-A study?

### Mr. Buchanan:

So in DETECT-A, we were working with a cohort of about 10,000 women who were ages 65 to 75 and hadn't had cancer before. And there were a few key findings there. One of them was that we found that within the year of follow-up after women had had their initial MCED test, 96 of them developed cancer. Several of those were ones who had cancer found through the MCED test itself. So 26 of those individuals had cancer detected through the MCED testing, and another 24 had cancer detected through a normal standard-of-care screening like mammograms and colonoscopies. And so one of the key findings is that adding the MCED test to standard-of-care cancer screening about doubled the rate of cancer pickup.

We also found that this was a test that led to a pretty low rate of false positives. So in a screening test, false positives are a major concern because they can lead to increased anxiety and increased use of the medical system that turns out to be unnecessary. And so you want to limit those as much as possible. And in this situation, about 1 percent of all participants had a false positive finding. And of those, the only thing that they had to do beyond that was a diagnostic PET/CT test. So a noninvasive imaging test. And that's where the evaluation stopped. So a pretty low rate of those sorts of negative outcomes that individuals are worried about in the context of MCED testing.

**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 Mr. Adam Buchanan about the poster he co-authored and presented at the 2023 ASCO Annual Meeting.

So if we turn our attention to the data you recently presented at ASCO, Mr. Buchanan, would you tell us about the longitudinal analysis that was done and what the findings were?

**Mr. Buchanan:**

We were interested in this poster that we presented at ASCO on what the clinical outcomes were for those 26 DETECT-A participants who were found to have cancer because they tested positive with the MCED test. And so we reviewed electronic health records from our system for roughly 4 years on median, after they had their initial positive MCED test. And we looked for things like whether they were in remission from the treatment, whether treatment was ongoing, and whether they were deceased. And we found a couple of key outcomes: one of which was that participants who had cancer detected because of a positive MCED test, if they had surgery as part of their treatment, nearly all of those individuals were now in remission roughly 4 years afterward. If they had other treatment, like chemotherapy, radiation therapy, or kinase inhibitor, a lot of those individuals did not have such a positive outcome; several of them were deceased, for example. And so we found that when you detect cancer through an MCED test, and you do so in such a way that you can treat it surgically with curative intent, that often leads to a positive outcome there for those patients.

We also found that of those who are now in remission, a little over half of those individuals are ones who have a cancer type that is not one that we screened for typically, so it doesn't have a standard-of-care screening modality. So examples are ovarian cancer, kidney cancer, and uterine cancer. And so that's an indication that this sort of MCED testing can be complementary to standard-of-care cancer screening, and it can help us pick up other tumor types that we wouldn't normally pick up except by symptoms and sometimes at later stage with a poor prognosis.

**Dr. Turck:**

And what implications might these findings have for patients and their providers?

**Mr. Buchanan:**

It's still early days in research on this type of technology, and so I don't think we can say that the findings are enough to support this sort of testing in all individuals. What I think it does is it reassures us that the testing can find some early-stage cancers and that then those cancers can, with appropriate treatment, go into remission. I think it can also reassure us that this type of technology can lead to the sort of positive outcomes related to standard-of-care screening.

**Dr. Turck:**

Before we close, Mr. Buchanan, would you highlight some key takeaways we should gather from this research?

**Mr. Buchanan:**

I think this research highlights some of the outstanding questions that we have here. So it's kind of a reassuring proof of principle, as it were, to show us that when you can pick up cancers that weren't otherwise picked up, that you can, especially at early stages, lead to curative intent for those cancers. But it doesn't tell us things like how often to do that kind of screening. It doesn't tell us how well that testing fits into the flow of care. Presumably, these are primary care activities. And it doesn't tell us how patients think about results of this testing in the context of the standard-of-care cancer screening. And there's certainly a concern about whether receiving a negative test on an MCED test would lead people to be overly reassured and therefore to back off of their regular cancer screening. And of course, that's a negative outcome if that were to occur.

We have some preliminary data both from the DETECT-A study and some ongoing work that's at least somewhat reassuring that individuals are not being discouraged from doing standard-of-care screening. But overall, that remains to be investigated.

**Dr. Turck:**

Well with those key takeaways in mind, I want to thank my guest, Mr. Adam Buchanan, for joining me to discuss his research on long-term clinical outcomes of patients whose cancer was detected by a multi-cancer early detection test. Mr. Buchanan, it was great having you on the program today.

**Mr. Buchanan:**

Thanks so much for having me.

**Announcer:**

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