Speaker 1: From the National Society of Genetic Counselors, this is the NSGC podcast series. Exploring stories of leading voices and best practices in genetic counseling.

Kayla Sheets: Welcome to the NSGC podcast series. I'm your host, Kayla Sheets. June is National Pride Month and in this episode, my cohost Khalida will be speaking with Kim Zayhowski and Rosalba Sacca, on genetic counseling with transgendered patients. First, Khalida will sit down with Kim, coauthor of Cancer genetic counselors' experiences with transgender patients: A qualitative study. Kim is a general genetic counselor at UMass Memorial Medical Center and a new graduate from Stanford's Human Genetics and Genetic Counseling Program. Take it away, Khalida.

Khalida Liaquat: Kim, thank you so much for joining me today to chat about the manuscript that's going to be appearing in the Journal of Genetic Counseling. I just am enamored with this article, because of the way you've laid out the information and the way your group has laid down the road map in navigating clinical work in a totally different aspect than what I'm used to seeing. So, can you tell me a little bit about the study itself and your interest in this topic?

Kim Zayhowski: Yes, of course. Well, thank you so much for having me. I'm really honored to be part of this podcast. This was actually my study that was done for my research project for graduate school. I knew I wanted to do a study on LGBT healthcare, because I'm a queer genetic counselor. I'm in a relationship with a woman who's actually pretty masculine and I really wanted to do a project that addressed healthcare disparities for LGBT people, but specifically for people who don't fit that stereotypical gender binary. I really wanted to make some sort of manuscript that would help genetic counselors know how to navigate some different clinical scenarios with transgender patients specifically.

Khalida Liaquat: Tell me a little bit about your findings.

Kim Zayhowski: Well, I wanted to have a project that would address transgender patients, partly because there are huge healthcare disparities for transgender patients. Not only is there a lot of blatant discrimination that transgender people face, but also transgender patients aren't going to healthcare as often. They're also avoiding cancer care. I wanted to do something with cancer genetic counseling, because I was trying to think of how gender affirmation care could affect genetic counseling.

Kim Zayhowski: Gender affirmation therapy are therapies that people undergo to achieve a physical concordance with their identities, so that might be hormone therapies or surgeries, things like that. I thought, "Oh, wow, well cancer is probably the perfect place to start, because cancer is very gendered." In genetic counseling, in cancer genetic counseling, we're often talking about male risks and female risks for different types of cancer, like breast cancer, prostate cancer or cervical cancer. I wanted to figure out how genetic counselors are talking to transgender

patients who may have undergone some gender affirmation therapy, about what may be pretty sensitive topics for them.

Khalida Liaquat: In thinking about gender affirmation and therapies, you would have to know in advance, in order to address those issues with the patient.

Kim Zayhowski: Yeah.

Khalida Liaquat: Is that something that's a barrier for the genetic counselor? Is it a barrier for the patient? There has to be some sort of relationship of trust, in many cases, in order for the patient to even disclose that information. Tell me a little bit about that.

Kim Zayhowski: That's a good question. In my study, I interviewed 21 cancer genetic counselors and a lot of them mentioned that they didn't even know that their patient was transgender, or that they might have undergone gender affirmation therapy of some sorts, until halfway through the session or even after the session. Some knew before, because sometimes it was well documented in the record, but other times, it wasn't well documented in the record. Or, they had no idea until the patient brought it up to them.

Kim Zayhowski: I think that is a barrier in itself, because someone might not even know what type of screening would be appropriate for the person, because they don't know, necessarily, the sex they were assigned at birth or the gender that they identify with. Then, that caught a lot of genetic counselors off guard too, just because they weren't asking the questions or getting the information that they needed to help with that risk assessment. Some didn't know how that would affect risk assessment, right?

Kim Zayhowski: If you've had surgeries, like a top surgery, which is a surgery that some transgender men get to remove the breast tissue, what kind of breast screening do you still need? Do you still need breast screening? Because, actually, top surgery is very different than a bilateral risk-reducing mastectomy that were familiar with, right? Those mastectomies, they're taking out all the tissue that they can. Whereas, in top surgery, they're not necessarily doing that.

Kim Zayhowski: Patients who've had top surgery might still need screening that people who've had a mastectomy wouldn't. So, a lot of these different things genetic counselors weren't necessarily aware of and weren't prepared for, if it came up in the middle of a session.

Khalida Liaquat: In thinking about counselors or counseling settings, where maybe they were a little bit prepared, is there any differences in expectations for these patients?

Kim Zayhowski: What a lot of people were telling me, that depending on the indication, some patients were coming in actually hoping to have a positive test result. Which isn't something we talk about in cancer counseling, right? Because we're talking

about a higher cancer risk, but, with a BRCA mutation, a surgery like a mastectomy might be covered by insurance. But, unfortunately, a lot of transgender healthcare or gender affirming care isn't covered by insurance, like a top surgery. Some patients were coming into these sessions hoping that they'd have a BRCA pathogenic variant, so that these surgeries would be covered, which is a very different conversation than a lot of genetic counselors are used to having.

Khalida Liaquat: Oh, sure. We're talking about patients who actually have accessed genetic testing, genetic counselors and either are on their way to understanding their risk, or already know of their risks. But, if we take a step back from there, what were your thoughts or your findings on access to genetic counseling, genetic testing and risk assessment in general?

Kim Zayhowski: If you think about it, these are probably patients who are very connected with their healthcare and their hospitals, but a lot of statistics show that transgender patients are much less likely to have a PCP. Are less likely to have any cancer screening, like mammograms or pap smears or things like that. It's probably a very specific population that is going to genetic counselors, but certainly, there are many, many trans people who aren't going to healthcare providers. Partially, again, because of fear of discrimination.

Kim Zayhowski: Maybe because they don't know what cancer screening they should be having, or are uncomfortable with the screening. Because, certainly, many people are uncomfortable with screening like pap smears, for example, but for transgender man, that might be a particularly tricky screening to have done, because it might be particularly uncomfortable. I think the people in my study who are accessing genetic counseling is probably a different population than the general population of transgender patients.

Khalida Liaquat: You had mentioned in risk assessments, the gender affirming hormone. The hormone therapies or the hormone treatment that is part of that course may affect the risk assessment, I would imagine. Does your study shed any light on how genetic counselors are handling that, or resources that are out there to help figure out what those numbers might look like?

Kim Zayhowski: Yeah, and that's pretty hard, because unfortunately, our research isn't there yet, that has specific numbers for how these hormones are affecting trans patients' cancer risk. Especially not in the setting of a pathogenic variant that we're finding on these genetic tests. So, a lot of counselors expressed that they were a little frustrated with the lack of information they had to give the patients, about how those hormones are affecting care. Some patients were being referred to genetic counselors, because of fear that the hormones might be impacting the cancer risk and if they had a pathogenic variant, the providers won't provide the gender affirming hormones to the patients.

Kim Zayhowski: These patients might even just be more concerned about not having access to their hormones than they are about the cancer risk that they're facing. I wish we had more data about how long-term use of hormones might affect cancer risk, but a lot of the data we're working from is women who've been on hormonal birth control for long periods of time, but that's certainly different for cancer risks, than someone who wasn't born creating as much estrogen. Someone who was assigned male at birth, who's taking estrogen, it's not the same cancer risk as someone who's been taking birth control for a long time.

Khalida Liaquat: I'm really interested in understanding a little more about the practitioners who are referring these patients to genetic counseling and what their understanding is of genetics and genetics testing. In your study, did you find that the non-genetic providers who were making the referrals really understood the risks for their transgender patients in particular? Or, was it more taking a family history as the patient, without that bias of whether the patient was LGBTQ and just looking at the patients from the perspective of risk assessment?

Kim Zayhowski: I think a lot of the providers who were referring trans patients to clinics were doing so out of some concern about how the gender affirmation therapy would be affecting cancer risk. Or, maybe they were trying to figure out if they'd even give the patients gender affirmation therapy. I guess it kind of depends on the indications. Certainly, many of the people who were in my study were referred because their parent had a BRCA mutation or something like that. The providers were interested in how that would affect someone who's not on that typical binary. Often, when we're talking about BRCA mutations, we're saying, "Okay, 80% risk of breast cancer for women, maybe much, much lower for men." But, what do you say to someone who doesn't fit that stereotypical man/woman box?

Khalida Liaquat: Right. So, you've mentioned that cancer is gendered and you know, a lot of these questionnaires that we have are binary. Can you tell me a little bit more about the day-to-day process that genetic counselors go through and opportunities for changing, maybe, our language, our thinking and how we elicit the information in order to create an environment and foster trust in our patients, from the get go? Because we might have biases that we're not even aware of.

Kim Zayhowski: Yeah, so you mentioned questionnaires. Certainly, I think our intake forms need to be more inclusive. We can't just say, "Sex, male, female." I think we should have, "Assigned sex at birth" But, also, "Gender identity, preferred names." We should be asking patients more questions about some of these things. I think an easy way to ask a patient about their preferred name, for any session, is just, "Is that the name you go by?" That could be an easy way to ask a patient, "Hey, is this the name you go by for anyone?" Then, that could make a patient feel more comfortable to tell you, maybe, a different name that they're more comfortable with.

Kim Zayhowski: There are little things like having gender-affirming rainbows in the office, but I think really, patients are just hoping to have a kind provider who is open to hearing their story. Even if providers are making mistakes, everyone makes mistakes. Say you use the wrong pronoun, I think just apologizing for it and sounding sincere is really important, but also, not harping on it, because then you're just making it too much of a focus and it kind of makes it uncomfortable for everyone. Apologizing, moving on and just being open to the patient and their experience.

Khalida Liaquat: Sure, and I think that the repercussions of having that information is great, because of the letters that we write, that are either addressed to ordering clinicians or to the patients. Or, any information that we put in our EMRs or laboratory infrastructure systems are gendered. Utilizing that correct pronoun gives information to anybody who has access to that information electronically. I think you make a good point. Now, what of minor or young patients? Did your study cover any of that aspect of the patient population that could be transgendered?

Kim Zayhowski: Actually, the people in my study who reported on the patients, a lot said they saw patients at younger ages, even minors, which in a cancer setting isn't something that happens very often. Seeing a minor patient for an adult-onset cancer condition. It might be that the minor's considering starting hormones, or even getting a surgery. Certainly, if a minor's considering that top surgery versus a mastectomy, it might be clinically indicated to do BRCA testing, for example. But, if they're starting hormones, is it clinically indicated?

Kim Zayhowski: If there's not data to suggest that those who have a pathogenic mutation should not take those hormones or should have different levels? We don't have that data. Is it appropriate to test the minors? With minors, you also get a lot more parent involvement sometimes. It's an interesting conversation with patients, because they might be younger patients, they might have a lot more parent influence and you might be talking to patients who just have much less understanding of cancer and cancer risks and might just be focused more on again, the hormones or the surgeries, because that's why they're really in the appointment.

Khalida Liaquat: It sounds like an opportunity for educating the care team about the genetic piece is important here, as well?

Kim Zayhowski: Definitely. I think there's a concern that genetics could actually be seen as a barrier for someone's gender-affirming care. Where really, we could be an entity that's helping other providers figure out cancer risk and cancer assessment for transgender patients. Also the patients themselves, understanding what kind of cancer screenings are appropriate for them and trying to figure out the resources, so that they're comfortable with that screening. So that we're not losing patients to not coming into the doctor's office.

Khalida Liaquat: Right. It sounds like there's an opportunity here for educating care teams, along with patients, with regards to what genetic testing can or cannot do, in terms of decision making that are beyond just your traditional mastectomy, say in the BRCA context?

Kim Zayhowski: Exactly.

Khalida Liaquat: A lot of what we've been focusing on is improving the care for patients who are transgendered, educating both patients and clinicians about genetic counseling and what genetic testing can do. Are there any other steps you think, as a community of counselors, we can take towards improving access to care and the care itself for trans patients?

Kim Zayhowski: One of the beautiful things about genetic counseling, is genetic counselors are really trying to be culturally competent and trying to cater to all of their patients. I think that's unique within genetic counseling. So, I think we could really be at the forefront of positive change, in terms of educating other providers about patients' needs. Also, just educating ourselves, figuring out how to ask some of these questions that maybe we're not used to asking. Like pronouns and names and trying to help patients navigate the system or their providers.

Kim Zayhowski: I think it's important for genetic counselors to become aware of local resources, to be able to talk to different types of providers. Certainly, we don't necessarily always talk to people's endocrinology, but maybe it's something we should start doing more, as being more multidisciplinary. Something that's a little tricky in all of healthcare, is that each specialty can become so separate, but especially with some patients, like patients who are undergoing hormone therapies, it might be much more important to communicate with other providers too.

Khalida Liaquat: On the topic of communication, have you found, in your study, that there were barriers to interpreting genetic testing, even, if the laboratory was not aware of the genotypic information, so to speak, versus with phenotypic information and discrepancies at that level?

Kim Zayhowski: Yes, definitely. Even from an electronic medical records standpoint, sometimes insurance is under a different sex and there might be a good reason for that. Some types of cancer screening, for example, wouldn't be covered if you're not under a female sex in your insurance. EMRs might not be reflective, test requisition forms often don't have options, so some genetic counselors didn't know what to choose. "Yes, my patient is a male, but was assigned female at birth. Will that make a difference for the testing?" That would make it tricky, in terms of which box to check on these forms that don't have many options.

Kim Zayhowski: Even something like the pedigree, a lot of genetic counselors expressed, "I got to the pedigree and I didn't know what to draw. Do I draw a box? Do I draw a circle? Do I draw circle in a box?" Even if you look at the guidelines, there's not

consistency. Some say you should draw the phenotypic gender outside the genotypic gender. Others say it's just whatever the patient identifies with, writing 46 XX or 46 XY under it.

Kim Zayhowski: Genetic counselors had really different views on what they should draw and what they're okay drawing. Some didn't like writing 46 XX or 46 XY under it, because you don't necessarily know that about the patient. It's not like they had a karyotype done necessarily. I think there is a lot of things we can try to do, in terms of standardization with our own practice, but also EMRs. There are recommendations for how medical records should be done and ways to input different sex in genders. So, maybe your hospital has a way to do that and maybe you could help put it into the system if it's not already there.

Khalida Liaquat: What would be a next step, or where do you see publications or research going, in terms of direction?

Kim Zayhowski: I would love to see people getting perspectives from the actual transgender and non-binary community, on how we can help them. Because, I think the best place to figure out the ways to help this community is to get their own perspective. Also, we need more research done on a scientific and, on how these different treatments are affecting cancer risks, so we can give better information to patients. Not being able to have that specific information that we have for cisgender patients, that's frustrating for a patient and a provider, so that's another place that should be explored more.

Khalida Liaquat: Kim, thank you so much for spending time to chat with me about this really important topic.

Kim Zayhowski: Well, thank you. It's been a pleasure to be on here.

Khalida Liaquat: To read Kim's full article in the Journal of Genetic Counseling, visit nsgc.org/journalofgeneticcounseling, typed without spaces. Next up, I'm sitting down with Rosalba Sacca, a genetic counselor at Memorial Sloan Kettering Cancer Center and coauthor of Trans-counseling: A case series of transgender individuals at high risk for BRCA1 pathogenic variants. Hi, Rosalba. Tell me a little bit about your work in general and this manuscript in particular.

Rosalba Sacca: Absolutely. First of all, I'd like to thank you and your team for giving me the opportunity to speak about our manuscript. Also, I want to acknowledge my collaborator in this work, Diane Koeller. All of this was done in a true collaboration with her. So, I wanted to make sure I mentioned that. Now, the way that our work came about, was really from discussions that Diane and I had following a period of work where we both happened to see transgender patients, who had either transitioned or were planning to transition. They were pursuing genetic testing due to a previously identified mutation or variant in the BRCA gene.

Rosalba Sacca: This happened, actually, over a period of a couple of months. It was unusual, and what we realized, when we saw our patients, is that we really had very little information that was available in the literature, or from our own personal experience, that would have been useful in counseling our transgender patients. For example, information about medical recommendations or risk assessment for individuals who had a BRCA mutation and were transgender.

Rosalba Sacca: We assume that, just like us, a lot of our genetic counseling colleagues were also lacking in training regarding transgender and LGBTQ healthcare issues in general. We wrote the manuscript with, really, the intention to share our experience and learnings with our GC colleagues and to help educate the community. So, the manuscript offers our perspective and the challenges and the learnings we've had, from counseling our transgender patients. As well as the limited literature that's available, regarding risk assessment or medical recommendations for transgender individuals who are at higher risk of cancer, based on the identification of a BRCA gene. Or a variant in the BRCA genes.

Rosalba Sacca: Our manuscript, then, includes three case studies of individuals who are at different stages during their transition. Then, from these three case studies, we pull together in the discussion, various issues that we addressed, regarding the challenges. If there's no disclosure of gender identity during the session, what happens when parents are in the room? As well as coordination of care with other healthcare providers. Then, we talk about things to think about, in terms of our practice.

Rosalba Sacca: For example, how do we collect relevant medical history? How do we document in a pedigree, a patient who is transgender? Then, thinking about who should have genetic testing. What is the appropriate timing of genetic testing? So, all of these things, we share our experiences, we share what's in the literature, with the hope that it will help other genetic counselors in the field.

Khalida Liaquat: I think that the work here is so important. Your presentation of these three cases are such a concrete example of what clinical counselors face, day-to-day. Especially, as you mentioned, there's not a whole lot in the literature to help guide. So, I think this is such a great step in the right direction, but I want to take a step back for a minute. I remember seeing a figure, not long ago, something around 40% of patients who are transgender don't actually access healthcare, because of very many different reasons. Can you tell me a little bit more about the stigma of healthcare for trans patients? Maybe a little bit about the genetic counseling process with that, as well.

Rosalba Sacca: Absolutely, and that's exactly right. Recent surveys have shown that, not just transgender, but LGBTQ individuals in general are very reluctant to seek medical treatment, or tend to avoid it. That's because of fear of the stigma that's associated with either being transgender or being LGBTQ. So, besides the stigma that they face in their daily life, also the healthcare stigma is actually sort of mind-boggling, when you think about that, even medical students, in a Stanford

survey, has been shown that one third of LGBTQ medical students remain in the closet, because they're afraid of discrimination.

Rosalba Sacca: For someone who is transgender, a recent survey showed that one in four individuals avoid medical care and they have good reasons for that. I mean, our systems don't allow for gathering information if someone is transgender, for example, they don't allow for gender identification other than male or female. When we issue genetic test reports, usually they put their sex assigned at birth in those reports, rather than gender identity preference. Even when we do our pedigrees, some programs that we use don't allow same-sex couples to be depicted on these pedigrees.

Rosalba Sacca: So, there are really a number of things that we can do to improve that. Of course, changing our electronic medical records is not an easy thing, but it can be done. We can provide our patients with questionnaires which include things like patient's sexual orientation, patient's gender identity, what pronouns they might prefer. What name would they prefer to be called by? Then, we can ask relevant questions that will really help us do a better job of counseling them. For example, we can ask, "Have you ever had hormone therapy? What kind of surgeries have you had or are you considering?" All of that will really help us do a better job in counseling our patients.

Khalida Liaquat: I think that's really important to keep in mind, that although right now, we're talking about trans counseling, but you bring a good point of the LGBTQ community as a whole, faces a lot of stigma in healthcare in general. So, thank you for mentioning that. Taking another step, kind of in a different direction, I was also thinking about something you had mentioned with regards to genetic testing for cancer. What about testing of minors, for specifically adult-onset cancers? How is that different for this particular community and the trans community?

Rosalba Sacca: For high-penetrance genes, like the BRCA genes for example, we recommend that women come in around age 25. For cisgender women, that's the age that we would start their breast screening and that's why we recommend that's the age for genetic testing. Now, we know that, for our transgender patients, the transition process may actually initiate at a much younger age. In their teens, in some cases. Having results of genetic testing may actually impact the types of decisions that they may make, in terms of the surgeries or their hormone therapy. So, I think, as genetic counselors, we were in a mindset that we don't test children for adult-onset conditions.

Rosalba Sacca: In our manuscript, we saw an individual who went ahead and had top surgery, because they were not aware of the fact that they had a BRCA mutation. When we recommend surgery for patients who have BRCA mutations, we would recommend risk-reducing mastectomies, which are slightly different than top surgery, in that they remove more tissues. Having that knowledge can really help guide the patient, doing the appropriate surgery, so they don't have to go

back and have additional surgery. This information, we feel, is really critical to empower the transgender patient to make a more informed decision, regarding how they want to move forward.

Khalida Liaquat: It sounds like there's an opportunity here for multi-department multidisciplinary medical care for a lot of these patients in the trans community, but even more so maybe in the minor community. The case that you're mentioning is the 19-year-old. Do you think that, generally speaking, the medical providers who are caring for the trans patients have enough genetic knowledge or hereditary cancer knowledge in this specific setting to have these conversations, or to refer to genetic counseling?

Rosalba Sacca: That's a great point, Khalida. Our concern is that, some healthcare providers are actually afraid to ask relevant questions of our patients and that's always with the best intentions. They don't want to feel like they're intruding or asking inappropriate questions. But, we feel that, when a transgender patient sees their endocrinologist or their primary care, when they're thinking about transitioning, we're really unsure how much family history information is being collected at that point, from the patient.

Rosalba Sacca: We all think that it would be beneficial to integrate cancer risk assessment with the gender affirmation process, because again, it could really impact these decisions. As genetic counselors, or as healthcare providers for these patients, we have to not be afraid to ask those questions and really make it clear to our patients that genetic testing, genetic counseling is not meant to be a barrier to transitioning. It's really rather adding information for them, so that they can make informed decisions about their transitioning process.

Khalida Liaquat: What's your sense of how frequently a thorough family history is even taken? Let alone the genetic counseling piece, but just starting with the basics of family history, which would eventually read to a cancer risk assessment?

Rosalba Sacca: I don't think that happens very often. Again, this is anecdotal for us, in terms of speaking with our patients. Their physicians usually do not ask about family history. The people that we did see and the people in our manuscript were individuals were already, genetic mutation in the BRCA gene had been identified. So, because of that knowledge, they were then referred for genetic counseling. But, we have seen patients who had a family history of cancer, or came from an ancestry which put them at higher risk for having a genetic variant. They said that they were never asked about their family history, or no one talked to them about the potential of there being hereditary risk to cancer in their family.

Khalida Liaquat: That's so interesting. Definitely an opportunity there, for some genetic education. Which, as genetic counselors, we're always identifying and seeking out. So, still on the topic of genetic testing and minors, there are so many DTC options nowadays. Do you find that in the trans community in general and

maybe in the younger set in particular, that these patients are maybe more likely to just order their own testing through non-traditional means? Because of, maybe, the lack of trust in the medical community? Which I think is a theme for LGBTQ, as we've mentioned.

Rosalba Sacca: I actually recently saw a survey from ASCO, regarding this topic and that is that younger individuals are more likely to have direct-to-consumer testing, because they basically feel very comfortable doing their genetic testing that way. It's easier, right? You don't have to make an appointment, see a provider. I think you're absolutely right. The one patient I have seen who was transgender, chose to have direct-to-consumer testing, because she was afraid that her doctor would use that testing result to not prescribe the hormones that she wanted to continue taking.

Rosalba Sacca: Again, the lack of trust in your physician, that they would not do necessarily what you want them to do. Also, the fact that they feel just as comfortable having direct-to-consumer testing as having it done in a setting of a hospital or a doctor's office. The survey pointed out that most younger patients feel that accuracy is the same, whether you have genetic testing in a doctor's office or direct-to-consumer. I think, more and more, we will be seeing patients coming to us, who have had direct-to-consumer testing. Then, it's up to us to really educate them and understand what the results mean and what it means for them and their decisions, in terms of their surgeries and transition process, going forward.

Khalida Liaquat: Rosalba, can you recommend any resources or websites that a genetic counselor who's interested in knowing more about this type of counseling, or LGBTQ and trans issues could visit or go to? Or just a good place to start?

Rosalba Sacca: One of the places that I've gone to and really obtained a lot of really good information is the UCSF website. They have a Trans Health Center of Excellence. If you go to the website, transhealth.ucsf.edu, you can really obtain a lot of good information there. When I was in Boston, where this work was carried out, we also used fenwayhealth.org. They have a lot of really good information about screening for breast cancer and in trans women, as well as information for trans men. They actually have a trans team coordinator at fenwayhealth.org, that one can reach out to.

Rosalba Sacca: Again, I think, for us, the main message that we really want our patients to hear, is that genetic counseling and genetic testing is not a barrier to transitioning, but rather a way to provide information, to understand cancer risks. The choices that are available to mitigate those risks. That we really want to do what's best for the patient and that does not have to hinder their transition plan in any way, but actually support it.

Khalida Liaquat: Thank you so much. I think that this work is really important and I'm looking forward to seeing more case theories come out, or just more information for

the genetic counseling community. Thank you so much for joining me today to chat about your work.

Rosalba Sacca: Thank you, Khalida. It was my pleasure.

Kayla Sheets: That concludes this month's episode of the NSGC podcast series. To read the full articles from today's speakers in the Journal of Genetic Counseling, visit nsgc.org/journalofgeneticcounseling, typed without spaces. Visit www.nsgc.org/JGCCEU to learn how to earn CEUs for listening to this podcast. This recording is produced by the National Society of Genetic Counselors and made possible by the NSGC Podcasts Subcommittee. A special thanks to our podcasts subcommittee members, Kate Wilson, Khalida Liaquat and Kayla Sheets. Interested in joining the podcast subcommittee? Contact nsgc@nsgc.org to learn how to get more involved. I'm your host, Kayla Sheets. Tune in next time, we'll see you then.