

FERTILITY PRESERVATION Bringing Hope to Cancer Patients and Those with Conditions that May Compromise Their Fertility

In 2005, an estimated 1.4 million people were diagnosed with cancer - of which 4% (approximately 55,000) were under the age of 35 years. A cancer diagnosis in and of itself is devastating – but can be made much worse when one considers that the treatment can cause infertility. Because of the vast advances made in the field of oncology, diagnoses are made much earlier and treatments are more successful – ultimately leading to improved survival rates. It is therefore important to consider the quality of life for individuals who have survived. Several studies have shown that one of the most important factors that determine a survivors' quality of life is their future fertility. That is why we at Pacific Northwest Fertility are committed to offering fertility preservation options to cancer patients in our community.

In addition to cancer, several other conditions or chronic illnesses and their treatments can render an individual infertile. Such conditions include: autoimmune/rheumatologic diseases, advanced endometriosis, significant risk of premature ovarian failure, family history of breast/ovarian cancer and desire for prophylactic removal of ovaries. Fertility preservation is available for those situations as well. Because many of the options available for fertility preservation are considered experimental, they should not be offered as an option for individuals who electively want to delay childbearing.



Pacific Northwest Fertility was the first clinic in Washington to offer egg freezing to cancer patients, and also provides embryo freezing for patients.

As a woman, what options for fertility preservation are available to me before starting my medical treatment?

The options available for fertility preservation before treatment starts depend on a few factors: Are you single or in a committed relationship? Can your cancer treatment be delayed by 2-6 weeks or does it need to begin immediately? What type of cancer do you have? What is your age?

Many options exist for women that want to take early steps to preserve their fertility before undergoing medical treatment. Following are some of the most common and successful.

Embryo Freezing

Embryo freezing is a well-established option for individuals who are in a committed relationship or willing to use donor sperm. It is important that the ovaries themselves are not cancerous. Embryos are created through a process known as in vitro fertilization and placed in the freezer for storage until cancer treatments are completed and the patient is ready to start their family. The entire process takes 2-6 weeks and hence, is not possible for individuals who need to start their treatments immediately. Your oncologist will need to ensure that the option you choose will not compromise or interfere with your cancer treatment and/or prognosis.

Egg (Oocyte) Freezing

Egg freezing is considered experimental, but offers the chance to preserve fertility for women who are not in a committed relationship and do not want to use donor sperm. As with embryo freezing, the process takes up to 2-6 weeks so it should only be considered if treatment can be delayed for that time. The first 2 steps involved are the same as embryo freezing, but eggs are frozen without being fertilized with sperm.

What if my treatment cannot be delayed, are any options available to me?

If your cancer treatment cannot be delayed there are still options available to attempt to preserve your fertility:

Ovarian Shielding or Transposition

Direct exposure to high dose radiation can be lethal to ovaries. If your cancer treatment involves radiation therapy, shielding the ovaries from direct radiation or surgically moving them out of the field of radiation can potentially protect them from damage. Both of these methods are well-established and should be considered for individuals who will be undergoing pelvic, abdominal or whole body radiation. Neither of these methods will protect the ovaries from chemotherapy.

Ovarian Suppression

Women are born with all their eggs and slowly lose them over their life time. Before puberty, the eggs are in a resting state and are thought to be somewhat protected; however once a woman has gone through puberty, her body makes hormones that stimulate the ovaries to make and release mature eggs, causing the ovaries to be in an “active state” and thus vulnerable to damage from various toxic chemicals and environmental factors such as chemotherapy. In theory, turning off the stimulation that activates the ovaries, may allow the eggs to stay in a resting state – protecting them from the effects of chemotherapy. Leuprolide is a long acting medication that can temporarily “turn off” your body’s stimulation to the ovaries, thereby suppressing the ovaries. Studies have reported conflicting results regarding the success of this method and hence, it is still considered experimental.

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What are my options if I completed my cancer treatment but fertility preservation was not or could not be considered prior to treatment?

Once treatment is completed, there are numerous options for women who may not have taken fertility preservation steps prior to treatment and now want to attempt pregnancy, including the use of donor embryos, donor eggs, using a gestation carrier or adoption.

Donor Eggs

Pacific Northwest Fertility's donor egg program is an excellent option for women who are infertile or in menopause after cancer or other treatments, but would like to carry a pregnancy.

Eggs can be donated to you from a friend or relative, or selected from Pacific NW Fertility's comprehensive egg donor program, where area donors are thoroughly screened prior to donation. Patients can choose a donor based on physical characteristics, ethnic background, educational background or other criteria that you may value. Pacific NW Fertility's egg donors are between 21 and 30 years old and have undergone basic psychological, medical, and genetic screening. The eggs are retrieved from the donor, fertilized with sperm from the recipient's partner, or donor sperm, and transferred to the recipient to achieve pregnancy. Following the transfer, usually 8-10 weeks after, the recipient continues hormone support until blood work shows that the placenta is self-sufficient.

Gestational Carriers (Surrogacy)

A "gestational carrier" or surrogacy is an option for a woman who cannot carry a pregnancy – due to loss of a functional womb or a medical condition that places her at considerable risk. While surrogacy can be a wonderful option for some, there are legal restrictions and expenses which should be reviewed and considered before undertaking this option.

Adoption and/or Foster Care

Adoption is an excellent option that can be considered by anyone seeking parenthood. The way adoptions are structured vary and can be domestic, international, open or closed. Foster care with the possibility of adoption may also be considered. Regardless of which route you take, state laws surrounding adoption and foster care vary from state to state, and also vary between specific adoption agencies.

What are the fertility preservation options for men?

Men who are diagnosed with certain types of cancer and are pursuing treatment also need to think about the potential risks their cancer treatment may have on their fertility. Several options are available to preserve fertility in male patients.

Sperm Banking

Sperm banking is a well-established option for fertility preservation. Men can collect sperm before starting their medical treatment. The sperm can be processed, frozen and stored for future use. Even if the sperm count is quite low or the supply is limited, sperm from the frozen sample can be used for in vitro fertilization or intracytoplasmic sperm injections.

Testicular Tissue Freezing

Testicular tissue freezing is a procedure where a small amount of tissue from a man's testicles, including the cells that produce sperm, is surgically removed, frozen, analyzed and stored. This is an outpatient surgical procedure that can be done before or after cancer treatments, and is available for men, before or after puberty. In many cases it is the only option for prepubescent boys. The procedure is still considered experimental, but shows promise for the future.

Donor Sperm

For couples wanting a family after the male has gone through treatment or if he is infertile, using donor sperm is one of the most simple and inexpensive ways to become a parent. Sperm banks collect sperm from men who have participated in a detailed screening of their physical health, educational and emotional history, family health history, and even some genetic testing. Couples can choose a donor who matches their physical traits, educational record or talents, as well as choosing a donor who will remain anonymous or who is willing to have contact with the child.

Getting Started

The staff at Pacific Northwest Fertility is here to help answer any questions and get you in to meet with one of our experienced physicians. We make every effort to get your process started as quickly as possible, as we know that many patients need to act quickly.

Please call 206-515-0000 to speak with Jane Perkins, ARNP and/or Fran Bulter, RN, who are available for questions, as well as to set up a consultation to discuss treatment options. ‡

Perspectives from Fertile Hope

The risk of infertility spans all cancers and affects both men and women. As a result, infertility is cited by the majority of young adult survivors as their top long-term survivorship concern.

Fertile Hope is a national non-profit and the only organization of its kind – solely dedicated to addressing cancer-related infertility and parenthood after cancer through programs that raise awareness, advance education, increase access to treatments and provide support. The organization was founded in 2001 by a two-time cancer survivor, and delivers these programs

free of charge to thousands of patients, survivors and healthcare professionals across the country. Fertile Hope has made a permanent mark on the cancer world by highlighting the importance of this issue and delivering efficient, sustainable services to those in need.



Pacific Northwest Fertility Clinic is the region's only clinic which can often make specific medications available to cancer patients, through its unique partnership with Fertile Hope. For more information, please call Pacific NW Fertility at 206-515-0000 or visit www.fertilehope.org.

The Costs of IVF

For many couples, beginning to plan for fertility treatment and IVF can be a daunting process, both emotionally and financially. Pacific Northwest Fertility understands that the cost of treatment is often significant and offers the services of trained financial counselors to walk you through what may be covered by your insurance. It is important to understand all your options before beginning the process, so that you'll be able to make the most informed decisions about what treatments your doctor recommends.

Pacific Northwest Fertility's goal is to be honest and upfront about the costs associated with treatment from the onset. We feel that you should only pay for the treatments that you and your doctor decide upon, and we therefore carefully review the most cost-effective treatment options available to you, and provide judicious testing practices. Pacific Northwest Fertility is known for its high rates of success, thus minimizing the number of cycles – and cost. Our clinic provides a discount for self-pay patients, and we also work to provide our patients with referrals to pharmacies that are committed to keeping medication prices low.

When starting your research on fertility clinics, you might find advertisements for some that offer a “money back guarantee.” The way this works is that patients, after completing an extensive screening process, pay one lump upfront fee for a set number of IVF cycles with the guarantee that a successful pregnancy will be achieved, or 100% of the fee will be returned. For many patients, this sounds like a great option. However, there are several important facts to consider before entering into this agreement. For example, skilled and experienced physicians are usually able to achieve success in many fewer cycles than those you'd be paying for upfront. Many clinics achieve success by transferring a large number of embryos, increasing the chance of multiples and ultimately creating more risk to the mother and costing much more in the long run. In addition, there are usually many costly procedures that the upfront fee does not cover, like ultrasounds and screenings, donor sperm or eggs, the cost of drugs for ovarian stimulation etc.

We believe that Pacific Northwest Fertility Clinic's philosophy will save you money in the long run and is the best way to build a trusting physician/patient relationship. Please call Pacific Northwest Fertility at 206-515-0000 to find out more.



Q & A: PNWF's Embryologists Amin & Cindee Share their Views on Careers in Fertility

Amin and Cindee Khabani share a life together – creating life. Working for a combined 32 years in fertility medicine, and married for 10 years, the Khabani's work side-by-side as the primary embryologists at Pacific Northwest Fertility Clinic. Cindee Khabani joined PNWF when the clinic opened its doors in 2005, with Amin following closely behind after working with the University of Washington. Below, Cindee and Amin share their thoughts on working in this exciting field.

Q: What is the most challenging part of your job, as an embryologist?

Amin: We are constantly challenged with unique circumstances surrounding why a patient cannot get pregnant. There are so many different questions, options and reasons; it's always an exciting challenge to get to the root of the issue, and ideally help patients overcome the roadblocks.

Cindee: There are so many unknown factors that may or may not be affecting a patient's situation and results. The frustration and challenge of trying to figure out how we can help each patient's chance of getting pregnant.

Q: What gives you the most satisfaction in your job?

Amin: Unlike research, there is an outcome with our job and the reward is seeing a patient bring in the child that we helped create. It's also a pleasure to work with a highly professional and caring staff.

Cindee: I get so much satisfaction out of giving patients hope that the dream of a child can come true and seeing the beautiful babies that are born with our help is amazing. I enjoy being surrounded by such an experienced, dedicated team.



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HOT BUTTON

Q: Is egg freezing a good idea for women of advanced reproductive age who are not ready to conceive?

A: The need for fertility preservation is greatest among those facing a chronic illness or cancer. Preserving fertility among women of advanced reproductive age is controversial and should be considered experimental according to the *New England Journal of Medicine*.

Send in your questions to questions@pnwfertility.com.

success rates

January 2008 - June 2008

Age Group	Number of Transfers	Average Embryos Transferred	Clinical Pregnancy Rate
DEP	57	1.5	75 %
≤ 34	60	2.0	62 %
35-37	36	1.9	56 %
38-40	44	2.6	52 %

* A clinical pregnancy rate at PNWF is defined as a positive fetal heart tone confirmed under ultrasound guidance at 7 weeks. These rates combine transfers performed on Day 3 and at the Blastocyst stage on Day 5.

around town

october 5, 2008

City of Hope – Annual Cancer Walk, Warren G. Magnuson Park

october 14, 2008

Bringing Hope to Life: Infertility 101, 6-7pm. Call 206-515-0000 to register.

october 21, 2008

Grand Rounds – Valley Medical Center (Renton, WA), 7-9am.

october 22, 2008

Infertility: The Basics and Beyond - Glaser Auditorium, Swedish Hospital, 6-9pm. Call 206-386-2502 to register.

contact us

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