

## **Fertility Preservation for Adolescent and Young Adult females**

### **Who is at risk?**

Female infertility depends on many factors including the type of drugs, type of cancer, your age at treatment, where you had radiation and how much radiation you received. Your oncology provider will discuss infertility as a possible effect of treatment and refer you to a specialist to discuss options if you are interested. It is important that you meet with a fertility preservation specialist to discuss options and have your questions answered before you start your treatment. The highest risk treatments include abdominal radiation, brain radiation, high dose chemotherapy used for bone marrow transplant and high risk leukemia, lymphoma and certain solid tumor patients.

Embryo and egg freezing (cryopreservation) can be done starting at about age 15 depending on ovarian function. For some patients this may not be an option. Delaying treatment is too dangerous with some cancers. These treatments are expensive, usually about twelve thousand dollars although there are resources available to help with costs. Insurance does not usually cover these expenses. Ovarian tissue freezing is the only option for girls who have not gone through puberty.

### **Embryo freezing**

This is an effective method to preserve fertility. It is a good option if you are married, have a partner or are willing to use donated sperm. Requires 2- 3 weeks of ovarian stimulation with hormones to help the eggs to mature. The eggs are then retrieved, fertilized with sperm and frozen. Frozen embryos can remain viable for many years and pregnancies have been reported after 10 years of storage. The survival rate of human embryos may be as high as 90% with pregnancy rates about 50%.

### **Egg freezing**

This is another effective method of preserving fertility. This also requires hormone stimulation to make the ovaries produce more eggs and then to mature the eggs. The main difference between embryo freezing and egg freezing is the eggs are frozen right away without being fertilized. This process of stimulation takes 2-3 weeks. Pregnancy rates are lower with egg freezing. Approximately 60-70% of the eggs survive the freezing process and the pregnancy rate is about 10-20%.

The hormone treatments involve shots or injections for about 12 days. Common side effects include nausea, vomiting, weight gain, feelings of fullness or bloating. There will be several blood tests and ultrasounds during the treatment process. The actual procedure for egg and embryo freezing involve having a physician insert a

tube and needle through the vagina using ultrasound images and taking the eggs from the ovary.

### **Ovarian Tissue Preservation**

Physicians remove an ovary or part of the ovary. The tissue or ovary is then frozen for future use. It is reimplanted at a later date. This is still considered experimental treatment.

### **Ovarian Transposition**

Ovaries are surgically moved away from the areas to receive radiation and then later repositioned.

### **Ovarian Suppression**

This method involves the use of hormone medication to suppress ovarian function causing the eggs to be protected from toxic effects of chemotherapy. This is still considered experimental but there are large studies in progress. There is a benefit of reduced uterine bleeding.

### **Resources:**

[www.fertilehope.org](http://www.fertilehope.org)

[www.myoncofertility.org](http://www.myoncofertility.org)

[www.savemyfertility.org](http://www.savemyfertility.org)

[www.livestrong.org](http://www.livestrong.org)