

The AI Revolution in Cancer Screening

National Webinar Transcript

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Presented by:



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About Sharsheret

Sharsheret, Hebrew for “chain”, is an international non-profit organization, that improves the lives of Jewish women and families living with, or at increased genetic risk for, breast or ovarian cancer through personalized support and saves lives through educational outreach.

With regional offices in the Midwest, Northeast, Southeast, West, and Israel, Sharsheret serves 275,000 women, families, health care professionals, community leaders, and students. Sharsheret creates a safe community for women facing breast cancer and ovarian cancer and their families at every stage of life and at every stage of cancer - from before diagnosis, during treatment and into the survivorship years. While our expertise is focused on young women and Jewish families, approximately 25% of those we serve are not Jewish. All Sharsheret programs serve all women and men.

As a premier organization for psychosocial support, Sharsheret works closely with the Centers for Disease Control and Prevention (CDC) and participates in psychosocial research studies and evaluations with major cancer centers, including Georgetown University Lombardi Comprehensive Cancer Center. Sharsheret is accredited by the Better Business Bureau and has earned a 4-star rating from Charity Navigator for four consecutive years.

Sharsheret offers the following national programs:

The Link Program

Peer Support Network, connecting women newly diagnosed or at high risk of developing breast cancer one-on-one with others who share similar diagnoses and experiences

- Embrace™, supporting women living with advanced breast cancer
- Genetics for Life®, addressing hereditary breast and ovarian cancer
- Thriving Again®, providing individualized support, education, and survivorship plans for young breast cancer survivors
- Busy Box®, for young parents facing breast cancer
- Best Face Forward®, addressing the cosmetic side effects of treatment
- Family Focus®, providing resources and support for caregivers and family members
- Ovarian Cancer Program, tailored resources and support for young Jewish women and families facing ovarian cancer
- Sharsheret Supports™, developing local support groups and programs

Education and Outreach Programs

- Health Care Symposia, on issues unique to younger women facing breast cancer
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Jenna Fields: Thank you everyone for being here. I'm really excited to see some names I recognize in the chat from across the country. So welcome friends and Sharsheret program participants. Thank you for joining us for tonight's webinar, The AI Revolution in Cancer Screening with Dr. Nina Capiro from the David Geffen School of Medicine at UCLA. I'm Jenna Fields. I'm the Chief Regional Officer of Sharsheret. And for those of you who are not familiar with Sharsheret, we provide free virtual personalized support, lifesaving education, financial assistance, and genetic counseling to empower those faced with or at increased genetic risk of breast cancer and ovarian cancer. For anyone on this call facing a breast cancer/ovarian cancer diagnosis as well as those with increased hereditary risk, please know that Sharsheret is here for you during October's Breast Cancer Awareness Month and throughout the year as you navigate your journey.

I'm also thrilled to welcome you to Sharsheret Summit. As part of this month's Breast Cancer Awareness Month, Sharsheret is bringing you our annual marquee event. Sharsheret Summit runs from September 18th to October 23rd, and you can join our national virtual symposiums on the latest hot topics in breast cancer and ovarian cancer. You can attend or host an in-person education and awareness program with community partners across the country, and you can learn the latest about screening guidelines and access the most up-to-date data and materials in our digital resource packet. My colleagues are putting information about Sharsheret Summit into the chat now, and don't forget to register for our amazing lineup of virtual programs. From menopause to GLP-1s in cancer, we have your questions answered. However you choose to participate, Sharsheret Summit is the source for the latest information on breast cancer and ovarian cancer in the Jewish community.

The AI Revolution in Cancer Screening

I want to thank our 2026 Sharsheret Summit sponsors, including AstraZeneca, Eisai, GSK, Lilly, Pfizer, Smart State, and Weill Cornell Medicine Department of Genetics and Personalized Cancer Prevention, as well as Cooperative Agreement 24-0061 of the Centers for Disease Control and Prevention. And thank you to all of our national Summit partners who you saw on our opening slide. Without their support, we wouldn't be able to bring you this important educational information. Before we begin the webinar, just a few housekeeping items. Tonight's webinar is being recorded and will be posted on Sharsheret's website along with the transcript. Your faces and names will not be in the recording. If you would like to remain private, you have the option to turn off your video and rename yourself or you can call into the webinar. We also have closed captioning available. To display live captions, click on the bottom bar, click on captions, and then click on show captions.

Now, you may have noticed that you were muted upon entering the Zoom, and we really ask that you please stay muted during the call. We will be holding a Q&A at the end of the presentation, and if you have any questions, you can just type them into the chat box at any time and we'll get to as many as we can during the Q&A. We do ask that you keep your questions as general as possible as we cannot comment on specific medical concerns. And I do want to remind you that Sharsheret is a not-for-profit cancer support and education organization and does not provide any medical advice or perform any medical procedures. And our full medical disclaimer is in the chat now.

Finally, I'm happy to share that Sharsheret launched our Maidenbaum Endometrial Cancer Program this year, which provides tailored support to those facing endometrial cancer. You can learn more and access support through the link in the chat now. I'm now thrilled to welcome tonight's expert speaker, Dr. Nina Capiro. Dr. Nina Capiro is an assistant professor of radiology in the breast imaging section at the David Geffen School of Medicine at the University of California, Los Angeles. She's a recipient of a mentorship grant from the Patient-Centered Outcomes Research Institute, or PCORI, as part of the pragmatic randomized trial of artificial intelligence for screening mammography, PRISM. Her research focuses on patient-centered implementation of new breast imaging technologies, identifying strategies to reduce healthcare disparities and optimizing high-risk breast cancer screening. I'm thrilled to welcome her today. And Dr. Capiro, I'm going to turn it over to you now.

Dr. Nina Capiro: Excellent. Thank you for that introduction, Jenna. Here, let me just share my screen.

All right, so thank you so much for having me today. I'll be talking about artificial intelligence or AI in cancer screening. We will look at how AI can help today, what the studies have found so far, and what this may mean for you. And so since our background and experiences can impact our perspectives, I want to start out by sharing a little bit about myself. So I'm a mom of three young children, so I know how hard it can be to make time for your own health when you're so busy caring for others.

I'm a breast radiologist and researcher at UCLA, and my clinical time is spent reviewing mammograms and other breast imaging studies, doing procedures and talking to patients. And my research focuses on the things Jenna was talking about, but primarily using new technologies to improve patient care in a way that is practical and equitable. I'm an AI user, but I'm inherently a skeptic. I use AI in both my personal and professional life, and I definitely used AI to help put this presentation together. But I also think that some of the supposed AI benefits are way over-hyped and that we need to better understand if it actually helps us or not in various aspects of our lives. I found that generally with AI, on first glance, the things that are produced seem incredible, but when you really look closer, you notice that there's often significant limitations. And then I'm also an ovarian cancer survivor.

I was diagnosed about two and a half years ago, even though I have no family history or known risk factors, and I've personally benefited from the support that Sharsheret provides, and I'm very grateful to be here speaking with you all today and to be able to give back even in a small way to an organization that has helped me tremendously. And so with that, so most of today's talk is about AI in screening mammography because that's where we have the most evidence about AI in cancer screening thus far. But I'll also talk a little bit about some exciting future directions in this area. We'll also look at how AI might help estimate a person's chance of getting breast cancer in the future, and we'll finish off with ovarian cancer screening where research is still at a very early stage.

And so we'll start with AI in screening mammography. So screening mammography saves lives, but it has several limitations. A patient may have a mammogram interpreted as normal, and then soon after discover a breast lump that ends up being cancer. Screening mammography can also identify findings that require additional imaging evaluation. The patient has to come back for diagnostic mammograms and ultrasounds, follow-ups, and all these things could ultimately prove to be nothing concerning. And these callbacks can cause anxiety and require patients to take away time from work and family responsibilities. So researchers are evaluating whether AI can help address some of these limitations of screening mammography. And AI in screening mammography in particular has gone quickly from a research idea to something that's being studied to something that's actually being used clinically, and all this has happened in a very short period of time. But the central question is whether its use actually improves screening outcomes for patients.

But what are we even talking about when we talk about AI in this setting? So more generally, AI is a type of technology that uses computers to analyze data and make predictions. So in mammograms, AI systems are trained to look for patterns that might show signs of breast cancer. The AI learns by setting thousands or even millions of mammograms to understand what cancer looks like and what normal tissue looks like. When AI reviews a mammogram, it gives a score showing how concerning the exam is, and it may mark areas on the mammogram for the radiologist to examine more closely.

The AI Revolution in Cancer Screening

So here's how AI fits into the screening mammogram process. So after you get a mammogram, the images are uploaded into the computer system. The AI tool looks at the images and flags areas that might need closer attention. The radiologist reviews the mammogram, including the AI score and associated markings if there are any, and the radiologist decides if the flagged areas are concerning or if they're just normal tissue. Once the radiologist finishes their review, they write a report that is shared with your doctor, but radiologists always make the final decision even with AI when AI is used.

And so here's an example of what a mammogram that was reviewed by AI would actually look like. This is just an example of one of the vendors. There are several though, they all kind of have a similar look to them. So this is a mammogram that received an elevated score from the AI tool. The first thing that the radiologist sees is this info sheet showing the overall score and the markings in the areas of concern. These are shown here with a little box around this area that the AI flagged as worrisome. So these show areas that the AI flagged as potentially abnormal. And as you can see here, this is an exam. Usually there's an E at the top of the screen. So this is an elevated score and then it has a box around an area in the right breast that the AI flagged as concerning.

Whereas this is a mammogram that received a low score from the AI system. So you see the same info sheet, but this one has an L at the top of it to signify the low AI score. And notice that there are no markings on the images. This means the AI didn't flag any areas for further review, but even though the AI didn't flag anything, the radiologist still carefully reviews all of the images to make sure that nothing was missed. And even the prior example where the area is marked, the radiologist still looks through everything on the exam, not just that one area, they review all of the images. So the AI can act as a safety net, but the radiologist makes the final decision.

And so what does the evidence tell us so far about how AI actually performs? So the MASAI trial was the first randomized clinical trial for AI in screening mammography. So in medical research, randomized trials provide the highest level of evidence since they may get rid of some of the many biases that can occur when we're doing research. And so it makes a comparison between two things more fair so we can better assess the difference between two imaging studies, two treatments, any two things. This randomization helps. It's the highest level of evidence. So this was a large study of over 100,000 women in Sweden, and the researchers placed women into two groups by chance. This is the randomization piece that I talked about. So one group had the usual screening approach, which in Sweden means that two radiologists read each screening mammogram, and the other group had screening with AI support. So in that group, if a mammogram got a low AI score, only one radiologist would read the mammogram, but if a mammogram got a high AI score, it would be read by two radiologists.

The AI Revolution in Cancer Screening

And the results were encouraging. Screening with AI found about 29% more cancers than screening without AI. And AI did not increase the rate of false positive exams or false alarms, meaning that it didn't lead to more women having to come in for additional imaging workup after a screening mammogram. And this is great. We found more cancers without having to do more imaging workups. Doctors also had fewer mammograms to read because the low AI score exams didn't need that second radiologist. And even better, the extra cancers that were found with the AI were often small cancers that hadn't yet spread to lymph nodes. And finding cancers like these are just the sort of cancers that we're trying to get with screening mammography, these small early cancers that develop before a patient has symptoms. So this all sounds incredibly promising, and other studies have shown similar results in Germany, Spain, and the United Kingdom.

But as you may have noticed, the strongest studies that I've talked about so far all come from Europe. And the problem is that breast cancer screening in Europe works differently than it does here in the United States. In many European programs, like I mentioned before, two radiologists read each mammogram. In the United States, usually there's only one radiologist reviewing your mammogram. European programs offer screening every two to three years and may start at a later age. Whereas in the US, some schedules vary, but generally we recommend starting at age 40 and having annual screening mammograms. Many European programs also use 2D mammograms. In the United States, 3D mammograms or tomosynthesis are more common. On top of that, the people screened, payment systems, chances of getting called back for more imaging, from a screening exam, all these things differ significantly between the US and Europe, and these differences matter. While the European results are promising, we need US studies to know whether patients here will see these same benefits.

And so luckily a study called the PRISM trial is currently underway here in the US, and it's the first large scale randomized trial of AI in screening mammography in the United States, and it's funded by the Patient-Centered Outcomes Research Institute. So it will include hundreds of thousands of mammograms from academic medical centers and community clinics across the country. Half of the mammograms as determined in a random fashion will have the usual care, which since we're in the US, means that they will be reviewed by one radiologist. In the other half of mammograms, those will be read by the radiologist, but they will also be run through the AI tool. So the radiologist will have that info sheet like I showed you before that will be used alongside looking at all the images in the screening mammogram. And researchers will compare how many cancers each approach finds and how often patients need more imaging tests. So they will also ask patients and doctors about their experiences with AI and their perspectives on AI's use in screening mammography. So this will help us better understand how AI works in a US screening setting.

And so since I'm at a site participating in the PRISM trial, I have the opportunity to use AI in my clinical practice. These are some of my personal anecdotal

impressions. They're not results from the study and may not reflect the experiences or opinions of other radiologists or folks using other AI tools. So things I've noticed are that the AI marks many things that are not cancers, including things that I believe nearly all radiologists would agree are not concerning. It can be helpful on some screening mammograms when maybe I'm on the fence about a finding, having that AI information could sway me one way or another and can help give me some support to make my final decision. Or if something catches my eye on the mammogram, it can help me decide whether or not it needs more workup. But I've also seen cancers on screening mammograms that have the AI tool, that the AI gave them a low score and these patients still have breast cancer.

So AI is definitely not a magic bullet and can't be relied upon completely. And this is why I'm eagerly awaiting the results of the PRISM trial. My experience alone cannot establish how well AI actually performs in screening mammography more broadly in the United States. So very exciting news to come on this, but right now we just don't have the data. And I think something interesting to bring up at this point is that some US imaging centers are offering AI for screening mammograms at an additional fee. The charge usually ranges from about 40 to \$60, and this is paid out of pocket by the patient. It's not covered by insurance.

So far, there's no evidence to support that paying for this extra service leads to meaningful health benefit for an individual patient in US practice. So AI may be useful, but we don't have enough evidence to recommend paying for this add-on. Some centers include AI as part of their usual care, but this isn't the current standard in the US, and that's very different from asking patients to pay an extra fee for something like this. So given my knowledge of AI, what would I do? So first off, I would not delay a mammogram or change imaging facilities just to buy an AI review. You don't need to feel that your mammogram is less good because you didn't pay an AI fee. Hopefully in the coming years we'll have more definitive data on how AI affects screening mammography outcomes in the US. But until then, the most important thing is to get a good quality mammogram on the schedule that's recommended to you by your doctor.

And so up until this point, we've been talking about AI that is used to look for evidence of cancer on your current mammogram, but AI may also help estimate a person's chance of getting breast cancer in the future. And let's look at how doctors estimate risk now and then how AI might help in years ahead. So about one in eight women in the United States will develop breast cancer at some point during their lifetime, but each person's risk is different. People with a higher risk of breast cancer may benefit from supplemental screening with breast MRI, and some may also benefit from talking with the genetic specialist or taking medicine to lower their breast cancer risk. The goal is to choose screening and additional services that fit each person's needs. Remember, while a risk estimate can try to guess your likelihood of getting breast cancer in your lifetime, it can't tell us for certain who will or who will not get breast cancer.

And so currently, doctors use clinical risk assessment tools to estimate a person's chance of getting breast cancer. You may hear names of some of these models such as Gail, the BCSC, the Tyrer-Cuzick or the IBIS model, and these risk assessment tools use information about you, like your age, your family history, and breast density to calculate your risk of developing breast cancer. And while these tools can help, like I mentioned before, they're not exact. And more confusing is that different tools can give different answers and they may work better for some groups of people than others. And importantly, many people who develop breast cancer don't have a high risk score before their diagnosis.

So at UCLA, when you get any breast imaging, you're given an iPad to answer a bunch of questions about your clinical history, and the answers that you give are used to calculate your Tyrer-Cuzick or IBIS risk score. This score is provided to you on your imaging reports. However, performing this sort of risk calculation at the time of breast imaging and providing this information to patients on their imaging reports isn't a universal practice. So if you want to calculate your own risk, the easiest way to do so is to Google IBIS breast cancer, which you can see IBIS spelled on this slide, and then go to the ibis.ikonopedia.com link that you see the name there as well. And there you can put in your information and it will calculate your lifetime risk of breast cancer based on that clinical risk model. A lifetime risk of 20% or higher would be considered high risk, and that's one common reason to consider an annual screening breast MRI.

But to put this into perspective, if you have a lifetime risk of 20%, that means that 20 out of 100 people with that estimated risk will develop or would develop breast cancer during their lifetime. Your care team also considers why you may be high risk, such as if you carry any specific genes that are associated with higher rates of breast cancer, as well as your own health needs to determine if you would benefit from a supplemental breast MRI or not. And one thing to note though about calculating things yourself is that some changes in your answers can change the result. So make sure to review any result with your clinician so that they can help you better understand what this number actually means for you. And while having an elevated risk may mean that you could benefit from supplemental screening, a low risk doesn't mean that you should skip screening mammography.

As like I mentioned before, most women found to have breast cancer do not have an elevated lifetime risk at the time of cancer diagnosis. And as we talked about before, AI is great at looking for patterns. And so while we were previously talking about AI looking for cancer on the current mammogram, a different direction is using these AI mammogram-based risk models to look for patterns to estimate the chance of breast cancer developing over the next several years. And these patterns may be imperceptible to the human eye or they may capture information that a health questionnaire just can't do. Some AI mammogram-based risk assessment tools have been shown to be better than these clinical tools that doctors currently use in practice. So while that's encouraging, we still need to know whether using these AI risk estimates actually improve health outcomes for patients. For example, what should a

doctor recommend after a higher AI risk score? Would extra tests help or would they cause unnecessary worry and testing? Researchers need to know and need to follow people over time to be able to answer these questions.

And so it's really interesting that I am giving this talk today because this actually was just a headline from the New York Times from a few days ago. So one example of one of these AI risk assessment tools that has recently gotten some media coverage is called Clarity Breast, and it provides a five-year breast cancer risk estimate. Like I said, this is from the New York Times just a few days ago. And so this company, Clarity, has partnered with another company, Everlywell, to offer their AI risk assessment tool nationwide. So patients complete an intake and then sign a medical records release form so that Clarity can request those mammogram images from the imaging facility where they have their screening mammogram. The mammogram has to meet certain eligibility requirements that are necessary for the AI tool to actually run, and then the patient is given their results in terms of what their risk score is based off of this AI model.

And the results, I guess, also come with some guidance to discuss with your healthcare provider. And the reported price for this is \$240 out of pocket. And just like the other coverage that we were talking about before, this is not covered by your insurance, so this is something that would be paid out of pocket. And so while I am genuinely excited about AI for breast cancer risk assessment, this is something I want to pursue more in my own research, my own career, breast cancer rates are increasing, especially among young women, and that makes me wonder whether there are factors affecting our risk that maybe we haven't identified yet or that our current clinical risk models can't fully capture. And I don't know, maybe some of this information is already present in a screening mammogram, but at the same time, predicting risk and knowing what to do with that prediction are different questions. The studies supporting Clarity's FDA authorization were all retrospective.

So that means that researchers looked back at mammograms and examined how well the model predicted which patients later developed breast cancer and which ones did not. And while these retrospective studies, these studies that look back at mammograms that have already been done and cancer diagnoses that we already have that tells us about the predictive performance of the tool, in other words, how good is it at predicting who would get cancer, those studies don't look at what happens when we use the tool to choose a screening schedule for a patient or to recommend a breast MRI for a patient.

Will that approach help patients and what additional testing will it lead to? And then there's also the practical question, how many women would receive a high risk result from one of these AI tools? So with traditional clinical models, up to 15% of women may be considered high risk for breast cancer, and that depends on the population and then the specific risk model that's being used. But we don't yet know what proportion of the population would be considered high risk using the newer AI risk tools. I asked one of the vendors at a conference I was at, not for Clarity, a different model, but a similar product to estimate for me

about how many women in the US population would be high risk if we did this AI risk assessment in everybody. And they told me about half of women would be considered high risk. And this was just an informal estimate from one vendor, it's not a validated population finding.

But that conversation raises a question, a really important one for me is if a much larger group of women qualifies as high risk, how should that change our imaging recommendations? And who would benefit from screening MRI? And would we even have the capacity to offer screening MRIs to all of these women? So for now, I personally would not pay for this assessment. One principal use commonly in medicine is to ask how a test result will change care before ordering the test. And I'm enthusiastic about the potential of this, but I don't yet have a clear plan for what I would do differently with an AI mammogram risk result.

All righty. And then switching gears a bit, so now let's talk just briefly about ovarian cancer screening. So just as a reminder, screening means checking for cancer in people who have no symptoms. And unfortunately, researchers have studied CA-125 blood testing and pelvic ultrasound alone and together for ovarian cancer screening and these approaches have not shown to reduce ovarian cancer deaths when used for routine screening in the general population. And one difficulty is that ovarian cancer is uncommon in the screening population. It's much less common than breast cancer. And even a test that performs well can produce a lot of false alarms. So a positive result may lead to anxiety, more tests or surgery in a person who doesn't need it. And that's different from evaluating someone with symptoms or a mass that's already been found, and that distinction helps explain where AI has made the most progress for ovarian cancer.

So an adnexal mass or a lump or a growth in or near an ovary is something that AI may help us assess. So here the question is whether an existing mass, so a mass that we already know a woman may have, maybe it's been found because she has symptoms, maybe she had an ultrasound done for a different reason and they find an adnexal mass. So AI may be able to help us determine which of these masses are benign, meaning not cancerous, or those that are malignant. So AI can analyze ultrasound images to help make that distinction based on imaging. In a large international study, an AI tool performed better than some expert and some less experienced ultrasound examiners at determining if an adnexal mass was benign or malignant.

So this suggests that AI could support more consistent interpretation of findings seen on ultrasound, especially in resource poor settings, places where there may not be a specialist available. But again, these are more retrospective studies looking back at studies that are, imaging exams that have already been done. And again, these results address characterizing something that was already seen on imaging rather than early detection in people without symptoms. And finding cancer before symptoms or a known mass appears is the next but harder challenge for ovarian cancer.

The AI Revolution in Cancer Screening

So research is in the very early stages in this area, but researchers are exploring whether AI can help detect ovarian cancer before symptoms develop. Some blood tests analyze cell-free DNA, which is DNA fragments circulating in the blood, and then others look at DNA methylation. These are marks on DNA, and then patterns across proteins or blood markers such as CA-125. And risk models may use AI to combine these blood markers, your health history, as well as inherited risk and routine test results to try to predict who is at a higher risk of developing ovarian cancer. And early studies have reported promising accuracy, but much of this work is using stored samples or data from just selected groups of patients, and we really need prospective studies which follow people forward in time to learn whether these approaches find cancer early enough to actually improve survival. So far, these AI approaches have not shown that they actually reduce ovarian cancer deaths, unfortunately.

And researchers also need to test the models in diverse populations and confirm that the results are reliable in different care settings. So for now, AI screening for ovarian cancer remains experimental. Patients should discuss persistent or unexplained symptoms as well as their family history with their care team. And if you have an inherited condition that increases your risk, ask a specialist about proven ways to reduce your risk such as with risk reducing salpingo-oophorectomy or other surgeries. An experimental screening should never replace that standard of care.

All right. And so here are my main takeaways that I'd like for you all to remember. So AI may help doctors find more breast cancers on mammograms. The strongest study results come from Europe and US studies are still underway. And even when AI is used, a doctor still reviews the mammogram and makes the final decision. AI may help estimate someone's chance of getting breast cancer in the future, but researchers are still learning how doctors should use those scores to guide care. And for ovarian cancer, we still don't have a routine screening test proven to reduce deaths, and AI tools are still in the very early research stages.

Okay, so here are some things that you can do now when it comes to cancer screening, given where the technology is and what the current recommendations are. So number one, keep getting your mammograms on the schedule your care team recommends whether or not AI is available. Second, you should ask whether your care team has estimated your chance of getting breast cancer. Like I said, at UCLA, that's provided on any imaging study reports that you may have, but if those are not on your imaging reports, that's something you can calculate on your own. And if you do have a risk that's higher, you can ask your care team whether a breast MRI, a visit with a genetic counselor, or you can also ask about ways that may lower your risk and how those might help you. And if you have an inherited gene linked to cancer, talk with your care team about proven ways to lower your risk, including surgery at the right time for your situation.

The AI Revolution in Cancer Screening

Experimental AI screening cannot take the place of that discussion. And if you're eligible or given the opportunity to do so, you should consider joining a research study. We often think of research or clinical trials just being for folks who have a cancer diagnosis who have maybe failed other therapies, but really the research that we do is all encompassing, covers all different aspects of the breast cancer care continuum, all the way from screening to later in diagnosis. I know I personally have done research where I hand out questionnaires in the waiting room or we've done focus groups to get patients' perspectives. So participating in those studies, if they ever become available to you, are how we learn and how these new ideas are tested and we can figure out if these new technologies actually impact patients. And ultimately, the goal of all of this should be to help people live longer, healthier lives. And while AI offers promising ways to improve screening, we need to know whether those improvements actually lead to better outcomes for patients. So thank you. My talk is pretty fast because I'm a fast talker, but I appreciate everyone's time.

Jenna Fields:

That was so informative. Thank you so much, Dr. Capiro. I'm so glad you're here. And I also just want to acknowledge you shared at the beginning that you are also a patient, not just a researcher and a physician, and we really appreciate you sharing your own story with us. And I know it means so much to the people here to know that you're coming from both of those perspectives. So I'm excited to get to the Q&A. I want to acknowledge there's some healthy skepticism in the chat, so that's great and a good place to start. Feel free to put your questions in the chat now. My request is just to keep things as general as possible, not to your specific health concern and also specific to the topic as well. So firstly, I wanted to just ask you about people who have concerns about risk of recurrence and if there's any investment in AI in that area of study, not just people who are looking to see what their risk is in their lifetime of getting breast cancer.

Dr. Nina Capiro:

No, definitely. That's another area that's of particular interest to me. Unfortunately, there's no AI tool yet, at least in terms of imaging, that helps us detect breast cancer recurrence. And another limitation of these AI models that we're using for screening mammography is most of them were trained, like I said, on hundreds of thousands, millions of screening mammograms. The bulk majority of those are people who have not had any breast surgery. So you know how I said that the AI models, at least the ones we use, often mark certain findings that most radiologists wouldn't even give a second look to. It often marks post-surgical changes because those post-surgical changes in and of themselves cause changes in the breast on the mammogram that can often mimic a cancer. But me as a radiologist is able to look at the whole picture, know your history, I can see, "Oh, that's just some post-surgical change. That's not something we need to worry about." So this is an area that I think AI has a potential to be helpful, but right now there's no current use for AI specifically to detect recurrence on imaging.

Jenna Fields:

So for something like someone had reconstruction implants, for example, how is that coming up right now with AI?

The AI Revolution in Cancer Screening

Dr. Nina Capiro: Yeah, most of the models that we're trained don't include women with implants, but the AI models are being used in women with implants. So it's something that we're really still learning about and is part of the reason why I still carry a healthy degree of skepticism because I know women with breast implants, either just cosmetic, it can be harder to visualize the breast tissue or women who've even had reconstruction for prior surgeries, for symmetry, things like that. The models are just not as good, so it's hard to know how to use it in those sort of settings.

Jenna Fields: So the question again was asked about breast MRIs as well. Is there any advancement in that area beyond mammography?

Dr. Nina Capiro: So not really. There's not a lot of... Here at UCLA, we're not using AI for breast MRIs. I'm sure there's some vendors that maybe have this, but the bulk of the data thus far is in screening mammography. So like I was saying, there's just so many different avenues that we could pursue for AI to improve care, and that's another one that I think would be very, very interesting to pursue because mammograms in addition to breast MRIs are essential for screening for breast cancer.

Jenna Fields: And a couple of people were curious about dense breast tissue and how that might impact all of this.

Dr. Nina Capiro: Yeah, yeah. I guess I can just talk about clinical risk. So starting off, so the Tyrer-Cuzick or IBIS model that I mentioned does factor in someone's breast density to determine their lifetime risk. So women who have more dense breasts are at a higher lifetime risk of having breast cancer. So someone with an extremely dense breast, someone of the same age, same clinical history, if they had an almost fatty breast or a not dense breast, they would have a lower lifetime risk of breast cancer. And on top of that, folks with dense breasts, it's just harder to find things on mammograms. Mammograms just aren't as sensitive because it's harder to see abnormalities through all of that dense breast tissue.

So this is where we're hoping that AI could potentially give us some additional information, maybe would help draw, us as radiologists would draw our attention to certain areas that maybe we would skip over because the breast is so dense, but maybe it could draw our area to an area, a specific part of the mammogram. But that's something that the PRISM trial is going to look to see, how does the AI perform across different breast densities so that we're hoping to get more information with this trial.

Jenna Fields: Okay. So a question came in about insurance coverage for this. I'm assuming because this is a trial, insurance does not play a role. You mentioned people being charged out of pocket for this. Where is insurance coming to play right now?

The AI Revolution in Cancer Screening

Dr. Nina Capiro: Yeah, so right now insurance doesn't cover either of these services. Some clinics just bundle it in with your regular screening mammogram, so they may just include it as part of your mammogram process. Us, since we're participating in the trial, there's no charge to patients, and there's still a big question mark as to whether or not insurances will ever reimburse for this because we don't have the data in the US population to show that it makes any sort of a difference. So maybe if that data comes out and it does show, yes, AI does help a lot in the US screening setting, then maybe insurance will cover it, but at this time it's not covered. As you may know, a screening mammogram is covered, through the Affordable Care Act, is covered with no cost sharing to the patient, but these add-ons, like I talked about, would not be covered.

Jenna Fields: So for patients who are being asked to pay out of pocket for these, is there any harm? I mean, if they're willing to pay, is there any harm in paying for it?

Dr. Nina Capiro: I'd say at this point, we really don't know. I would assume that there is no harm, but like I said, there are studies or mammograms that I have looked at that are given a low score by the AI tool that end up having breast cancer. So the fear is in those cases, if it gets a low by the AI, is the radiologist going to read it more quickly and maybe not pay as close attention to those more subtle findings? So while I don't think it's harmful, we really don't have the data yet to support that.

Jenna Fields: So for something like the Clarity test, are you seeing that more as a recreational option for patients right now or are providers really recommending this for patients who are able to afford it?

Dr. Nina Capiro: So it's so early, and actually with the latest NCCN guidelines, they included image-based risk assessment in their determination for qualifying someone as high risk and considering for them to get a breast MRI. So at this point, I'm not recommending it to patients. I don't know if any of our doctors are necessarily recommending it. It's not something we provide at UCLA. It's just a big question mark. So my fear is at this point, we just don't know what to do with this information. And I even talked to a different AI vendor, not Clarity, but another vendor who has a risk prediction model, and they asked me, "How do you see this being used in practice?" And I thought that they might have an idea of their vision of how this would be used, but they don't really know. They're waiting for us to figure out how to implement this clinically.

So like I was saying before, if there's a test and I don't know what I'm going to do with the information from that test, whether it's positive or negative, then I have question if that test is actually doing us any good. And at this point, I just don't know what it actually means. And if it tells you your risk is very, very high, what are you supposed to do? Or if it tells you that your risk is very, very low, I'd still recommend you get an annual screening mammogram. So I hope we have more data in the coming years, but at this point we really just don't know.

Jenna Fields: Yeah, no, it's fascinating. So Linda, hi, Linda, asked, "Will AI replace CAD for reading for radiologists? What's the difference?"

The AI Revolution in Cancer Screening

Dr. Nina Capiro: Okay, so CAD, these days we call that the old school computer aided detection. So that was developed in the '90s, and the story for that is that it was developed, there were some very weak studies showing that it helped radiologists, and so then it was rapidly implemented. It wasn't as advanced as the AI that we're using today. It was more like pixel-based. Computer-aided detection is what it was called. So that quickly became FDA authorized, it was reimbursed by insurance, and then widely implemented based off of these really weak studies. And then once it was out and everyone was using it, more studies came out showing that it actually made radiologists worse. It made us call back more things, didn't help us find more cancers, but it still continued to be used. And so us radiologists with AI, it uses a different technology, it's more advanced.

We don't want to see the same mistakes made with AI that we consider were made for CAD in the early '90s, that people just started using it without having a deep understanding of how it actually impacts. So the technical difference is, old school CAD was more pixel-based. The new AI systems are deep learning models that use more of these fancy neural networks. And so at least at UCLA, because we're taking part in the trial, we're actually no longer using CAD. It was removed, so our images aren't using CAD anymore. I can't speak for other imaging facilities. Some may still be using CAD, but we are not.

Jenna Fields: Another person asked if AI is good at picking up lobular breast cancer, but I'm going to make it broader. Did the European studies see that there were certain cancers it was easier to pick up than others?

Dr. Nina Capiro: That I'm not sure of. I will speak to the point that yes, invasive lobular cancers, us breast radiologists call them the sneakiest kinds of cancers because the imaging findings can be so subtle and so vague. So that's something we're definitely hoping to study with the PRISM trial is seeing with AI, does it help us, especially with the invasive lobular carcinomas that are oftentimes imaging occults or really hard to see on imaging, perhaps it helps with those. But I apologize, I don't know the European studies if they looked into that level of detail.

Jenna Fields: So someone asked about some of the recent blood tests, the liquid biopsy tests that are coming out, the Galleri test, Signatera, are they incorporating, this is not the question, I'm asking, are they incorporating AI into it? If not, is this something you recommend in your practice to people?

Dr. Nina Capiro: Yeah, so I have to take a little bit of a step back because I'm a radiologist, so my area of expertise is imaging. So I know less about the liquid biopsies, the circulating tumor DNA exams that are sometimes done to monitor people after a cancer diagnosis. So I don't know if they're using AI or not. I do know that they're used for monitoring folks. I know they're not currently being used in a screening setting, but that's something that's another future direction potentially. But with everything, we always worry about false positive studies or exams. If you get a positive result and then go through all of this stress and

The AI Revolution in Cancer Screening

anxiety thinking that you have cancer and then you end up not having cancer, that's something I think we need to be very cautious of with any sort of large scale screening tool.

Jenna Fields: Yeah, absolutely. One great question around AI is improving so rapidly. How is the trial adapting to this right now?

Dr. Nina Capiro: Yeah, so the nice thing about the PRISM trial is it's a pragmatic study, which basically means we're trying to mimic the real world settings as much as we can because we are practicing radiologists and all of the patients that we're seeing in practice, they're being randomized to AI or no AI. So with any sort of software update that we get for the model that we're using, we just implement that and we're taking note of when these changes happen, when the tool gets updated. We're not necessarily trying to evaluate the single model, the same single AI tool. We're trying to think more broadly how AI impacts screening more generally. So as things are improving, we're definitely incorporating them. We're not allowing the study to limit us in terms of just using this one tool just because it's the one we're using for the study.

Jenna Fields: Yeah, no, that makes sense, and that's wonderful to hear.

Dr. Nina Capiro: And that's something we're keeping in mind too, because yeah, AI is changing so rapidly that even if we're using it in the real world setting, we would be doing the same thing.

Jenna Fields: Okay. A few questions just about the research investment in this area of research, and where are the winds blowing right now? Does this feel like an area where we're going to see more research investment? There was a question around investment in more ovarian cancer prevention and screening. What are you seeing just generally for the funding world right now?

Dr. Nina Capiro: Yeah, so AI tools that have received FDA authorization, the vast majority of them are in radiology, and of those in radiology, the majority of them are in screening mammography. So there's a lot of these different tools that are FDA authorized for us to use in screening mammograms. So there is a lot of excitement in this area. We're just hoping to get more of the clinical information to confirm that this works before we fully accept it and are fully on board. Some areas that I think are really exciting, and there's been a lot of vendor interest, is for this image-based risk assessment. I think that's a really exciting future area, but there's a lot of vendors going into that space, even people who they already have their AI tool that helps with the current mammogram, they're using that information to also create a risk model. So I know that there's a lot of excitement around that.

With ovarian cancer and AI, it's really challenging because the disease is just not as common as breast cancer, so there aren't as many patients. So figuring out who would benefit in terms of screening in the entire population is more

The AI Revolution in Cancer Screening

generally a challenge. And I know ovarian cancer research in general is underfunded just because it's less common. So I'm hopeful that there will be more excitement in that area, but I think number one is still screening mammography and then two being risk assessment.

Jenna Fields:

Okay. Well, I think we got through all of our questions together, which might be a Sharsheret webinar first. Thank you, Dr. Capiro, so much for your time. It's really exciting to hear what's happening. It's a little scary, and also just really appreciate everybody being here to be informed and empowered together. So thank you all for participating today. I'm going to ask my colleagues to put our evaluation survey in the chat right now, and I want to thank our 2026 Sharsheret Summit sponsors, including AstraZeneca, Eisai, GSK, Lilly, Pfizer, Smart State, and Weill Cornell Medicine Department of Genetics and Personalized Cancer Prevention, along with the Cooperative Agreement 24-0061 of the Centers for Disease Control and Prevention. Sharsheret Summit, which you are participating in right now, is running from September 18th to October 23rd.

And please don't forget to register for our amazing lineup of virtual programs. From menopause to GLP-1s in cancer, we've got your questions answered. My colleagues are going to be putting that registration in the chat one more time and our evaluation in the chat one more time. Please don't hesitate to reach out to Sharsheret if you are in need of any support. We know it's Breast Cancer Awareness Month, but we also know that cancer affects all of us year round, and Sharsheret is here to support you. Thank you everybody for being here and have a good night.