

What You Should Know About Cancer and Fertility

Owing to medical advances, oncologists can provide cancer survivors with several options to preserve their fertility potential and should promptly refer patients to a specialist in oncofertility—the combined fields of oncology and reproductive medicine—in order to discover and apply new fertility preservation options.

How can cancer treatment affect fertility?

Chemotherapy. Chemotherapy agents treat cancer by targeting rapidly dividing cells, but this results in an accelerated loss of eggs or even ovarian failure, particularly with certain medications. In general, the older the woman, the less likely her ovaries will resume function.

Radiation therapy. Radiation therapy uses high-energy particles to destroy cancer cells but can also damage reproductive organs in the target area. The radiation dosage and the intensity and spread of the radiation field affect the degree of damage to organs.

Surgery. Surgery that removes some or all of a reproductive organ may cause infertility. Fertility-preserving surgery is discussed below.

What options are there to preserve fertility?

Gonadotropin-releasing hormone (GnRH) analog treatment. GnRH analog treatment involves administration of a medication during chemotherapy to cause temporary menopause. Some researchers believe that this medication-induced menopause causes the ovaries to “hibernate,” which could minimize ovarian damage from cancer treatments.

Embryo freezing. Through in vitro fertilization (IVF), a woman undergoes hormonal stimulation to her ovaries. Then the eggs are collected during an outpatient surgical procedure and fertilized with sperm from her partner or another donor to create embryos. The embryos are frozen for future use. Certain cancers may contradict hormonal stimulation for IVF.

Fertility-sparing surgery. Less aggressive and low-stage cancers may allow the removal of only one ovary if the other is cancer free; to remove only the cervix (or a portion) but maintain the uterus; or to treat endometrial cancer with hormonal therapy rather than surgery.

Ovarian transposition. Using laparoscopy, an outpatient surgical procedure, the ovaries can be positioned away from the target zone of radiation treatment.

Experimental Options

Egg freezing. An option for women who don’t currently have a partner and who don’t want to use donor sperm

to create embryos. Hormonal stimulation is used to mature the eggs, which are then frozen for future use.

Ovarian tissue freezing. This may be a good option if you must start cancer treatment immediately and cannot wait for your eggs to mature, or if you are not a candidate for the hormonal stimulation needed for embryo or egg freezing. Laparoscopy is necessary to remove ovarian tissue that is subsequently cut into smaller pieces and frozen so that it can be replaced later.

What are other options for parenthood?

Egg Donation. Using another woman’s donated eggs to be inseminated through IVF by your partner or donor sperm in order to create embryos for transfer into the uterus.

Surrogacy. Using another woman’s uterus to carry a child by sperm insemination or IVF with embryo transfer. Many fertility clinics and agencies specialize in helping patients and their partners locate surrogates and donors.

Adoption. Adoption is another good option for anyone who wants to become a parent. It is a good idea to work with one of the many agencies that have experience working with cancer survivors.

Questions to ask your health care provider

- What short- and long-term effects will my cancer treatment have on my reproductive system?
- Will my cancer treatment damage my ovaries so that I go into menopause?
- Is there anything that can be done to preserve my fertility before I start cancer treatment?
- Once my cancer treatment is over, how will we know whether I am fertile or not?
- How long should I wait to try to become pregnant after my cancer treatment is over?
- Can you refer me to a fertility specialist who has experience working with cancer survivors?

Where can I learn more?

For more information, please visit the following links: [American Cancer Society, www.cancer.org](http://www.cancer.org); [National Cancer Institute, www.cancer.gov](http://www.cancer.gov); [Fertile Hope, www.fertilehope.org](http://www.fertilehope.org); [Oncofertility Consortium, http://oncofertility.northwestern.edu](http://oncofertility.northwestern.edu).

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