DVIF&G
Delaware Valley Institute
of Fertility & Genetics

Informed Consent for Assisted Reproduction:
Oocyte Cryopreservation

Please place your initials below to indicate which components of IVF treatment you agree to undertake in your upcoming treatment cycle. Also, initial each page to indicate that you have read and understand the information provided. If you do not understand the information provided, please speak with your treating provider. There are a few locations within the consent form where you are being asked to make a decision. Please initial your choice and sign where requested.

Chosen Elements of Treatment:

Signatures

Patient: Spouse/Partner: Date:

_____ _____ _____

Provider / Witness: Date:

_____ _____

OVERVIEW

Egg or Oocyte freezing is utilized in order to preserve future fertility. A patient may choose to freeze her eggs in order to avoid infertility associated with aging, chemotherapy or radiation, certain medical conditions, or for ethical/religious reasons. Eggs that are frozen can later be thawed and fertilized in order to create embryos and attempt pregnancy.

Egg freezing occurs by a "flash freeze" method known as vitrification. This involes removing the surrounding support cells, the cumulus, from the eggs prior to freezing. Once the cumulus cells are removed, eggs may not fertilize readily. In addition, the zona pellucida "shell" around the egg hardens with freezing. For these two reasons, injection of sperm directly into the egg (ICSI) is currently recommended after eggs have been frozen. When eggs are vitrified, they may come in direct contact with liquid nitrogen. This could carry a risk of transmitting infection if the liquid nitrogen should be contaminated, although there has never been a case of infection reported by this means.

The techniques for freezing eggs have become successful enough that they are no longer considered experimental. Implantation and pregnancy rates may be lower with frozen eggs than with fresh eggs. Most reports have focused on young women who have responded well to the medications used for egg retrieval, so success rates in older women or poor responders may not be as good.

This consent form reviews the ART process from start to finish, including the known risks that this treatment might pose to you and your offspring. While best efforts have been made to disclose all known risks, there may be risks of oocyte cryopreservation that are not yet clarified or even suspected at the time of this writing.

An oocyte cryopreservation cycle typically includes the following steps or procedures:
- Medications to grow multiple eggs.
- Retrieval of eggs from the ovary or ovaries.
- Cryopreserving the eggs.

Note: At various points in this document, rates are given that reflect what are currently believed to be U.S. national averages for those employing ART treatments. These include items such as pregnancy rates, Cesarean delivery rates, and preterm delivery rates. These rates are not meant to indicate the rates of these outcomes within individual practices offering IVF, and are not to be understood as such. Individual practices may have higher or lower pregnancy and delivery rates than these national averages, and also higher or lower risks for certain complications.

Screening

Before you can undergo your ART procedure, you will need to have testing to assist us in ensuring your safety during your treatment. We will test you for sexually transmitted disease, hepatitis, and HIV (the virus that causes AIDS). If we find evidence of any type of infection, we will discuss the results of your test with you and, if needed, refer you for treatment or treat you ourselves.

In addition to infectious disease screening, we will ask you to have tests that we would recommend for any women anticipating pregnancy or infertility treatments. These tests include blood typing and Rh, complete blood count (CBC), blood chemistries (CMP), and genetic carrier screening. We require all of these screening procedures before your first cycle of treatment. For subsequent cycles you may need to repeat a few of these tests. If more than a year has gone by since your first cycle, we will require you to repeat your screening tests.

You will have baseline blood tests and possibly an ultrasound and antimullerian hormone (AMH) to assess your ovarian reserve. These are tests of your follicle-stimulating hormone (FSH) and estradiol (E2) that we perform early in your menstrual cycle, around the third day of your period. Many reference laboratories perform FSH and E2 tests, but each lab reports their results differently. Therefore we ask that you have your baseline tests performed at Delaware Valley Institute of Fertility & Genetics, if possible. You will have the baseline tests repeated immediately before you start your treatment cycle. In addition to FSH

and estradiol, your pretreatment baseline tests may also include a progesterone (PGN), Luteinizing Hormone (LH) and pregnancy test. If your baseline tests are abnormal, we may ask you to speak with your provider to discuss the potential ramifications of this upon your treatment success.

Financial consultation should be completed prior to baseline evaluation. If you have to pay "out of pocket" the cost of an entire ART cycle in 2010 will be in the neighborhood of $10,000 - $20,000. This approximates all costs including medication and possible cryopreservation. Please speak to our financial counselor for details about your financial obligations to the center and for a review of what benefits are available under your insurance plan.

The Cycle

Beginning your Treatment Cycle

You must have a reservation on file with our IVF coordinator in order to start a treatment cycle. We will base your cycle reservation on the type of treatment that you plan to have and on the approximate date of your next menstrual cycle. Please call the IVF coordinator at Delaware Valley Institute of Fertility & Genetics to schedule your baseline blood tests on day 2 or 3 of menstrual bleeding (not spotting).

If your baseline studies are normal, prescriptions for medications, based on the orders written by your provider, will be ordered through the appropriate specialty pharmacy. Final payment for your cycle will be due at this time.

Also note that while this information is believed to be up to date at the time of publication (2010), newer reports may not yet be incorporated into this document.

Outline of Consent for Oocyte Freezing

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A. Techniques of Oocyte Freezing

1. Core elements and their risk

a. Medications for Oocyte Freezing

- The success of IVF largely depends on growing multiple eggs at once
- Injections of the natural hormones FSH and/or LH (gonadotropins) are used for this purpose
- Additional medications are used to prevent premature ovulation
- An overly vigorous ovarian response can occur, or conversely an inadequate response

Medications may include the following (not a complete list):

- ***Gonadotropins, or injectable "fertility drugs"*** (Follistim®, Gonal-F®, Menopur®): These natural hormones stimulate the ovary in hopes of inducing the simultaneous growth of several oocytes (eggs) over the span of 8 or more days. All injectable fertility drugs have FSH (follicle stimulating hormone), a hormone that will stimulate the growth of your ovarian follicles (which contain the eggs). Some of them also contain LH (luteinizing hormone) or LH like activity. LH is a hormone that may work with FSH to increase the production of estrogen and growth of the follicles. Luveris®, recombinant LH, can also be given as a separate injection in addition to FSH or alternatively, low-dose hCG can be used. These medications are given by subcutaneous or intramuscular injection. Proper dosage of these drugs and the timing of egg recovery require monitoring of the ovarian response, usually by way of blood tests and ultrasound examinations during the ovarian stimulation.

  As with all injectable medications, bruising, redness, swelling, or discomfort can occur at the injection site. Rarely, there can be there an allergic reaction to these drugs. The intent of giving these medications is to mature multiple follicles, and many women experience some bloating and minor discomfort as the follicles grow and the ovaries become temporarily enlarged. Up to 2.0 % of women will develop Ovarian Hyperstimulation Syndrome (OHSS) [see full discussion of OHSS in the Risks to Women section that follows]. Other risks and side effects of gonadotropins include, but are not limited to, fatigue, headaches, weight gain, mood swings, nausea, and clots in blood vessels.

  Even with pre-treatment attempts to assess response, and even more so with abnormal pre-treatment evaluations of ovarian reserve, the stimulation may result in very few follicles developing, the end result may be few or no eggs obtained at egg retrieval or even cancellation of the treatment cycle prior to egg retrieval.

  Some research suggested that the risk of ovarian tumors may increase in women who take any fertility drugs over a long period of time. These studies had significant flaws that limited the strength of the conclusions. More recent studies have not confirmed this risk. A major risk factor for ovarian cancer is infertility per se, suggesting that early reports may have falsely attributed the risk resulting from infertility to the use of medications to overcome it. In these studies, conception lowered the risk of ovarian tumors to that of fertile women. (see 2.b.2 below for further discussion)

- ***GnRH-agonists (leuprolide acetate)*** (Lupron®): This medication is taken by injection. There are two forms of the medication: A short acting medication requiring daily injections and a long-acting preparation lasting for 1-3 months. The primary role of this medication is to prevent a premature LH surge, which could result in the release of eggs before they are ready to be retrieved. Since GnRH-agonists initially cause a release of FSH and LH from the pituitary, they can also be used to

start the growth of the follicles or initiate the final stages of egg maturation. Though leuprolide acetate is an FDA (U.S. Food and Drug Administration) approved medication, it has not been approved for use in IVF, although it has routinely been used in this way for more than 20 years. Potential side effects usually experienced with long-term use include but are not limited to hot flashes, vaginal dryness, bone loss, nausea, vomiting, skin reactions at the injection site, fluid retention, muscle aches, headaches, and depression. No long term or serious side effects are known. Since GnRH-a are oftentimes administered after ovulation, it is possible that they will be taken early in pregnancy. The safest course of action is to use a barrier method of contraception (condoms) the month you will be starting the GnRH-a. GnRH-a have not been associated with any fetal malformations however you should discontinue use of the GnRH-a as soon as pregnancy is confirmed.

- ***GnRH-antagonists (ganirelix acetate or cetrorelix acetate)*** (Antagon®, Cetrotide®): These are another class of medications used to prevent premature ovulation. They tend to be used for short periods of time in the late stages of ovarian stimulation. The potential side effects include, but are not limited to, abdominal pain, headaches, skin reaction at the injection site, and nausea.

- ***Human chorionic gonadotropin (hCG)*** (Profasi®, Novarel®, Pregnyl®, Ovidrel®): hCG is a natural hormone used in IVF to induce the eggs to become mature and fertilizable. The timing of this medication is critical to retrieve mature eggs. Potential side effects include, but are not limited to breast tenderness, bloating, and pelvic discomfort.

- ***Progesterone, and in some cases, estradiol:*** Progesterone and estradiol are hormones normally produced by the ovaries after ovulation. After egg retrieval in some women, the ovaries will not produce adequate amounts of these hormones for long enough to fully support a pregnancy. Accordingly, supplemental progesterone, and in some cases estradiol, are given to ensure adequate hormonal support of the uterine lining. Progesterone is usually given by injection or by the vaginal route (Endometrin®, Crinone®, Prometrium®, or pharmacist-compounded suppositories) after egg retrieval. Progesterone is often continued for some weeks after a pregnancy has been confirmed. Progesterone has not been associated with an increase in fetal abnormalities. Side effects of progesterone include depression, sleepiness, allergic reaction and if given by intra-muscular injection includes the additional risk of infection or pain at the injection site. Estradiol, if given, can be by oral, trans-dermal, intramuscular, or vaginal administration. Side effects of estradiol include nausea, irritation at the application site if given by the trans-dermal route and the risk of blood clots or stroke.

- ***Oral contraceptive pills:*** Some treatment protocols include oral contraceptive pills to be taken for 2 to 4 weeks before gonadotropin injections are started in order to suppress hormone production or to schedule a cycle. Side effects include unscheduled bleeding, headache, breast tenderness, nausea, swelling and the risk of blood clots or stroke.

- ***Other medications:*** Antibiotics may be given for a short time during the treatment cycle to reduce the risk of infection associated with egg retrieval or embryo transfer. Antibiotic use may be associated with causing a yeast infection, nausea, vomiting, diarrhea, rashes, sensitivity to the sun, and allergic reactions. Other medications such as steroids, heparin, low molecular weight heparin or aspirin may also be included in the treatment protocol.

b.Monitoring

You will need repeated morning visits to the Delaware Valley Institute of Fertility & Genetics once you begin your treatment cycle. After the baseline visit, our first visit for monitoring will generally be on the fourth day after you began injecting the fertility drugs. On these visits you will have blood tests to monitor your estrogen production and ultrasound examinations to measure growth of your follicles. Blood drawing may result in mild discomfort and a risk of developing a bruise at the needle site. Vaginal ultrasound examinations of the follicles may be uncomfortable but there is no known risk associated with them. The provider covering the IVF practice will tell your provider about your progress on stimulation. Each afternoon of the day of your visit to the Delaware Valley Institute of Fertility & Genetics, a nurse or provider will contact you to tell you how much medication to take that evening.

c. Transvaginal Oocyte Retrieval

- Eggs are removed from the ovary with a needle under ultrasound guidance
- Anesthesia is provided to make this comfortable
- Injury and infection are rare

Oocyte retrieval is the removal of eggs from the ovary. A transvaginal ultrasound probe is used to visualize the ovaries and the egg-containing follicles within the ovaries. A long needle, which can be seen on ultrasound, can be guided into each follicle and the contents aspirated. The aspirated material includes follicular fluid, oocytes (eggs) and granulosa (egg-supporting) cells. Rarely the ovaries are not accessible by the transvaginal route and laparoscopy or transabdominal retrieval is necessary. These procedures and risks will be discussed with you by your provider if applicable. Anesthesia is generally used to reduce if not eliminate discomfort. Risks of egg retrieval include:

Infection: Bacteria normally present in the vagina may be inadvertently transferred into the abdominal cavity by the needle. These bacteria may cause an infection of the uterus, fallopian tubes, ovaries or other intra-abdominal organs. The estimated incidence of infection after egg retrieval is less than 0.5%. Treatment of infections could require the use of oral or intravenous antibiotics. Severe infections occasionally require surgery to remove infected tissue. Infections can have a negative impact on future fertility. Prophylactic antibiotics are sometimes used before the egg retrieval procedure to reduce the risk of pelvic or abdominal infection in patients at higher risk of this complication. Despite the use of antibiotics, there is no way to eliminate this risk completely.

Bleeding: The needle passes through the vaginal wall and into the ovary to obtain the eggs. Both of these structures contain blood vessels. In addition, there are other blood vessels nearby. Small amounts of blood loss are common during egg retrievals. The incidence of major bleeding problems has been estimated to be less than 0.1%. Major bleeding will frequently require surgical repair and possibly loss of the ovary. The need for blood transfusion is rare. (Although very rare, review of the world experience with IVF indicates that unrecognized bleeding has lead to death.)

Trauma: Despite the use of ultrasound guidance, it is possible to damage other intra-abdominal organs during the egg retrieval. Previous reports in the medical literature have noted damage to the bowel, appendix, bladder, ureters, and ovary. Damage to internal organs may result in the need for additional treatment such as surgery for repair or removal of the damaged organ. However, the risk of such trauma is low.

Anesthesia: The use of anesthesia during the egg retrieval can produce unintended complications such as an allergic reaction, low blood pressure, nausea or vomiting and in rare cases death.

Failure**:** It is possible that the aspiration will fail to obtain any eggs or the eggs may be abnormal or of poor quality and otherwise fail to produce a viable pregnancy.

When the eggs are thawed:

- The eggs may not survive or fertilization may not occur.
- The embryos may not develop normally or transfer into the uterus may be technically difficult or impossible.
- Implantation may not result or the embryos may not grow and develop normally.

In spite of reasonable precautions, any of the following may occur in the lab that would prevent the establishment of a pregnancy:

- Bacterial contamination or a laboratory accident may result in loss or damage to some or all of the eggs.
- Laboratory equipment may fail, and/or extended power losses can occur which could lead to the destruction of eggs.
- Other unforeseen circumstances may prevent any step of the procedure to be performed or prevent the establishment of a pregnancy.
- Hurricanes, floods, or other 'acts of God' (including bombings or other terrorist acts) could destroy the laboratory or its contents, including any sperm, eggs, or embryos being stored there.

2. *Additional Elements and their risk*

a. Intracytoplasmic Sperm Injection (ICSI)

- ICSI is used to increase the chance of fertilization when fertilization rates are anticipated to be lower than normal
- Overall success rates with ICSI are slightly lower than for conventional insemination
- An increased risk of genetic defects in offspring is reported

The use of ICSI provides an effective treatment for male factor infertility. The negative effects of abnormal semen characteristics and sperm quality on fertilization can be overcome with ICSI if viable sperm are available because the technique bypasses the shell around the egg (zona pellucida) and the egg membrane (oolemma) to deliver the sperm directly into the egg. ICSI involves the direct injection of a single sperm into the interior of an egg using an extremely thin glass needle. ICSI allows couples with male factor infertility to achieve fertilization and live birth rates close to those achieved with in vitro fertilization (IVF) using conventional methods of fertilization in men with normal sperm counts. ICSI can be performed even in men with no sperm in the ejaculate if sperm can be successfully collected from the epididymis or the testis.

Reports on the risk of birth defects associated with ICSI (compared to those associated with conventional fertilization in IVF cycles) have yielded conflicting results. The most comprehensive study conducted thus far, based on data from five-year-old children, has suggested that ICSI is associated with an increased risk of certain major congenital anomalies. However, whether the association is due to the ICSI procedure itself, or to inherent sperm defects, could not be determined because the study did not distinguish between male factor conditions and other causes of infertility. Note that even if there is an increased risk of congenital malformations in children conceived with ICSI, the risk is relatively low (4.2% versus ~3% of those conceived naturally). The impact of ICSI on the intellectual and motor development of children conceived via ICSI also has been controversial. An early report suggested that development in such children lagged significantly behind that of children resulting from conventional IVF or those conceived naturally. However, more recent studies from larger groups, using standardized criteria for evaluation, have not detected any differences in the development or the abilities of children born after ICSI, conventional IVF, or natural conception.

The prevalence of sex chromosome abnormalities in children conceived via ICSI is higher than observed in the general IVF population, but the absolute difference between the two groups is small (0.8% to 1.0% in ICSI offspring vs. 0.2% in the general IVF population). The reason for the increased prevalence of chromosomal anomalies observed in ICSI offspring is not clear. Whereas it may result from the ICSI procedure itself, it might also reflect a direct paternal effect. Men with sperm problems (low count, poor motility, and/or abnormal shape) are more likely themselves to have genetic abnormalities and often produce sperm with abnormal chromosomes; the sex chromosomes (X and Y) in the sperm of men with abnormal semen parameters appear especially prone to abnormalities. If sperm with abnormal chromosomes produce pregnancies, these pregnancies will likely carry these same defects. The prevalence of translocations (a re-arrangement of chromosomes that increases the risk of abnormal chromosomes in egg or sperm and can cause miscarriage) of paternal origin and of de novo balanced translocations in ICSI offspring (0.36%) also appears higher than in the general population (0.07%).

b. Oocyte Cryopreservation

Risks of oocyte cryopreservation: There are several techniques for oocyte cryopreservation, and research is ongoing. Traditional methods include “slow,” graduated freezing in a computerized setting, and “rapid” freezing methods, called “vitrification.” Current techniques deliver a high percentage of viable oocytes thawed after cryopreservation, but there can be no certainty that embryos will thaw

normally, nor be viable enough to divide and eventually implant in the uterus. Cryopreservation techniques could theoretically be injurious to the oocyte. Per ASRM, there are no increase in chromosomal abnormalities, birth defects, or development deficits, in the children born from cryopreserved oocytes. Egg freezing is a new technology and there could be unforeseen risks realized in the future.

B. Risks to the Woman

1. Ovarian Hyperstimulation Syndrome

To increase the number of eggs that develop, a series of hormone shots are given to support the simultaneous growth of numerous follicles instead of just one. The hormones used in this regimen are known to have, or suspected of having a variety of side effects, some minor and some potentially major.

The most serious side effect of ovarian stimulation is ovarian hyperstimulation syndrome (OHSS). Its symptoms can include increased ovarian size, nausea and vomiting, accumulation of fluid in the abdomen, breathing difficulties, an increased concentration of red blood cells, kidney and liver problems, and in the most severe cases, blood clots, kidney failure, or death. The severe cases affect only a very small percentage of women who undergo in vitro fertilization—0.2 percent or less of all treatment cycles—and the very severe are an even smaller percentage. Only about 1.4 in 100,000 cycles has lead to kidney failure, for example. OHSS occurs at two stages: early, 1 to 5 days after egg retrieval (as a result of the hCG trigger); and late, 10 to 15 days after retrieval (as a result of the hCG if pregnancy occurs). The risk of severe complications is about 4 to 12 times higher if pregnancy occurs which is why sometimes no embryo transfer is performed to reduce the possibility of this occurring.

2. Cancer

Many have worried that the use of fertility drugs could lead to an increased risk of cancer—in particular, breast, ovarian, and uterine (including endometrial) cancers. One must be careful in interpreting epidemiological studies of women taking fertility drugs, because all of these cancers are more common in women with infertility, so merely comparing women taking fertility drugs with women in the general population inevitably shows an increased incidence of cancer. When the analysis takes into account the increased cancer risk due to infertility per se, the evidence does not support a relationship between fertility drugs and an increased prevalence of breast or ovarian cancer. More research is required to examine what the long-term impact fertility drugs may be on breast and ovarian cancer prevalence rates. For uterine cancer, the numbers are too small to achieve statistical significance, but it is at least possible that use of fertility drugs may indeed cause some increased risk of uterine cancer.

C. Risks to Offspring

1. Overall risks.

Since the first birth of an IVF baby in 1978, more than 3 million children have been born worldwide following IVF treatments. Numerous studies have been conducted to assess the overall health of IVF children and the majority of studies on the safety of IVF have been reassuring. As more time has passed and the dataset has enlarged, some studies have raised doubts about the equivalence of risks for IVF babies as compared to naturally conceived babies.

A major problem in interpreting the data arises from the fact that comparing a group of infertile couples to a group of normally fertile couples is not the proper comparison to make if one wants to assess the risk that IVF technology engenders. Infertile couples, by definition, do not have normal reproductive function and might be expected to have babies with more abnormalities than a group of normally fertile couples. This said, even if the studies suggesting an increased risk to babies born after IVF prove to be true, the

absolute risk of any abnormal outcome appears to be small.

Singletons conceived with IVF tend to be born slightly earlier than naturally conceived babies (39.1 weeks as compared to 39.5 weeks). IVF twins are not born earlier or later than naturally conceived twins. The risk of a singleton IVF conceived baby being born with a birth weight under 5 pounds nine ounces (2500 grams) is 12.5% vs. 7% in naturally conceived singletons.

2. Birth Defects.

The risk of birth defects in the normal population is 2-3 %. In IVF babies the birth defect rate may be 2.6- 3.9%. The difference is seen predominately in singleton males. Studies to date have not been large enough to prove a link between IVF treatment and specific types of birth defects.

Imprinting Disorders. These are rare disorders having to do with whether a maternal or paternal gene is inappropriately expressed. In two studies approximately 4% of children with the imprinting disorder called Beckwith-Weidemann Syndrome were born after IVF, which is more than expected. A large Danish study however found no increased risk of imprinting disorders in children conceived with the assistance of IVF. Since the incidence of this syndrome in the general population is 1/15,000, even if there is a 2 to 5-fold increase to 2-5/15,000, this absolute risk is very low.

Childhood cancers. Most studies have not reported an increased risk with the exception of retinoblastoma: In one study in the Netherlands, five cases were reported after IVF treatment which is 5 to 7 times more than expected.

Infant Development. In general, studies of long-term developmental outcomes have been reassuring so far; most children are doing well. However, these studies are difficult to do and suffer from limitations. A more recent study with better methodology reports an increased risk of cerebral palsy (3.7 fold) and developmental delay (4 fold), but most of this stemmed from the prematurity and low birth weight that was a consequence of multiple pregnancy.

Potential Risks in Singleton IVF Pregnancies

	Absolute Risk (%) in IVF Pregnancies	**Relative Risk (vs. non-IVF Pregnancies)**
Preterm birth	11.5%	2.0 (1.7--2.2)
Low birth weight (< 2500 g)	9.5%	1.8 (1.4--2.2)
Very low birth weight (< 1500 g)	2.5%	2.7 (2.3--3.1)
Small for gestational age	14.6%	1.6 (1.3--2.0)
NICU (intensive care) admission	17.8%	1.6 (1.3--2.0)
Stillbirth	1.2%	2.6 (1.8--3.6)
Neonatal mortality	0.6%	2.0 (1.2--3.4)
Cerebral palsy	0.4%	2.8 (1.3--5.8)
Genetic risks		
-imprinting disorder	0.03%	17.8 (1.8--432.9)
-major birth defect	4.3%	1.5 (1.3--1.8)
-chromosomal abnormalities (after ICSI):		
-of a sex chromosome	0.6%	3.0
-of another chromosome	0.4%	5.7

In this table, the Absolute risk is the percent of IVF Pregnancies in which the risk occurred. The Relative Risk is the risk in IVF versus the risk in non-IVF pregnancies; for example, a relative risk of 2.0 indicates that twice as many IVF pregnancies experience this risk as compared to non-IVF pregnancies. The numbers in parentheses (called the “Confidence Interval”) indicate the range in which the actual Relative Risk lies.

D. Ethical and Religious Considerations in Infertility Treatment

Infertility treatment can raise concerns and questions of an ethical or religious nature for some patients. The technique of in vitro fertilization (IVF) involves the creation of human embryos outside the body, and can involve the production of excess embryos and/or 'high-order' multiple pregnancy (triplets or more). We encourage patients and their spouses or partners who so desire to consult with trusted members of their religious or ethics community for guidance on their infertility treatment.

E. Psychosocial Effects of Infertility Treatment

A diagnosis of infertility can be a devastating and life-altering event that impacts on many aspects of a patient's life. Infertility and its treatment can affect a patient and her spouse or partner medically, financially, socially, emotionally and psychologically. Feelings of anxiousness, depression, isolation, and helplessness are not uncommon among patients undergoing infertility treatment. Strained and stressful relations with spouses, partners and other loved ones are not uncommon as treatment gets underway and progresses.

Our health care team is available to address the emotional, as well as physical symptoms that can accompany infertility. In addition to working with our health care team to minimize the emotional impacts of infertility treatments, patients may also consider working with mental health professionals who are specially trained in the area of infertility care.

While it is normal to experience emotional ups and downs when pursuing infertility treatment, it is important to recognize when these feelings are of a severe nature. If you experience any of the following symptoms over a prolonged period of time, you may benefit from working with a mental health professional:

- Loss of interest in usual activities
- Depression that doesn't lift
- Strained interpersonal relationships (with partner, family, friends and/or colleagues)
- Difficulty thinking of anything other than your infertility
- High levels of anxiety.
- Diminished ability to accomplish tasks
- Difficulty with concentration
- Change in your sleep patterns (difficulty falling asleep or staying asleep, early morning awakening, sleeping more than usual for you)
- Change in your appetite or weight (increase or decrease)
- Increased use of drugs or alcohol
- Thoughts about death or suicide
- Social isolation
- Persistent feelings of pessimism, guilt, or worthlessness
- Persistent feelings of bitterness or anger

Our health care team can assist you in locating a qualified mental health professional who is familiar with the emotional experience of infertility, or you can contact a national support group such as RESOLVE, (www.resolve.org, Tel. 1-888-623-0744) or The American Fertility Association (AFA), (www.theafa.org, Tel: 1-888-917-3777).

F. Reporting Outcomes

The 1992 Fertility Clinic Success Rate and Certification Act requires the Centers for Disease Control and Prevention (CDC) to collect cycle-specific data as well as pregnancy outcome on all assisted reproductive technology cycles performed in the United States each year and requires them to report success rates using these data. Consequently, data from my/our IVF procedure will be provided to the CDC, and to the Society of Assisted Reproductive Technologies (SART) of the American Society of Reproductive Medicine (ASRM) (if my/our clinic is a member of this organization). The CDC may request additional information from the treatment center or contact them/us directly for additional follow-up. Additionally, my/our information may be used and disclosed in accordance with HIPAA guidelines in order to perform research or quality control. All information used for research will be de-identified prior to publication. De-identification is a process intended to prevent the data associated with my/our treatment being used to identify me/us as individuals.

G. References

General IVF overviews available on the internet

http://www.sart.org/

http://www.cdc.gov/art/

http://www.resolve.org/site/PageServer

Intracytoplasmic sperm injection

Genetic considerations related to intracytoplasmic sperm injection (ICSI)

The Practice Committee of the American Society for Reproductive Medicine and the Practice Committee of the Society for Assisted Reproductive Technology. Fertil Steril 2006; 86 (suppl 4): S103-S105.

Ovarian Hyperstimulation

Ovarian hyperstimulation syndrome. The Practice Committees of the American Society for Reproductive Medicine. Fertil Steril 2006; 86 (suppl 4): S178-S183.

Risks to offspring

Infertility, assisted reproductive technology, and adverse pregnancy outcomes. Executive Summary of a National Institute of Child Health and Human Development Workshop. Reddy UM, Wapner RJ, Rebar RW, Tasca RJ. Obstet Gynecol 2007; 109(4):967-77.

Multiple pregnancy associated with infertility therapy. The Practice Committees of the American Society for Reproductive Medicine Fertil Steril 2006; 86 (suppl 4): S106-S110.

Imprinting diseases and IVF: A Danish National IVF cohort study. Lidegaard O, Pinborg A and Anderson AN. Human Reproduction 2005; 20(4):950-954.

H. Disposition of Oocytes Statement

Because of the possibility of you and/or your partner's separation, divorce, death or incapacitation after embryos have been produced, it is important to decide on the disposition of any embryos (fresh or cryopreserved) that remain in the laboratory in these situations. Since this is a rapidly evolving field, both medically and legally, the clinic cannot guarantee what the available or acceptable avenues for disposition will be at any future date.

Currently, the alternatives are:

1. Discarding the cryopreserved oocyte(s)
2. Donating the cryopreserved oocyte (s) for approved research studies.
3. Donating the cryopreserved oocyte(s) to another couple in order to attempt pregnancy. (In this case, you may be required to undergo additional infectious disease testing and screening due to Federal or State requirements.)
4. Use by one partner with the contemporaneous permission of the other for that use.

This agreement provides several choices for disposition of oocytes in these circumstances (death of the patient or the patient's spouse or partner, separation or divorce of the patient and her spouse/partner, successful completion of IVF treatment, decision to discontinue IVF treatment, and by failure to pay fees for frozen storage).

I/We agree that in the absence of a more recent written and witnessed consent form, Delaware Valley Institute of Fertility & Genetics is authorized to act on our choices indicated below, so far as it is practical.

I also agree that in the event that either our chosen dispositional choices are not available or we fail to preserve any choices made herein, whether through nonpayment of storage fees or otherwise, Delaware Valley Institute of Fertility & Genetics is authorized to discard and destroy our oocytes.

Note:

- Oocytes cannot be used to produce pregnancy against the wishes of the partner. For example, in the event of a separation or divorce, embryos cannot be used to create a pregnancy without the express, written consent of both parties, even if donor gametes were used to create the embryos.

- Oocyte donation to achieve a pregnancy is regulated by the FDA (U.S. Food and Drug Administration) as well as state laws, as donated tissue; certain screening and testing of the persons providing the sperm and eggs are required before donation can occur.

- You are free to revise the choices you indicate here at any time by completing another form and having it notarized.

- Your will should also include your wishes on disposition of the oocyte and be consistent with this consent form. Any discrepancies will need to be resolved by court decree.

- Please check the appropriate box in each section to delineate your wishes and initial the bottom of each page.

Death of Patient

In the event the patient dies prior to use of all the oocytes, I agree that the oocytes should be disposed of in the following manner (check only one box):

❑ Award to patient's spouse or partner (if applicable), which gives complete control for any purpose, including implantation, donation for research, or destruction. This may entail maintaining the oocytes in storage, and the fees and other payments due the clinic for these cryopreservation services.

❑ Donate to another couple or individual for reproductive purposes. This may entail maintaining the oocytes in storage, and the fees and other payments due Delaware Valley Institute of Fertility & Genetics for these cryopreservation services. If you wish, you may designate a couple or individual to receive the embryos. In the event the designated couple or individual is unable or unwilling to accept the embryos, Delaware Valley Institute of Fertility & Genetics will control the donation.

Please donate to:
Name _____
Address _____
_____

Telephone _____
Email _____

❑ Award for research purposes, which may result in the destruction of the frozen oocytes but will not result in the birth of a child

❑ Destroy the oocytes.

❑ Other disposition (please specify): _____

Default Disposition: I/We understand and agree that in the event none of our elected choices are available, as determined by Delaware Valley Institute of Fertility & Genetics, Delaware Valley Institute of Fertility & Genetics is authorized, without further notice to us, to destroy and discard my oocytes.

Nonpayment of Cryopreservation Storage Fees

Maintaining oocyte(s) in a frozen state is labor intensive and expensive. There are fees associated with freezing and maintaining cryopreserved oocyte(s). Patients/couples who have frozen oocyte(s) must remain in contact with Delaware Valley Institute of Fertility & Genetics on an annual basis in order to inform us of their wishes as well as to pay fees associated with the storage of their oocyte (s). In situations where there is no contact with Delaware Valley Institute of Fertility & Genetics for a period of **THREE** years or fees associated with embryo storage have not been paid for a period of **THREE** years and Delaware Valley Institute of Fertility & Genetics is unable to contact the patient after reasonable efforts have been made, the oocyte(s) may be destroyed by Delaware Valley Institute of Fertility & Genetics in accordance with normal laboratory procedures and applicable law. Reasonable efforts to reach the patient include:

- Annual notification of continued storage of oocytes at last known address for THREE years,

- Annual bill for continued storage of oocytes at last known address (Year One),
- If no payment after one year, patient sent to collections,
- Annual bill for continued storage of oocytes at last known address (Year Two)
- Annual bill for continued storage of oocytes by registered mail at last known address (Year Three),

If I/we fail to pay the overdue storage fees within 30 days from the date of said mailings, such failure to pay constitutes my/our express authorization to Delaware Valley Institute of Fertility & Genetics to follow the disposition instructions we have elected below without further communications to or from us (check one box only):

❑ Award for research purposes, which may result in the destruction of the frozen oocytes but will not result in the birth of a child.

❑ Destroy the frozen oocytes.

Default Disposition

I/We understand and agree that in the event none of our elected choices are available, as determined by Delaware Valley Institute of Fertility & Genetics, Delaware Valley Institute of Fertility & Genetics is authorized, without further notice to us, to destroy and discard our frozen embryos.

Age and Time Limited Storage of Oocytes

I understand that Delaware Valley Institute of Fertility & Genetics will only maintain cryopreserved oocytes for **10** years or to maternal age 48 (DATE: __/___/___). After this age, I elect (check one box only):

❑ Award for research purposes, which may result in the destruction of the frozen oocytes but will not result in the birth of a child.

❑ Destroy the frozen oocytes.

❑ Transfer to a storage facility at our expense.

❑ Donate the cryopreserved oocytes to another individual/couple for reproductive purposes.

Default Disposition

I/We understand and agree that in the event none of our elected choices are available, as determined by Delaware Valley Institute of Fertility & Genetics, Delaware Valley Institute of Fertility & Genetics is authorized, without further notice to us, to destroy and discard my frozen oocytes.