

Oncologists Address Fertility Issues Earlier With Patients

BY OHIO STATE UNIVERSITY COMPREHENSIVE CANCER CENTER

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Oncologists are finding they have more to discuss with patients than how best to treat their cancer. In many cases, cancer physicians are also looking to the future, offering options to preserve their patients' fertility—and their chances of someday becoming parents.

With improved screening techniques, earlier detection and advances in cancer treatment, more cancer survivors are living longer. Buoyed by estimates that three out of five cancer patients are disease-free five years after diagnosis, many of these cancer patients are planning for a future that includes having their own children.

More Doctors Discuss Long-term Effects on Fertility

Yet not so long ago, the idea of preserving patients' fertility before cancer treatment was rarely discussed by oncologists. In the United States alone, some 800,000 men and women have been diagnosed with cancer during their prime reproductive years, and many are concerned about their fertility, according to the American Society for Reproductive Medicine.

“For a long time, oncologists focused primarily on the best treatments for cancer. But now, they are increasingly focusing on the impact of that treatment on a person's life, such as treatment-related infertility,” says Charles Shapiro, MD, director of breast medical oncology at the Ohio State University Comprehensive Cancer Center.

Often cancer survivors are at greater risk for developing infertility because of chemotherapy or radiation treatment. In men, chemotherapy and radiation may reduce the number of sperm cells or limit their mobility, while in women, those treatments may affect menstrual cycles or cause premature menopause.

“For some patients, their hopes and dreams are to have children, even after being treated for cancer. It's important for cancer patients to realize that there is life beyond cancer, and that children can be a part of that life,” says Dr. Shapiro, who co-chairs the task force on survivorship guidelines for the American Society of Clinical Oncology, a leading professional organization for oncologists.

Oncologists Release Guidelines to Preserve Fertility

Earlier this year, a separate ASCO task force released [fertility preservation guidelines](#) for cancer patients. The guidelines call for all oncologists to address potential treatment-related infertility with all fertile patients—male or female—and, in the case of children, with their parents or guardians. Oncologists should be prepared to discuss fertility preservation options or refer patients to reproductive specialists. Organizations such as Fertile Hope, a nonprofit group that offers fertility information and resources for cancer survivors, have filled the gap left open by oncologists in past decades, but now are working together to inform patients of fertility options.

Lindsay Nohr Beck, founder of [Fertile Hope](#), served on the ASCO committee to help produce their newly released fertility preservation guidelines. “We realize that there is a very short time period between diagnosis and treatment when fertility information is imperative,” Beck says, which is why Fertile Hope has been collaborating with large cancer organizations, such as ASCO, the Lance Armstrong Foundation and the American Cancer Society, to help increase public awareness about fertility issues with cancer.

Fertility Preservation Research Allows Patients to Plan for the Future

Because of the new guidelines, more oncologists are discussing fertility preservation options with their patients before beginning chemotherapy or radiation treatment. A single treatment can dramatically decrease fertility, so it is essential that patients and doctors develop a fertility-preservation plan before treatment begins. Cancer treatment usually must be delayed several weeks to accommodate fertility preservation methods, such as sperm banking or freezing fertilized eggs.

Prostate and testicular cancer therapies can affect sperm production, resulting in low sperm count or infertility. For men wanting to preserve fertility, freezing sperm at a sperm bank or fertility center has been a successful technique for decades. If sperm count is low, a process called intracytoplasmic sperm injection is available, where only one sperm is needed to fertilize an egg. Another technique, testicular sperm aspiration—sperm is taken directly from the testicle or from resected testicular tissue—is being studied as another possibility when sperm count is low.

For women, certain chemotherapies and hormone treatments, as well as radiation to the pelvic area, can damage the ovaries and other reproductive organs and induce early menopause. Because women are born with a limited number of eggs, or oocytes, damaging them during cancer treatment can leave a woman infertile.

If treatment calls for radiation to the pelvis, the ovaries can be surgically moved from the field of radiation, called oophoropexy, which cuts the risk of damage by 50 percent. Treatments that temporarily shut down ovarian function during chemotherapy are also being investigated as a means to prevent damage to the eggs. A multicenter trial to investigate if Zoladex (goserelin) protects ovarian function in breast cancer patients is currently ongoing.

With in vitro fertilization (IVF), an egg is fertilized and frozen, or cryopreserved, until it is later thawed and inserted into the uterus. Since IVF must be done before treatment, women needing immediate treatment may not be able to wait the several weeks required to retrieve viable eggs. Hormonal treatments are given to promote egg development, but there are natural methods available that do not involve hormone injections. IVF with frozen embryos has a high success rate, and women can use donor sperm.

“A lot of focus is currently on egg freezing and improving those success rates,” says Beck. “Five years after I froze my eggs the success rates are much, much higher.”

While freezing unfertilized eggs is possible, the success rate is much lower than embryo freezing. Once thawed, the egg is fertilized by intracytoplasmic sperm injection and inserted into the uterus. Although freezing unfertilized eggs is considered experimental, better freezing and fertilization techniques are improving success rates and more clinics in the United States are offering the treatment. Researchers are also exploring ways to freeze testicular and ovarian tissue to be transplanted back into the patient after therapy.

Because many of these new fertility procedures are experimental, most are not covered by insurance and the cost can be as high as \$20,000. Even traditional IVF can cost around \$10,000. Depending on insurance, diagnosis of infertility and some treatments may be covered. Financial assistance is available through organizations such as Fertile Hope.

While Fertile Hope actively educates patients and survivors about fertility options, Beck says they don't want the onus to be on the patient to bring up the topic. The organization frequently gives presentations at cancer centers around the country—not specifically to patients, but to doctors and medical professionals. “Anecdotally, we have heard that they increase doctor-patient communication on the subject,” Beck says. To reward cancer centers who proactively inform patients of fertility issues before treatment, Fertile Hope implemented the Centers of Excellence program identifying those cancer centers.

“Without a doubt, things are improving,” Beck says. “We are at a very exciting crossroads where survivorship rates are high and there are more parenthood options than ever before. There are less and less excuses not to discuss it.”

Additional reporting by Elizabeth Whittington.