

Transcript Details

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Pediatric Oncofertility: Key Considerations & Procedures

Dr. Sands:

You're listening to *Project Oncology* on ReachMD. I'm Dr. Jacob Sands, and I recently had the chance to catch up with Dr. Yasmin Jayasinghe, who's the Director of the Oncofertility Program at the Royal Children's Hospital. Here she is now talking about how oncofertility procedures differ in pediatric patients versus adult patients.

Dr. Jayasinghe:

They do differ because the only procedures that can be offered to prepubertal children are tissue preservation procedures; that means collecting ovarian tissue or collecting testicular tissue. So for young girls, they don't have the physical maturity or the emotional maturity for us to go and stimulate their ovaries to do oocyte collection or egg collection, and for prepubertal boys, their testes contain germ cells, they don't contain sperm. So that means that to obtain this tissue, surgical procedures need to be undertaken before cancer treatment starts. And the other differences with these procedures are their efficacy compared to procedures that can be offered for more mature patients.

So ovarian tissue preservation, we know that it's been close to 200 births worldwide now, but they're largely in adults. There've been two births from tissue collected from children. So while it's not deemed experimental anymore, it is considered low efficacy for now.

For testicular tissue preservation, while that field is progressing very rapidly with respect to the research in animal models and there've been births, we still haven't been able to mature sperm from tissue from a prepubertal testis. And that means that these procedures are still deemed experimental.

And when we first started our program, we had a really long considered think about permissibility of these procedures in the context of a cancer diagnosis. And basically we came up with a clinical ethics framework within which to practice. And we basically considered these procedures to be ethically permissible when there was informed consent, and often parents will be the surrogate decision-makers here, which adds another layer of complexity to oncofertility in children, as opposed to more mature patients. Also, the other reason why we feel that it's ethically permissible is because there's a long lag phase from collecting the tissue to actually potentially using that tissue for future parenthood during which time, a lot of research is being undertaken and it's progressing so rapidly, and there's also that window of opportunity because the impact on the reproductive tissue from the cancer treatment is irreversible.

Every decision has to be considered, it's an individualized decision, it means that you have to look at medical comorbidities, look at medical safety of undertaking these procedures, you have to look at anesthetic safety for children, and then you've got to really try and understand the families' values, and the families have to be able to express their values and be given that space to express their values. Because it's a very difficult decision to make for families and as long as families can make a decision that's aligned with their own values, then that is a decision that will be far more acceptable to them in the future.

When we have unclear outcomes for oncofertility in children, what it means is that there's really no right or wrong decision as long as it's medically safe and ethically safe. So we would consider if those two conditions are met, then that decision is within the zone of parental discretion and parents really need to be supported in this situation. And as long as we can tap into their values, then we can support them through the decisions in a much better way.

When children are getting a little bit older and can understand what's going on, then obviously we know that young people want to know about fertility, they want to contribute to decisions about their own fertility. Teenagers want to be part of that decision. They want to make informed decisions and the options that we can offer for teenagers can also involve tissue preservation when there's little time, but also we can offer sperm collection and we can offer oocyte collection or egg collection.

Traditionally, we used to think that egg collection could be offered for older teenagers because they can collect more eggs and the quality of eggs is a little bit better. But we're seeing in the literature now and even in our own institution, we are starting to offer egg collection to younger and younger patients and with reasonable results.

Dr. Sands:

That was Dr. Yasmin Jayasinghe talking about the oncofertility procedures that are available for younger patients. For ReachMD, I'm Dr. Jacob Sands. To hear my full conversation with Dr. Jayasinghe and to access other episodes in this series, visit ReachMD.com/Project-Oncology, where you can Be Part of the Knowledge. Thanks for listening!