Fertility Preservation and Treatment Options for Women Diagnosed with Cervical Cancer

Nearly 13000 women are diagnosed with cervical cancer in the United States each year and about 68% of all invasive cervical cancer cases diagnosed involve women of childbearing age. Advanced treatments available today allow women to live longer but the same treatments impact their fertility negatively, decreasing their quality of life severely. This makes it important that these women be given options to preserve their fertility before going for cervical cancer treatments. January is Cervical Cancer awareness month, and in honor we are addressing the issue of fertility preservation in cervical cancer patients with Dr Julie Lamb, reproductive endocrinologist and infertility specialist at Pacific NW Fertility in Seattle and clinical faculty at the University of Washington. Morgan and Lauren, Cervical cancer ambassadors for Cervivor.org and Allison Pozzi, a Cervical cancer survivor who successfully built her family via IVF (In vitro fertilisation) will share their experiences and inform the panel.

Full Transcript:

Shweta Mishra: Good evening and welcome to Cure Talks, I'm Shweta Mishra, your host and today to mark and honor the cervical cancer awareness month, we are going to discuss issue of fertility preservation in cervical cancer patients, with our eminent guest, Doctor Julie Lamb, reproductive endocrinologist and infertility specialist at Pacific NW Fertility at Seattle and clinical faculty at the University of Washington. Nearly 13,000 women are diagnosed with cervical cancer in the United States each year and about 68% of all invasive cervical cancer diagnosed involves women of childbearing age. Advanced treatments available today allow women to live longer but the same treatment impacts their fertility negatively, decreasing their quality of life severely. This makes it important that this group of patients be given opportunities to preserve their fertility before going for cervical cancer treatments. Joining us on this important discussion today are Morgan S Newman, Lauren Lastauskas and Allison Pozzi. Morgan is my co host for today. She is a cervical cancer ambassador for cervivor.org and a proud recipient of the 2018 Cervivor Champion Award. For all the advocacy work she does, she also speaks on panels and lobbying at Capitol Hill. She was diagnosed at 24 and had to go through treatment that that affected her fertility. Lauren is also a cervical cancer ambassador for cervivor.org. Diagnosed in 2016, she actively advocates for HPV awareness alongside attending physician assistant program at the University of South Carolina School of medicine. Allison Pozzi on the panel is a cervical cancer survivor and an IVF success story. She is an attorney at a tech company who successfully built her family via IVF after cervical cancer diagnosis and now expecting a baby again through the same procedure. Congratulations Allison and I welcome you, Lauren and Morgan to the panel. Before we go on with our questions to Dr Lamb, I would like our audience to know that we will be discussing audience questions in the last 10 minutes of the talk. So you can send your questions to shweta@trialx.com or you can also post them on our website curetalks.com.

So moving on with the discussion Dr Lamb, it would be great if you please begin by talking a bit about the basics of cervical cancer and tell us about the efficacy of the Pap smear preventive screening method. We know that many of us were raised on a once a year Pap smear mantra, but it seems like there are diverse thoughts on what the frequency of the test should be. What does the recent data tell you?

Dr Julie Lamb: Hi, thank you for having me. Well, we're certainly the pap smear has kind of revolutionized care and the United States and in the developing countries and we see much fewer cases of cervical cancer and the mortality rate is much lower than it used to be before the Pap smear was available. We certainly see in developing countries that cervical cancer is still has very high mortality and morbidity. So the Pap smear is the best thing we have to screen for cancer of the cervix and it helps us prevent the lesions from getting further. There's also something called HPV typing, which also helps us to detect higher risk of cervical cancer in a certain patient population. So this is sometimes coupled with the Pap smear to decrease to better understand your risk profile and to prevent, to understand the screening and how on how often it needs to be. So certainly, every ob Gyn is a little bit different. And they're constantly balancing the benefits of early detection and of these treatable lesions and the reduction in the incidence and mortality of cervical cancer with the risks of false positives and the unnecessary procedures that come with that and other other harms of like, of these false positives. So those potential benefits and risks just vary with age and medical history and other risk factors. So patients are often deciding with their care provider who's often an ob Gyn what the best plan is for screening for them.

Shweta: Okay. So there is no set rule, it's different for different patients, right?

Dr Julie Lamb: Yeah. So usually after age 21 patients begin screening and if they're a low risk population who's immune competent and doesn't have other risk factors, they will sometimes move to testing every three years. I think that's probably what you're asking me about. It's recently changed in the last, since I did my training from being required every year to something that they consider going to every three years. But that certainly doesn't mean you should not see your healthcare provider. They are certainly screening for other things and watching for other things. Certainly if you're symptomatic, you should have it sooner than that. And there's a lot of things that weigh into that. So between one and one in three years they make the suggestion.

Shweta: Wow. Okay. Absolutely. Thanks for that information.

Dr Julie Lamb: Oh, it's something that's always changing and updating to have the algorithm that's best for you. So I do a lot of fertility preservation, but I don't do a lot of cervical cancer screening. By the time a patient already comes to me, they've often already been diagnosed with cervical cancer.

Shweta: Sure. Okay. All right. Thanks for that info Dr. So moving onto the next question. Why do women diagnosed with cervical cancer, need to worry about or pay special attention to their fertility, given that virtually all cases of cervical cancer are caused by HPV. How much does HPV itself affect a woman's fertility?

Dr Julie Lamb: So the HPV is a virus. It stands for human papilloma virus and it's one of the, it's the virus that spin that we know causes cervical cancer or can leave some cervical cancer in some patients. So now there's actually a vaccine that we're giving up to age 46 that helps prevent cervical cancer in many cases, but HPV can affect the cervix and cause cervical cancer and the cervix plays a vital role in fertility because it holds that baby in the uterus. And if you have something there, it can cause difficulty getting pregnant or if

you remove that cervix it can cause difficulty getting pregnant or difficulty keeping the pregnancy. So when any kind of cancer certainly can affect fertility from a radiation and chemotherapy perspective, all of those things affect the quality of the eggs and the number of the eggs, but the cervix is also a vital part of the women's reproductive system. So place an additional role in fertility.

Shweta: Yeah, that's what that was going to be my follow up question for that. So just the cancer by the locational said that is the cervix and also its treatment more harsh on the reproductive organs compared to other cancers. So that's what you answered.

Dr Julie Lamb: Yeah, they're all just kind of in that same line of field when someone has breast cancer, that chemotherapy can affect the ovaries and it certainly usually does, but the radiation is shielded as a way from the ovary when the patients are undergoing breast cancer treatment, but when it's sister, cervix the ovaries, they're right there. The uterus is right there. So all those reproductive organs are right in that line of fire. So certainly fertility, it's affected,

Shweta: Right. So, sometime back hysterectomy was the only procedure available for women having even some of the early stages of cervical cancer. So what are some of the fertility sparing treatment options available for women diagnosed with cervical cancer today?

Dr Julie Lamb: Yeah, so it's changed a little bit and it's constantly changing as the research changes and as they continue to look at what's safest for patients. And certainly every reproductive endocrinologist saves eggs and embryos and treats patients with cervical cancer, but it's the gynecologic oncologist that actually helps the patient make the treatment option choice that's best for them in setting of that cancer. So, but that's changed. It used to be that radical hysterectomy was recommended for quite a few patients and now there's just more options. So you could have a cervical conization where we took out part of the cervix where a Gyn oncologist would take out part of the cervix trying to get all of the cancer in a specimen. Something called a simple trachelectomy, which is the removal of the cervix but conserving the uterus, which is where the baby grows. And then there's something called a radical trachelectomy that is removal of the cervix and the surrounding tissues in an effort to conserve the uterus. And all of those things require really special selection criteria. So a young age, somebody whose desires to preserve their fertility, it can't be a high risk in histology type. There has to be no evidence that lymph nodes are involved in the cancer and the cancer has to be relatively small. So that decision is really made on individual basis with the patient and the Gyn oncologist and what the Gyn oncologist is comfortable with. So I think we're going to hear a little bit today from our panel, when that's the case and they got a second opinion and looked for, any other, say that you want to be safe and your cancer, but you'll also want to be able to think about preserving your fertility as well and be able to have children.

Shweta: Absolutely. All right. Thank you so much for all those answers. At this point I would like to invite Morgan to the panel. Our cohost Morgan is here. Hi Morgan. Welcome to the show. I had a question for you.You said you were diagnosed at 24. Would you like to share your experiences briefly before moving on to your questions?

Morgan S Newman: Yeah, sure. I went in and had a yearly exam, well woman exam and I went in, when I was 24 and had my first abnormal Pap tests ever. And then I went through a colposcopy, which then referred me to the oncologist and the oncologist staged me with 3/B cervical cancer. They did refer me to a fertility clinic at that time, but I just felt so overwhelmed that I didn't have enough information. Sometimes I just didn't know what kind of questions to ask.

Shweta: Right. All right. Yeah. Now you have the opportunity to ask a questions to Dr Lamb. Go ahead.

Morgan: I would like as my first question, we often hear survivors say they're told about fertility saving options at the time of their diagnosis. When they are stunned and processing the information about their cancer treatment, many women feel they would benefit from a follow up appointment to discuss options when they are more lucid and level headed. How and when do you present fertility preservation options to your patients?

Dr Julie Lamb: Yeah, so I'm actually not a Gyn oncologist. I'm a fertility specialist, so that means I'm a reproductive endocrinology and fertility specialist. So when patients come to me, they've been sent by their oncologist to talk about what their options might be. And some of that can be saving eggs before chemotherapy or radiation. The fertility sparing options that occur, that are surgical options related to keeping your uterus are all with the Gyn oncologist. So by the time they get a patient, we talk about if she's going to need chemo or radiation, we talk about saving some of her eggs for future. And if she's going to undergo a radical hysterectomy or radiation of her uterus, that would be involving saving eggs before that starts and then using them in a gestational carrier if she chooses to conceive someday. So we often have more than one visit to discuss these things. And yes, you're right. Everyone's kind of shell shocked and everyone's much more interested in saving their life and treating their cancer and overcoming that hurdle often before they're able to kind of think about fertility preservation or saving eggs. So we talk kind of about all the family building options, like it's okay to not do the fertility sparing things if the surgeon's not recommending it. We talk about what are your options for building your family that don't include your own uterus or your own eggs. And we go through kind of all of those with a patient and certainly we often meet with them more than once.

Morgan: Sure. Sure. And that kind of builds into my next question, about like what are some deciding factors when you're discussing that fertility preservation and do you discuss it with all your patients regardless of them having children or not?

Dr Julie Lamb: Yes. It certainly depends on whether they're referred to me or not. And I think a lot of cancer patients aren't necessarily referred to a fertility specialist, when they already have children but a lot of the patients I see are related to planning for a second baby or a third. And we talk about the process of freezing eggs if they're going to go through a chemotherapy or radiation. We've talk about the risk of preterm labor and preterm birth if they're planning to carry the pregnancy themselves, after a trachelectomy and we talk about kind of the process of IVF, that's often required after some of these treatments.

Morgan: Sure, yeah. And what constitutes like a too late diagnosis for fertility preservation and how do you

make that difficult call?

Dr Julie Lamb: What do you mean by too late of a diagnosis?

Morgan: Like what makes them not a good candidate?

Dr Julie Lamb: Oh, so everyone's different. Are you talking about fertility preservation surgery or fertility preservation in egg freezing?

Morgan: Either one.

Dr Julie Lamb: So fertility preservation surgery, so that involves the removing just the cervix and that's the procedure that the Gyn oncologist does. And there's very specific criteria about lymphovascular space invasion and the size of the tumor and the desire for fertility and age of the patient that go into that decision. And that's by the gyn oncologist. When I talk to a patient about freezing eggs before, and then, once the tumor gets to a certain size, the cancer's treated totally differently. And so to have a surgical option, they start with the radiation and the chemotherapy. And that's when we talk about freezing eggs before chemotherapy and radiation. And, the things that would make somebody not a good candidate for that is if she's having so much bleeding from the cervical cancer that she's needing transfusions. We just don't have the two or three weeks required to get the eggs out because she's having so much heavy bleeding.

Or if the size of the mass is so big, we can't get to the top of the vagina. Sometimes it doesn't feel safe to, because you certainly don't want to go through the cancer and then into the ovary because there's that kind of theoretical risk of spreading the cancer to the ovary. So that would be another reason to talk about it. And other things that go into the decision is egg supply. If you're, already 40 and age goes into it and if the process isn't very efficient, some patients don't want to do it. Sometimes if the chances 50% patients won't want to do it and other times the chances 1% and they'll still want to do it. So it's very personalized where that threshold is, that makes it worth it for that individual patient to go under procedure prior to radiation or chemo.

Morgan: Sure, sure. That's great information. Thank you. I would like to ask if Alison would like to introduce herself and tell her story.

Allison Pozzi: Hi everyone. My name is Allison and you probably saw in my bio that I was diagnosed with cervical cancer when I was 35 and I had just had a miscarriage and was dealing with bleeding, unexplained bleeding for nine months basically before I was diagnosed with cervical cancer. And, it was a really long path, but thankfully by reaching out to my network and, thankfully Doctor Lamb happened to be in that friends of friends and friends network that, she advised and shared a personal story and friend with me that led me in the direction of ultimately getting my fifth opinion, where I was then presented and accepted a radical trachelectomy and as Dr Lamb describes that's when they remove the cervix and the surrounding

tissue. And, I think it was four years later, I was eventually able to carry my son who's now two, full term basically. And so I'm absolutely a success story and thankful to all of the doctors and advice that I got all along. And, before I ask my questions, I guess one other message beyond my bio that I would have for the listeners is that I found that with every doctor that I met with and it was five different sets basically, everyone had a great deal of confidence and they had high confidence in telling me what they recommended for me. And, it was just the case that I didn't like hearing it.

And so, the first couple of doctors said absolutely a hysterectomy. One of the doctors said to me that it had to be an open abdominal hysterectomy because he wanted to get in and touch the tumor. And we were talking like I had stage I/B, this is a very small tumor. I found that barbaric. And the other doctor said, well, what's the worst that can happen? We can try a trachelectomy and if it doesn't work out, then we could do a hysterectomy. And I wasn't convinced that he had ever really done one of these before. And so I had to keep searching. I had to keep asking for referrals. I asked one of the hospitals to take it to the tumor board to basically get consensus from the physicians and the gynecology oncology as to what the recommendation was. And I was really frustrated when their a recommendation with a hysterectomy as well. They were not the most they could do as a laparoscopic hysterectomy for me. And so it wasn't until I spoke with Dr Lamb's friend that I heard about MD Anderson, a physician there and how her friend had been given the option, some other options that I hadn't been given here in California. And so that's how I happened upon the trachelectomy. And so my advice to all of you is, if you don't like what you first hear, it doesn't mean that you can change the outcome. But certainly put in the time, do your homework, see if there are any alternatives and challenge your doctors and keep asking. And it will eventually feel right where you'll realize like I'm either out of time or out of energy or convinced this is the right path for me. But definitely choose your path because you can't rely on somebody else to know what's best for you. You have to feel it for yourself.

Allison: And, maybe I could ask Dr Lamb some of my questions even though she has already addressed them just in the answers that she's given already. But I think that, when I was fortunate to know that I was an early case of cervical cancer and, so I went to an REI doctor about fertility preservation at the same time when I was talking to a gynecologic oncologist and hadn't made the call yet as to whether I would do fertility preservation before or after. And in Dr Lam talked about just now about how it's a very personal decision, but I wanted to ask her from her medical perspective, is it usually a very clear path? Like an absolute yes, I would feel very Dr Lamb as the medical professional would feel very comfortable with proceeding with the fertility, like egg retrieval before treatment or is it sometimes a close call and it's really kind of give the risks and let the patient decide, I know the patient ultimately decides, but from your side, is it usually black and white? Yes or no?

Dr Julie Lamb: That's a great question Allison. Usually it's really clear what the right answer is to do. We're all on the same page. The patient, my other partners, we kind of have a group consensus where we meet and kind of decide a care plan. And also weighing into this is often a consultation or discussion with a Gyn oncologist and what the plan is, what the patient's timeline is as well as the patient's family building goals. I think when you're considering a surgical intervention, there's less necessity for every before, after. It's kind of a preference on timing, and potentially even doing one or more cycles depending on what the treatment plan is. When it is chemotherapy and radiation is the first step, then usually it has to be done before treatment is started. But in surgical intervention there's more options for patients.

Allison: And even with my, when I was looking at fertility treatments, I had two opinions basically. And I

wanted to ask you, what do you think are the most important factors when choosing a fertility doctor or a fertility clinic?

Dr Julie Lamb: That's also a good question. So it's really important like what you said before about choosing a Gyn oncologist that you just feel confident in their care and you feel comfortable. But you also just look that it's a very reputable clinic and with good success rates. And that's the national reported data that you can find on the CDC. But the problem is that when you're in the midst of cancer diagnosis, you don't really have the time to research your doctors. So I think oftentimes you trust or have to trust kind of the referral from your Gyn oncologist and who they work closely with and have seen good outcomes. But yes, certainly feeling comfortable with their plan and having the ability to ask all your questions and feel like they were answered and in a place that you feel really comfortable with is all part of that decision when choosing a fertility doctor

Allison: Yeah, for myself, I know that I ultimately went with like a teaching institution that felt very research oriented and I felt like I was going to be a really complicated case having had a trachelectomy. And so, I appreciated that the clinic I was working with, I felt as if they cared less about success rates and more about like doing their best to help me solve my particular situation because I felt like I wasn't going to be like the other statistics. I wasn't an easy case. So I needed to go to that place where people brought their challenges and I even felt like it's possible that I would have been rejected by the other fertility clinic that I met with.

Dr Julie Lamb: Right. And I think that might've been true. Like you weren't, you did have a challenging case Ed. And just doing what I know about your treatment. Like you have a doctor that just refuse to give up to see you through to success and that's not always the case like you have.

Allison: All right. Yeah. My other question, Dr Lamb actually really answered already, so I'm fine to pass it over. Thank you.

Morgan: And now I'm going to ask Lauren if she would like to introduce herself and ask a couple questions to Dr Lamb.

Lauren Lastauskas: My name is Lauren. Thanks for having me on the call. I am a cervical cancer survivor and I was diagnosed about two weeks after turning 23. I underwent, I had an abnormal Pap smear and then I had a colposcopy, which showed high grade lesions. Then after my colposcopy, my regular ob Gyn ended up doing a LEEP procedure, and that is where the cancer was found. So she then referred me to a gynecologic oncologist in Charleston, South Carolina. So, my oncologist lived about two hours away, so it was quite a task to just go there. My PET scan revealed further cancer. I underwent as Dr Lamb said earlier, the conization. I had a cold knife cone where again more cancer was found. And ultimately I underwent a radical hysterectomy when I was 23. My Gyn oncologist did tell me that I would be able to go get a second opinion wherever I so chose. And the closest location for another Gyn oncologist would have been four and a half hours away. And he had actually already consulted with that physician in North Carolina, so that if I so chose to get a consult on the trachelectomy that he was aware of my situation and my staging. But according

to the tumor board where my current oncologist is, they recommended the hysterectomy based off of everything that had happened so far, my age with how far progressed so quickly. And, unfortunately, only maybe about two sentences where ever said about my fertility, whether I went forward with the hysterectomy or trachelectomy of, you're more than welcome to go and find a fertility specialist and see what they have to say. But being single and not married and only 23 and still in college, and knowing that my insurance was not even going to cover anything of a first consultation with a fertility specialist, I didn't even do it. It's maybe something I'd considered a little bit further down the line as I still have my ovaries. But that's about my story. And Dr Lamb, I do have a couple of questions for you. So since I do have my ovaries that are supposedly working, but with hot flashes, I don't know about that all the time. Um, so when it comes to fertility preservation options for a woman like me that does still have her ovaries but no uterus, um, would you say there's a better option between preserving eggs versus embryo's or are both a safe viable option?

Dr Julie Lamb: Can you say that again, Lauren, so preserving your ovaries with your surgery, for your cancer treatment?

Lauren: Yes. So for a woman like myself who does indeed still have working ovaries, if I was to move forward, would you, is there a preference over preserving eggs or embryos?

Dr Julie Lamb: Oh, okay. Yeah, that's a great question. So, this often depends on a lot of different factors and one of them is whether you have a partner or you're ready to have kids with. The process of freezing embryos and eggs has improved so much in the last decade with the new path-breaking technology that you're able to freeze eggs with the same success rate. So if you're, don't have a partner, your age is advancing, then we certainly recommend freezing eggs. When we freeze them as embryos. You're committed to having a baby with that genetic, whoever the genetic sperm provider is. So you're locked into that, those genetics. And so when it used to be that before the egg freezing process was as well understood, that you would have to go out and pick donor sperm when you didn't have a partner, but now you can freeze eggs before or after. So especially when you had, it sounds like you certainly went through a lot at a very young age. It's overwhelming to even think about, I can't even imagine how you would have fit a fertility consult in the midst of all of that. But it sounds like you still have a lot of family building options and fertility options left. It's just not what you were necessarily hoping. And certainly they tend to be really cost prohibitive, which is really unfair in this setting of cancer diagnosis.

Lauren: Yeah. Cause I think the line of thought, recently and in the past has always been, at least among the cancer community, my other survivors is, oh, it's so much better to freeze embryos and eggs. So it's definitely a good thing to know that with technology now freezing the eggs alone is just as viable. So thank you.

Dr Julie Lamb: Yes. Yes. And you want to, when you're picking a fertility clinic, you want to just ask them about that. Do you see the same success rates, whether you freeze eggs or embryos and there's, it takes a long time for the online community to kind of catch up with the new data.. So asking the right questions is really important. You're thinking about all the things.

Lauren: Another question I have for you is kind of based off of what had happened last spring at a fertility clinic in Ohio when tons and tons of eggs and embryos were lost. I actually have a cancer survivor friend who lost her last eggs in that incident. And, I guess, again, not necessarily the provider, but how likely is something like that to happen for eggs or embryos to be damaged or lost during storage?

Dr Julie Lamb: That's a great question and certainly really scary when it's a nonrenewable resource like from a cancer patient that can't freeze more after treatment or something. So as far as we know, it's very rare, although it did happen twice, once in Ohio and once in San Francisco on the same month last year. So everyone's a little bit overwhelmed. So we've been talking a lot to cancer patients about that since then. And certainly, especially being in Seattle, we worry about earthquakes and all sorts of natural disasters that could also affect storage of eggs or embryos. So there's no right answer. I think you can be reassured that it's very rare. And look at options if someone had enough eggs or embryos to store some of them in two different places so that to decrease that risk. But before this happened, I would have not even thought to recommend that or talk about it with patients. So it's really changed how we think we can, how we counsel patients. And it certainly made all of these clinics and embryology Mavs makes sure that they have all of their safeguards in place so that there's for years, there's always been backup methods to the backup methods in generators and keep all the embryos and egg safe. But everyone's being hypervigilant about it right now. But yeah, they never tell you 100% that they're going to be okay. And it's certainly a scary situation.

Lauren: Yeah. I guess, as someone who has not yet had a consultation or met with any fertility specialist yet, what can somebody expect during their initial consultation as a Gyn cancer survivor in contrast to somebody who's just having trouble conceiving?

Dr Julie Lamb: Yeah. So you make an appointment and he left them know a little bit about your history and then the doctor or the clinic will request your records so they really understand the staging of your cancer, what kind of surgery was performed, really helps us to better understand where you're at. So that initial consultation at our clinic is about an hour and we talk about your history and go through the details of what you've been through and, really understand, and also try to hear from you what your family building goals are and what your wishes as far as moving forward and number of kids and what options you feel comfortable with. And then we talk about, a treatment plan that right be right for you. Oftentimes if testing hasn't been done prior to that appointment. We'll talk and discuss the testing and the process. Oftentimes it will include an ultrasound, even on the first visit to kind of look at those ovaries if they're still there. But it's just like gathering information about your history and about prior surgeries and about what your goals are. So it should be a comfortable situation. If you feel uncomfortable, then it's probably not the right fit.

Lauren: Okay. Thank you. Kind of going off of that, I know you've made it clear on the differences between a fertility specialist and their role in this versus the gynecologic oncologist, but being in PA school right now, something we talk a lot about is interprofessional care. And so I guess I'm wondering how cohesive is this interprofessional care and the discussions amongst the fertility specialists, Gyn oncologist, and even possibly primary care provider?

Dr Julie Lamb: Right, right. Especially in the setting of either new diagnosis of cancer or prior cancer. There is much more than if someone was just trying to conceive without the history of a cancer diagnosis. So before a patient can undergo fertility preservation procedure, if it's a new cancer diagnosis, it's kind of a

multi specialty discussion between the oncologist, the Gyn oncologist, the surgeon about the timing of the different procedures and, what's safest and best for the patient. So I won't let a patient move forward unless I know from the oncologist that they feel good with the plan, or that their cancer is treated and not like, so somebody who has a treatment a long time ago, like you did that we always will get clearance from the current Gyn oncologist or oncologists managing the patients, that piece of the patient's history, that they feel good with the treatment plan and that they think it's safe for the patient to pursue this kind of thing. And then the other sub specialty that's often been involved as maternal fetal medicine. So what are the risks related to carrying the pregnancy and being pregnant that are a little bit different because of that history of cancer treatment and that is a multidisciplinary discussion as well.

Lauren: Okay. Thank you. And, I guess my last question would be, as I mentioned earlier, the financial burdens of fertility treatments after cancer and then kind of the misconceptions that can float around a little bit on the Internet. Are there any specific resources for Gyn cancer patients in relation to preserving their fertility, either during or after treatment, such as any really trustworthy and reliable support group, website, or financial assistance that patients can get?

Dr Julie Lamb: That's a good question, Lauren. There are some that I know of. There's probably a lot that I don't know of, but there is certainly a lot of room for growth in this area. When I see a patient for the first time we've work with Walgreens pharmacy has a really great donation program, Live Strong through the Lance Armstrong Foundation, will often pay for medications. In the setting of either a new cancer diagnosis or a previous cancer diagnosis, they've been really helpful. But that's like one small piece of it. There's some organizations that do fertility grants to help cover costs of IVF, but there's not any that I know that are specific for cancer patients that we're covering the entire cost. My patients have had the most luck with going and getting a job that involves coverage or like insurance coverage. But that's also certainly very tricky in the setting of a new cancer diagnosis. You can't just go out and get an insurance. That's one of the things we kind of talk about is like having broader insurance. There's insurance mandated states. So that's been really helpful. I've had a couple cancer patients moved to Illinois because there's mandated coverage in that state. And so there's some different creative ways of looking at it, but yes, it's a common problem to not have the financial resources, it's enough to have the emotional resources to go through something like but to depend also on financial resources is really unfair.

Lauren: Well, thank you for your time and I appreciate you answering my question.

Dr Julie Lamb: My pleasure.

Allison: Thanks Lauren.

Shweta: Go ahead Morgan, I guess you have more questions, right?

Morgan: I just have one more. Because the other one kind of has been answered. The last question I was

going to ask was what, what is the average timeframe for fertility preservation treatment?

Dr Julie Lamb: So to preserve eggs or embryos sub time is the length of an IVF cycle. So it used to be that we needed to start that with a menstrual cycle. So we spend a lot of time waiting around or trying to figure out what was the start of a menstrual cycle. But recently actually due to like pioneering work by Allison's doctor, that the whole field has changed. And so we're able to start a little bit more randomly in the menstrual cycle and the timing as crucial. So it's just as the time that it takes to see a specialist to get the medication and get started and then grow the eggs and the process of growing and then retrieving the eggs is on average, like 10 to 14 days. Sso it can be really quick. And I've had patients start chemotherapy and radiation as soon as like the next day following a procedure like that. So if you're able to wait a couple of weeks, that's I guess actually what's required.

Morgan: That's good to know. I think during that time where you're unsure and you don't know how much time you have it, you're trying to gather all that information that's important to hear. Thank you.

Dr Julie Lamb: Yeah, you're welcome. It feels really scary. It's really hard cause we tell you what, we don't really know. We don't think that this affects success rates. We don't think the spreads cancer. But all you can think about is this new cancer diagnosis. So, it's an overwhelming process for sure for all patients.

Shweta: Thank you so much Morgan, it was great listening to this discussion so far. I have a couple of questions for Lauren, Morgan and I know Alison talked about her experiences, getting a second opinion and then she had somebody recommendations for our audiences. Well. So, Lauren you had to have a radical hysterectomy done at the age of 23, even though you were diagnosed with a stage one cancer. So how are you feeling now and what advice would you like to give to young girls your age?

Lauren: Yeah, so I kind of discussed that. No one really gave me a push really to kind of look into preserving my fertility other than a different surgical option. So now that I'm 26 and I'm in Grad School, I'm still not married, but that's okay. I know now that there are still options and then like Dr Lamb said, the states that are starting to mandate fertility coverage for cancer survivors, that is kind of a growing concept. So I have that possibly look forward to as well. But it is hard when I see my friends getting married, getting pregnant, having children. It's definitely bittersweet seeing pregnancy announcement or going to a friend's baby shower, knowing that, I won't ever experience the pregnancy of my own naturally. So my advice really for girls my age in general, hopefully get vaccinated at a younger age as a teen for the HPV. And then in your 20s, just stick to those well woman exams and stay on top of that because like Dr Lamb said, we're not just performing a Pap smear or HPV test, there's more to it and you should really just stick to those annual well woman exams and ask questions. If you ever have questions about your fertility or menstrual cycle of just women's health in general, it's important.

Shweta: All right. Thank you so much for that advice on Lauren. Morgan, you want to add something to that?

Morgan: Yeah, I'll take you back off of Lauren and I just, I think it's super important that we all listen to our bodies and if something's not right, follow your gut instinct on that. Also, I would say gather as much information as you can and make the best decision for yourself. Don't do it for anyone else, just do it for yourself. And yeah, just find all the information before making those decisions.

Shweta: That's right. That's right. Okay. Thank you so much, Morgan. Allison, would you like to share something more?

Allison: I guess maybe two quick things. I think Morgan and Lauren and I have been out of this now for a couple of years, and so we've matured and we feel like we can be advisors and it's safer to talk about it now, but I didn't start promoting my success until five years out. There was some stigma of like I didn't want people to know that I had cervical cancer. But then once I became a success story and all along, I wanted to be the advisor and be that success story, or at least be the person who can say, get checked, get second opinions, etcetera, but I felt like I couldn't have my voice and I couldn't prove the first doctor's wrong until I could get five years out post no cancer. And so that was, that was huge for me. But I do think that anyone's who's facing this situation, you really can benefit from tapping into networks, whether it's having to tell your friends, having to tell coworkers, having to tell people, maybe you don't want the sympathy. I certainly didn't, but I needed the knowledge that people might have and connections, etcetera. And then something else that maybe it's not quite for this audience because this audience is probably already interested in a cervical cancer or in fertility preservation. But something to keep in mind as you go and advise your friends to prevent them from having the troubles and challenges that you have is that men aren't tested for HPV. And so when a man tells you that they are clear and had a clear STD test, they were never tested for HPV. And, that was something that I learned and was really upset by, especially when nowadays we have this vaccine that wasn't there when I was a child or when I would have been seeing a pediatrician, or in my teenage years. But, something that for today's teenagers or early sexually active, kids, teenagers, adults, whatever, they could have this vaccine now and it should be for men and women.

Shweta: Right. Okay. Thank you. Thank you so much. Yeah, go ahead Dr Lamb.

Dr Julie Lamb: It's great. Thank you for saying that Allison. It's really important, I hear all the time even from friends and colleagues, why does my son need the HPV vaccine? But it prevents more than cervical cancer. It prevents the anal cancer, all sorts of cancers that are caused by HPV and it prevents from passing it to women who are future partners that could get cervical cancer. So it's really big and important to get out the awareness because that's what's going to help us Pap smears detect it when it's too late for a lot of us, a lot of these cancers like we should prevent the cancer from growing, not try to catch it early.

Shweta: Right. Thank you so much everyone for sharing all your experiences and I'm sure all your experiences are helping the people who need the knowledge, as Allison just said. So thanks a lot. Now I'll move on to audience questions. There are a couple of audience questions posed to Dr Lamb. So the first one says, could you talk about ovarian tissue freezing and its success rate and how is it different from egg freezing and embryo freezing and what kind of cancer patients is this procedure advised?

Dr Julie Lamb: So ovarian tissue freezing still that under an on an experimental basis. So ovarian tissue freezing is actually taking part of the woman's ovary and freezing it for the idea that in the future we'll be better able to create/make eggs and embryos right out of the ovary. So this is for women that are having surgery anyway. So it's done at the time of another abdominal surgery. So if someone was having a radical hysterectomy, like some of our guests were talking about done at the same time, it could be done in somebody who hasn't started menstruating. So somebody really young could have ovarian tissue freezing before they could undergo an IVF cycle. But it's still pretty experimental and it needs to be done at a center that has a lot of experience with it. So you have to get referred to one, there's several places in the United States that are enrolling patients in that right now. But it isn't as proven successful as like egg freezing, which requires the IVF process. So the difference is in egg freezing the eggs and the follicles and the ovary have to be given medication to mature and we take out the individual egg and in ovarian tissue freezing, they actually save a piece of your ovary to try to do that process with it outside of the body later.

Shweta: Okay. So is that a piece of the ovary transplanted back then like when the patient is ready?

Dr Julie Lamb: Yeah, it could if they still had the uterus, or, but more likely it would be something called in vitro maturation. So maturing the egg outside the ovary, both are done and both are under further study to try to be a better option for women. You can save more eggs in a piece of the overall in that single month with egg freezing, but the success rate isn't as good as they are with increasing at this point.

Shweta: Alright. Okay. And the other question is about ovarian transportation. So what patients are advised this fertility preservation options?

Dr Julie Lamb: Yes. So ovarian transposition is when you take that ovary and you move it out of the field of radiation. So this is really important for a patient that have a cervical cancer that isn't surgically fixable, that isn't under going to go the surgical treatment. And if they need radiation or it moves them out of the radiation field cause usually done by the Gyn oncologist and they're kind of pit the sidewalls on the inside of your belly, when it gets them out of that field away from the cervix, which is getting treated with radiation. It doesn't protect ovaries from chemotherapy, but it can protect ovaries from radiation treatment.

Shweta: Okay. It's a procedure that is being done in patients, right? It's like not an experimental thing that is happening, right?

Dr Julie Lamb: No, it's done. And it's on case by case basis on what kind of cancer patients have and what the treatment plan is for that patient. Sometimes I see it hard to get pregnant after that. So after your treatments have completed, sometimes we release the ovaries so they can work again and if the patient's not able to use her uterus, then we retrieve the eggs and do IVF at that point. Cervical cancer is different than other cancers because of so many different treatment options and the fertility preservation affects it in so many different ways. It's not just chemotherapy and radiation, but it's also fertility sparing surgery like Allison had. So there's a lot of different impacts that makes this cervical cancer just more complicated and more the need to for it to be more individualized.

Shweta: Right. Thank you so much for answering all these questions Dr Lamb. It was really nice having you with us today and sharing such a great deal of information with us. I guess we are at the end of the scheduled time we had so and I hope that this talk will help as a useful resource for all the newly diagnosed women and also folks who are looking for more information on fertility preservation during and after cancer treatment. Morgan, thanks for co hosting with me, Allison and Lauren, thanks so much for accepting my invitation to join the panel and also for your insightful questions that's brought out a very informative discussion. So thank you so much. Audience, I thank you for your support and we look forward to having you all join us on our upcoming talks and we'd love to hear your feedback and also welcome your suggestions on the topics that you think should be discussed on this portal. So please email me at shweta@trialx.com with your feedback and suggestions and more important mission on upcoming cure talks you can visit the website, www.curetalks.com and the link for today's show will be sent via email to all the participants. So until next time, thank you and have a great day, everyone. Bye. Bye.