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(866) 423-7849

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## MCED Technology & Its Role in Early Cancer Detection: What Do We Need to Know?

### Announcer:

You're listening to *Clinician's Roundtable* on ReachMD, and this episode is sponsored by GRAIL. Here's your host, Dr. Charles Turck.

### Dr. Turck:

Welcome to *Clinician's Roundtable* on ReachMD. I'm Dr. Charles Turck, and joining me to discuss the clinical implementation of multi-cancer early detection screening, or MCED screening for short, is Dr. Vershalee Shukla, a board-certified radiation oncologist and co-founder of the Vincere Cancer Center in Scottsdale, Arizona. Dr. Shukla, thanks for being here today.

### Dr. Shukla:

Thank you so much for having me.

### Dr. Turck:

To start us off, Dr. Shukla, what kinds of tools are currently available for early cancer detection, and do they have any key limitations we should be aware of?

### Dr. Shukla:

Absolutely. So, I think mammography is one of our most utilized screening tools, and even though it picks up a lot of cancers, it only has a sensitivity in dense breasts of about 40-some percent, and so a lot of women who have dense breasts, those are younger women, some people with genetic predispositions, mammography is not a very sensitive tool for them, and can miss cancers.

It's also not very sensitive for lobular cancers, and it has radiation, and so some women who have a BRCA mutation are at high risk, such as CHEK2 mutation. They often undergo MRI screenings in addition to mammography, and so it has its limitations. Colonoscopy is, you know, we've been doing those for a long time as well, but they're very involved, and patients have to go to an outpatient surgery center or a hospital, they have to take a colonoscopy prep, they usually have to take one to two days off of work to do this, and they need a driver. And so, it can be hard on patients. Skin exams are simple, but you have to be able to get into a dermatologist, and low-dose lung CT, which has really been great for patients who smoke, but it's an underutilized technology. Again, you have to go to an imaging center and you have to be followed very carefully, and so again, compliance is not great with low-dose lung CTs either. And then prostate exams and clinical GYN exams also are routine screening exams that we have available for patients currently.

### Dr. Turck:

Now with that in mind, let's dive into MCED screening. How does this tool work, and which of our patients should be screened with it?

### Dr. Shukla:

So, multi-cancer early detection is a simple blood test that looks for DNA methylation patterns in the blood. So, cancers shed DNA methylation patterns in the blood. This is technology that we've been utilizing for quite some time in advanced stage. They've just perfected the technique so now we can pick it up in smaller amounts, and earlier cancers. And so, not only can it tell if you have a cancer, but 90 percent of the time, it can tell where that cancer originates from.

Patients who are at high risk for cancer should be doing this, so I utilize it in my clinic in first responders, the patients who have a family history, patients who have a genetic predisposition, patients who are above the age of 50 who we consider high risk for cancer.

### Dr. Turck:

And as a quick follow-up to that, Dr. Shukla, would you tell us about some of the impacts of utilizing MCED screening?

**Dr. Shukla:**

Absolutely. I utilized it in my clinic for first responders, and it helped me pick up different cancers that I can't pick up with routine screening. And so, cancers such as pancreatic cancers, esophageal cancers, ovarian cancers, head and neck cancers, those are cancers that people are getting and people are dying from, and we don't have good ways to screen from them, and so, having access to this test has enriched my program a lot, and now I'm able to pick up even more cancers at earlier stages.

**Dr. Turck:**

For those just tuning in, you're listening to *Clinician's Roundtable* on ReachMD. I'm Dr. Charles Turck, and today I'm speaking with Dr. Vershalee Shukla about multicancer early detection screening, or MCED screening for short.

So, Dr. Shukla, now I'd like to turn our attention to clinical implementation of this screening. What are some of the steps we need to take, in order to implement MCED screening into our clinical practice?

**Dr. Shukla:**

So, the actual physical implementation is quite easy. It's simply a blood draw, you send it off to a lab, ten days later you get a result. However, it's the education. It's the education for patients and the education for staff, who are counseling the patients, which is really critical. So, first of all, patients have to understand, this is not a replacement for your routine cancer screenings. You still have to go for your mammogram, you still have to go for that prostate exam, you still need to get that colonoscopy. This is additive, and it really is additive in that it can help you detect rare cancers that are aggressive, that we don't have good screening for currently.

Staff have to understand that even though there's patients that have a negative signal, it doesn't necessarily mean that you don't have cancer. It just means that we couldn't detect DNA methylation in the blood, and that even though we test for 50 different cancers, the sensitivity for each of those cancers vary. And so, just being able to explain the differences to patients, and understanding why it's so important to get your routine screenings is critical.

**Dr. Turck:**

Are there any common barriers we might come across when taking those steps, and if so, how might we overcome them?

**Dr. Shukla:**

I think the biggest barrier is cost. Implementing anything new is also a little bit scary for physicians. They're not used to having to work up people for a potential pancreatic cancer. So, I think education to physicians is also important as well. So I think those are the two biggest barriers. And I think finally, we always want to make sure that we're not overutilizing a test, and we're over-working patients up, and causing more harm than we are doing good. And so, there's always a balance there.

**Dr. Turck:**

Before we close, Dr. Shukla, do you have any final thoughts or takeaways on MCED screening you'd like to share with our audience?

**Dr. Shukla:**

Yeah, I think this is a very, very exciting time in early detection. I think being able to have a blood test that can screen for cancers that we have absolutely no screening for is a game changer, and maybe, perhaps now we'll see more stage 1 pancreatic cancer, and things like that. And finally, it's accessibility. It's a simple blood test. We can test for cancer all over the world. We don't need high, expensive mammography equipment and things like that in the future. And so, I think it has a lot of potential, and I'm very excited about it.

**Dr. Turck:**

Well, with those final thoughts in mind, I want to thank my guest, Dr. Vershalee Shukla, for joining me to discuss how we can implement multicancer early detection screening in clinical practice. Dr. Shukla, it was great speaking with you today.

**Dr. Shukla:**

Thank you.

**Announcer:**

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