

IVF Patient Information

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Overview:

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IVF Micro Lupron Protocol with BCPs (PDF File)

1. Basic timeline for IVF.

Many patients have had a physical, emotional and financial journey by the time they consider IVF as a treatment. OB/GYNs may have performed surgeries or done ovulation induction with *clomid* for many months that seem to drag on. The feeling of ‘loss of control’ is very real for many patients. When patients get to IVF, things seem a bit more regimented and hopefully some sense of control is restored. Generally we will get eggs and know they fertilize and embryos grow, something we do not know when *clomid* fails. When the menstrual cycle starts in month #1, we fill in the dates on one of the protocols listed above. Most patients will fall within a day or two of the predicted dates. We like to consider IVF as a two-month process. During the 1st month ovarian reserve testing may be done along with an assessment of the uterine cavity. A semen analysis will be done and a semen sample cryopreserved as a back-up in case the male can not provide a sample the day of the egg retrieval. The IVF lab needs a more recent assessment of the sperm that will be used the following month. Many patients will be placed on oral contraceptives in order to reduce the chance of cyst formation secondary to lupron injections and to better control the stimulation start date. The 2nd month is the stimulation, egg retrieval and embryo transfer.

2. Preliminary testing.

✓ **Ovarian reserve tests.**

Assessment of ovarian reserve may provide information about the chance for pregnancy, likelihood of response to medications, number of oocytes and their potential quality. It is the most important test for the female patient. A cycle **day #3 FSH and estradiol** is generally obtained. FSH is secreted by the anterior pituitary gland in the brain and functions to stimulate the ovaries to produce follicles and eggs. If there are fewer eggs and follicles in the ovaries, the brain senses this and secretes increased amounts of FSH. High FSH can be seen in patients that have had chemotherapy, ovarian surgery (i.e. endometriosis resection or destruction), certain metabolic conditions and increased age. We generally like to see the FSH level <12 mIU/ml. If the estradiol level is elevated (i.e. >75 pg/ml) and the FSH is borderline, it is possible that the patient will have a difficult stimulation. Based upon the ovarian reserve test, we may choose the micro lupron protocol over the long lupron protocol for ovarian stimulation. **Anti-Mullerian hormone (AMH)** may be used to estimate the pool of small basal follicles and potential chance for pregnancy. AMH is a hormone secreted by the small ovarian follicles. This is a direct indicator of ovarian function compared to FSH, which indirectly measures the ovarian function. In general, AMH levels of <0.3 are associated with poor outcomes. Ultrasound evaluation of the **antral follicle count** is another method to assess ovarian function. Good responses are generally seen in patients with a count >12. Other less used tests include the **Clomid Challenge Test** and **Inhibin B** levels.

✓ **Infectious disease screening.**

All patients are tested for hepatitis B, hepatitis C, and HIV 1 and 2.

✓ **Uterine evaluation.**

It is important to have an evaluation of the uterus and fallopian tubes prior to IVF. The **hysterosalpingogram (HSG)** is a study performed in the hospital radiology department. It will show the uterine cavity filled with dye and any defects like fibroids, polyps, septae, or scar tissue will be visible. It will also show if the fallopian tubes are open or closed. If a patient has dilated fallopian tubes (i.e. hydrosalpinges) on a HSG, generally from a prior infection such as chlamydia or gonorrhea, the chances to get pregnant with IVF go down. It is thought that fluid inside the tube will go back into the uterine cavity and inhibit implantation. The tubes may have to be excised. The **Saline Infusion Sonogram (SIS)** is done in the physician's office to evaluate the uterine cavity and adjacent uterine wall. Typically, after placing a speculum in the vagina, the cervix is washed with a betadine solution and a small catheter is placed in the uterus. The catheter is attached to a syringe with saline. Once the speculum is removed, a trans-vaginal ultrasound is performed. Saline is injected into the uterine cavity. As the fluid enters the cavity any defects are visualized. Also, the ultrasound will show if the

uterus is ‘tilted’ (i.e. retroverted, retroflexed) which provides important information for the eventual embryo transfer. This is a **trial embryo transfer**. Studies have shown that the embryo transfer technique is crucial IVF success and the trail transfer aids the physician greatly.

✓ **Hormonal Evaluation.**

Patients should have their thyroid hormone level evaluated. Studies have shown that untreated hypothyroidism (i.e. high TSH, low T4) may have increased complications of pregnancy like spontaneous loss and the children may suffer from certain neurological conditions. Pregnancy affects the status of the thyroid, so the replacement dose may need to be changed in the pregnant patient. Patients with Polycystic Ovarian Syndrome (PCOS) have several hormonal issues to deal with. PCOS is diagnosed in patients that have polycystic appearing ovaries on ultrasound exam, anovulation or oligo-ovulation with or without elevated androgens. If PCOS patients have elevated testosterone levels, it is wise to lower them with birth control pills prior to IVF in order to improve stimulation, egg quality, implantation and pregnancy rates. Some patients with PCOS may have increased insulin levels, typically detected with a 2-hour glucose tolerance test. If the insulin is high, miscarriage rates are higher and treatment with *metformin* may be beneficial.

✓ **Semen Analysis.**

Patients should have a recent semen analysis. It is important for the ART lab to see the patient’s sample to get a feel for what they are going to work with. Additionally, we often cryopreserve a sample of the semen to be used in case the partner can not be at the egg retrieval or has difficulty collecting the day of the procedure. This happens in about 1% of the cases. If the sperm count is low, we will perform Intra-Cytoplasmic Sperm Injection (ICSI) to increase fertilization. We may have the male seen by a urologist to see if he has a varicocele or other cause of a low sperm count. Tests that may be done on the male include FSH, LH, TSH, testosterone, karyotype, or cystic fibrosis screening depending upon the clinical scenario.

✓ **Lifestyle factors.**

Patients that smoke tobacco have roughly ½ the pregnancy rate of non-smokers. Women that smoke have lower ovarian reserve and may produce poor quality eggs. The products in tobacco may bind to the DNA in sperm and the seminal fluid of smokers has increased oxygen radicals that may affect sperm function. Don’t smoke! Certain herbs may also affect sperm function. Please be sure you have discussed with the doctor all medication you are taking. Hot tubs may damage the sperm which depend upon lower temperatures to develop appropriately. Alcohol should be consumed only in moderation if at all. Exercise has many benefits including decreasing stress and is encouraged.

3. Medications.

Patients generally make one egg per month. IVF as it is practiced currently depends upon stimulation of the ovaries with medicines to increase the number of eggs produced in a given month. Each patient is different and responses may vary significantly. There is generally no 'one protocol fits all.' Dr. Donahue will review your previous records of ovarian stimulation to see what can be improved upon. Most IVF practices will have a flow sheet that summarizes the ultrasound findings during stimulation and the estradiol, LH and progesterone levels at each ultrasound. We can get a feel for the egg quality by looking at these parameters during the stimulation. Also, the ovarian reserve test may help provide information concerning the best protocol to use. We often see a different response when we change the protocol. Some of the possible medications are reviewed below.

A. Lupron (luprolide acetate).

Lupron acts upon the pituitary gland in the brain to alter the secretion of FSH and LH. It is a gonadotropin releasing hormone (GnRH) agonist. GnRH is the hormone that is secreted by the hypothalamus in the brain and acts upon the pituitary to stimulate the secretion of FSH and LH. An agonist is a medication that binds the same receptor as the natural ligand, in this case GnRH, and has a similar effect. Luprolide has modifications of the 10 amino acids found in GnRH that prolong its half-life and function to make it more suitable as a drug therapy. Luprolide will first stimulate the pituitary gland, so there will be an initial increase in FSH and LH. This may cause patients to have ovarian cysts, especially if begun in the 1st part of the menstrual cycle. After prolonged treatment where luprolide is bound to the GnRH receptors in the pituitary, the number of GnRH receptors will be decreased. This basically shuts off the hormonal communication between the ovaries and the pituitary. As the ovaries are stimulated with FSH containing drug the body will naturally want to ovulate as estrogen and other ovarian hormones increase. The luprolide suppresses ovulation and thus allows more follicles to grow. We start lupron on or about day 21 of the cycle (i.e. late luteal phase) or when on birth control pills. The birth control pills will suppress ovarian cysts that may form due to the stimulatory effect of luprolide and will also help with the egg quality in some patients. When the menses come, we generally lower the dose of lupron by ½ and continue it with the addition of gonadotropins (i.e. FSH). When we do the baseline ultrasound exam, we look for the presence of ovarian cysts and check the LH and estradiol levels to confirm appropriate ovarian suppression. A cycle may be canceled if the estradiol or LH levels are too high or too low or if the menses are delayed more than a week. We generally like the cycle to start around the 10th day of lupron. **Microdose Lupron** is a preparation of diluted luprolide that is given in the 1st part of the menstrual cycle (i.e. follicular phase) that takes advantage of the stimulatory effects of the drug on FSH and LH. It is more of a 'stimulatory' than 'suppressive' protocol. It is often used in patients that had a sub-optimal response to the more suppressive long *lupron* protocol.

Administration: Lupron is taken subcutaneously as an injection once or twice a day beginning on day 21 of the cycle or towards the end of the birth control pills the month prior to the egg retrieval.

Side effects: Headaches, fatigue, mood swings, hot flashes, delayed onset of menses, bruising or irritation at injection site.

B. Gonadotropins.

These are the drugs that directly stimulate the ovaries to produce multiple follicles and eggs. They are produced from either recombinant DNA technology (i.e. *Gonal-F, Follistim, Luveris*) or highly purified menopausal urine (i.e. *Menopur, Repronex, Bravelle*). The recombinant DNA based drugs are essentially 100 % pure FSH or LH activity. The purified menopausal urine preparations may have small amounts of other biologically active compounds like hCG. The purified menopausal urine preparations have FSH and LH, 75 IU each, in each vial. The recombinant preparations have 75 IU of FSH per dose or vial. There are protocols which call for the addition of LH to the FSH, so these drugs may be combined. *Luveris* is recombinant LH, 75 IU per dose, which may be used when LH is desired. Is one drug better than another? Studies have shown that these drugs are equal in many respects. A patient may respond better to one or the other. Ultimately it is the patient response to the drug that is most important.

Administration: Gonadotropins are generally administered subcutaneously with a pre-filled syringe or mixed by the patient prior to use with the urinary derived products. The injections may be once or twice a day depending upon the protocol. They generally begin on day 3 of the stimulatory cycle and continue until the follicle sizes reach 'maturity', about 18 mm to 22 mm, with a corresponding estradiol, LH, and progesterone level. The dose may be modified during the stimulation when ultrasound scans are done on days 7, 9, and 11 according to the protocols above. Once mature follicles are documented, hCG will be given to finally mature the eggs 36 hours prior to the egg retrieval.

Side effects: Mood swings, discomfort around ovaries, abdominal fullness, soreness at injection sites.

C. Human chorionic gonadotropin (hCG).

hCG is given when the follicles reach the appropriate size to act on the LH receptors to finally mature the eggs and induce ovulation. In IVF, we retrieve the eggs 36 hours after the injection. The eggs could release on their own several hours later, so timing is crucial. Naturally occurring LH has a very short half-life (i.e. disappears quickly from the serum) compared to hCG. Therefore, hCG can continue to stimulate the ovaries after an egg retrieval and in some patients lead to ovarian hyperstimulation syndrome. Ovulation may also be triggered with a GnRH agonist like *Lupron*, which acts on the pituitary to release naturally occurring LH to mature the eggs. hCG is given as an intra-muscular injection as *Profasi, Pregnyl, and Novarel*. It is given subcutaneously as *Ovidrel*.

Administration: hCG must be mixed with sterile water prior to intra-muscular injection. It is important to use only 2 cc's of the water to dissolve the 10,000 IU

of lyophilized drug. These instructions are different than the instructions that are on the box the medicine comes with.

Side effects: Discomfort around ovaries, soreness at injection site, ovarian hyperstimulation syndrome.

D. Antibiotics.

We commonly prescribe *doxycycline* to reduce the risk of infection related to the egg retrieval. This begins on the day of hCG administration and continues for 6 days. Infections are extremely rare with IVF. If a patient has a hydrosalpix (i.e. dilated fallopian tube secondary to a pelvic infection), the tubes are generally removed prior to IVF. In the past, patients with a hydrosalpinx *in situ* were at increased risk for a pelvic infection related to the egg retrieval. In years past patients were screened for the presence of *Mycoplasma sp.* and *Ureaplasma sp.* and treated with *doxycycline*, however there is no association with these microorganisms and infertility.

Administration: Doxycycline 100 mg twice a day with meals.

Side effects: Stomach upset, allergic reactions (i.e. hives, itching, swelling), and vaginal yeast infection.

E. Progesterone.

Progesterone is crucial for the development of a uterine lining that will support the early pregnancy. With the egg retrieval, cells that have the ability to produce progesterone are removed from the ovaries. Because progesterone is important for the ‘implantation window’ all IVF patients receive some extra support. Additionally, vaginally administered progesterone has been shown to decrease uterine contractions that occur between the time of egg retrieval and embryo transfer and increase pregnancy rates. We use intra-muscular injections of progesterone because some studies have shown better pregnancy rates compared to vaginal or oral routes. We realize that some patients have discomfort with these injections. We try and reduce the dose after 8 weeks of pregnancy. Prior to this time, the ovaries are responsible for most progesterone secretion. After 8 weeks, the placenta takes over progesterone production.

Administration: 100 mg vaginal progesterone from day of egg retrieval until embryo transfer to relax uterus. 100 mg progesterone IM from day after egg retrieval until about 10 weeks of pregnancy.

Side effects: soreness at injection site, delayed onset of menses if not pregnant, breast tenderness.

F. Estrogen.

Studies have shown the estrogen administered during the luteal phase after egg retrieval improves pregnancy rates. It can be transdermal or oral routes. Estradiol levels are checked one week after embryo transfer and if levels are excessively high, the estrogen support is discontinued.

Administration: Estrace, 2mg twice a day until 1st pregnancy ultrasound.

Side effects: Nausea, headache, and breast pain.

G. Methylprednisolone.

This low dose steroid is taken when assisted hatching is performed. It is thought that the steroid will suppress immune system cells at the level of the endometrium that may attack the embryo and inhibit implantation. Steroids typically have many different effects so some other effect may be operational.

Administration: 16 mg oral from day of egg retrieval until day of embryo transfer.
Side effects; Fluid retention.

H. Low-dose aspirin.

Very high levels of estrogen are thought to increase blood clotting which may be detrimental to the embryo implantation. It has been shown the low-dose aspirin improves blood flow to the uterus.

Administration: One 81 mg pill per day until about 12 weeks of pregnancy.
Side effects: Upset stomach, prolonged bleeding time.

I. Pre-natal vitamins.

Studies have shown that increased folic acid in pregnancy reduces the risk for neural tube defects in babies. The nutritional requirements change dramatically with pregnancy and increased vitamins are needed.

Administration: One pill daily.
Side effects: Upset stomach, nausea, and constipation.

4. Procedures and what to expect.

A. Ovarian stimulation.

A baseline transvaginal ultrasound exam will be performed by day 3 of the menstrual cycle. Do not be alarmed if you are still on your menses at this time, it is very common. The ultrasound will show if any cysts are present. If large cysts are present, it is possible that the cycle will be canceled and a different protocol attempted the following month. Blood will be drawn to check estradiol levels and LH levels. This will give us an estimation of the ovarian suppression from *Lupron* and baseline data to compare the future scans. In general, you will be seen after 5 days of the FSH stimulation. We expect to see ovarian follicles in the 10 mm to 12 mm range and an estradiol level >200 pg/ml. If the estradiol level were < 100 pg/ml, there is a chance that the cycle would be cancelled due to a slow start. It is better to cancel a cycle that is 'too suppressed' rather than increasing the dose of the drugs because of the increased likelihood that we will get poor quality eggs on such a cycle. It is unusual to be canceled for an excessive response, but this may happen in patients with PCOS that have very high estradiol levels (i.e. >1000 pg/ml) and very small follicles (i.e. <10 mm)

because of the high risk for ovarian hyperstimulation syndrome. Ultrasound exams may be done on day 9 or day 11 of the cycle. When the follicles are 18 mm to 22 mm and the estradiol is appropriately elevated and the LH and progesterone are low, hCG will be administered to prepare for egg retrieval. Occasionally, a patient will have increased progesterone levels detected (i.e. > 2 ng/ml), which may be a sign of premature luteinization (i.e. progesterone production before the release of the egg), which may be associated with decreased implantation. In general, only about 15 % of cycles get canceled. We feel it is better to cancel the cycle if there is a sign that the outcome will not be good and a different protocol is indicated.

B. Egg retrieval.

The egg retrieval is scheduled 36 hours after the hCG shot is given. We ask patients to arrive 30 minutes before the procedure and to have had nothing to eat or drink since midnight so that they have an empty stomach. This is because of the anesthesia. Upon arrival, we will escort the patient and her partner to the pre-OP/recovery room. The couple will have a chance to ask further questions of Dr. Donahue and our embryologists. The patient will change into a gown for the procedure and the anesthesiologist will start the IV fluids and answer any questions. This gives the patient a chance to meet our anesthesiologist and feel more comfortable with the procedure. We will review a new set of instructions for medications that will be needed between the time of egg retrieval and embryo transfer. We like to review instructions on multiple occasions with the patients to ease their potential stress and not have an information overload.

The patient will next walk a few steps down the hall to the entrance of the procedure room. Pictures of the procedure room are shown in the new IVF lab section of our web site. Once in the procedure room the patient will be helped onto the procedure table. The room is very comfortable. Soft music is generally playing. We tend to avoid bright lighting in the room because bright light may damage eggs and embryos. The patient will have ECG leads placed, pulse oximeter placed on the finger tip (i.e. measures oxygen in blood, so no fingernail polish on index finger) and a blood pressure cuff. The anesthesiologist is at the side of the patient throughout the entire procedure. The anesthesiologist may give the patient some medicine to relax a bit more (i.e. *versed or fentanyl*), prior to an IVF drip of *propofol* (i.e. *diprivan*). *Propofol* induces deep sedation. The patient is not intubated and is breathing on her own. About one 1 in 10 patients may actually start talking with no recollection of what they said. Some patients even snore. In general, most patients find the anesthesia very acceptable and sleep through the 15-20 minute egg retrieval procedure.

Following the administration of the sedation Dr. Donahue will insert a speculum in the vagina and cleanse the cervix and upper vagina. The egg retrieval is performed with an ultrasound-guided needle attached to the transvaginal ultrasound probe. This is very similar to the ultrasound exams that were done to monitor the ovarian stimulation. The ovaries generally are located next to the

vaginal wall in the pelvis and the needle, under direct visualization, passes through the vaginal wall and into the ovaries. The needle has 2 barrels, one to aspirate the follicular fluid and one to inject media to flush the follicle out. The needle set is closed to the environment and attached to a suction device and test tubes where the follicular fluid is collected. The test tubes are kept in a warmer to keep the fluid at body temperature. Once the test tube is filled, it will be handed off to the embryologist who will examine the contents for the presence of the oocyte cumulus complex (i.e. egg and surrounding cumulus cells). Once an egg is confirmed, we move onto the next follicle and repeat the process. We aspirate each follicle. We may not get eggs from every follicle. Quality counts more than quantity. At the time of the egg retrieval we examine the uterus and ovaries. If there is fluid in the uterine cavity it may be a cause for concern and we may need to cryopreserve the embryos due to decreased implantation. Uterine contractions may be seen as well. Patients with endometriosis may have endometriomas containing 'chocolate fluid' that may be aspirated. We can measure the ovarian volume and free fluid in the pelvis (i.e. assess risk for ovarian hyperstimulation syndrome). The ultrasound allows the physician to carefully stay away from vital structures like blood vessels and bowel. When we are convinced that all eggs have been collected, the procedure is completed. In general, most patients will wake up pretty quickly once the *propofol* drip is discontinued. The ultrasound probe is removed from the vagina and the vagina will be inspected for signs of bleeding. Rarely a small blood vessel in the vaginal wall is found to be bleeding and a stitch can be placed to stop the bleeding. The patient will then be moved to the recovery room. Once in recovery the patient will wake up pretty quickly. We will review the findings with the couple regarding the number of eggs and their potential quality. The 1st question seems to always be 'how many eggs did we get?' When the patient is alert and able to drink water and ambulate she will be allowed to leave. This is usually less than 1 hour after the procedure.

Generally the male will collect a semen sample while his partner has her egg retrieval. We have a private collection room. Men can collect a specimen at home as long as it is within 1 hours driving time.

After the egg retrieval we encourage for patients to take the day off from work and relax. *Progesterone* vaginal suppositories, 100 mg, are used for four days to help relax the uterus. The day after the egg retrieval, patients begin IM *progesterone*, 100 mg/day and *estrace*, 4 mg/day. The embryologist will call the patient the morning after the egg retrieval to give the fertilization report. The decision to perform a day 3 embryo transfer or day 5 embryo transfer is often made on this day. In general, it is best to sleep with the upper body raised with pillows so that fluid that leaks from the ovaries stays in the pelvis rather than under the diaphragm and cause shortness of breath. We prescribe *Demerol* for pain control to be taken as needed. Most patients do not need much pain medicine.

C. Embryo Transfer.

The embryo transfer is really the most important part of the whole IVF procedure from a technical standpoint. Studies have shown that difficult embryo transfers may have lower pregnancy rates. This is the reason we do the trial embryo transfer the month before the entire process starts. At that time, we can see if the cervix has any significant deviation (i.e. retroflexed or anteflexed, sharply tipped backwards or forwards). If so, we use a special transfer catheter, which will negotiate the sharp turn from the entrance of the cervix to the uterine cavity. If the cervix is stenotic (i.e. very tight) and we are unable to pass the trial transfer catheter, we may need to perform a hysteroscopy and dilate the cervix before we start the IVF procedure. The goal is to have the easiest transfer as possible in the shortest amount of time between embryo placement in the catheter and transfer to the uterus. The embryo transfer is normally performed 3 days after the egg retrieval. We may do a day 5 or 'blastocyst' stage embryo transfer depending upon the circumstances. The transfer is done in the procedure room. Your partner will wear an OR cap, mask and gown so he can be there with you. We play relaxing music at the time of the transfer and patients may bring their own CDs if they desire.

We will ask you to arrive 30 minutes prior to the scheduled procedure. Take the *Valium 10 mg* pill to help you relax at this time. Additionally, you will place the *progesterone suppository* in the vagina an hour before. This may help the uterus soften and not contract during the transfer procedure. The placement of the embryos into the uterus is done with ultrasound guidance. This time, however, the ultrasound will be done abdominally. It will be necessary, therefore, for you to have a moderately full bladder when Dr. Donahue performs the transfer. Plan to drink 2 to 3 glasses (8 ounces) of fluid about an hour before the scheduled transfer time.

Dr. Donahue will cleanse the cervix and vagina and then do another trial transfer. We use culture media moistened swabs to remove the remnants of the progesterone suppositories and the flush out the cervical mucus with culture media. We do not want the mucus to interfere with the transfer by clogging up the catheter opening as it passes through the cervix with embryos inside. Once the trial transfer is comfortably done, he will instruct the biologist in the lab to place the embryos in the catheter. There is a door between the procedure room and the embryo lab that is open at this time. It is just a few steps in-between. When Dr. Donahue confirms that the catheter should pass easily, he instructs the partner to step inside the lab with the embryologist. The partner will see the embryologist take the *Petri dish* that has your embryos in it out of the incubator. The dish has your name and ID number etched in the bottom. We have a special form where we have a witness confirm the identity of the gametes or embryos whenever important procedures are being done. This includes identification of the sperm and eggs at retrieval, insemination or ICSI, and identification of the embryos for embryo transfer. We feel this added level of security is important. We have the partner sign off as the final witness after we do the embryo transfer. We have a

special witness form that shows date, time, and initials of person performing the procedure and witnessing. At this time, the embryos are removed from the incubators, placed into the transfer catheter, and brought into the transfer room. Dr. Donahue will pass the very slender catheter through the cervix, and guide it to the proper location in the mid to upper area of the uterus. You will be able to watch on the ultrasound monitor as the embryos are expelled from the catheter into your uterus. The laboratory biologist will then check the catheter, under the microscope, to be sure it has been emptied of the embryos.

We will keep you in the recovery room for 30-60 minutes after the transfer. You will need to lie flat for this time. There are studies that found patients could resume normal activities within 1 hour and transfer without any negative effects on pregnancy rates. We still think it is prudent to take it easy for a day or so. We suggest no heavy lifting, exercise, or hot tubs for the next couple of weeks. Some studies have suggested that you could have regular intercourse during this period. Fewer miscarriages were reported and the pregnancy rates were the same as patients that had no intercourse. It is possible that seminal fluid has factors in it that may help with implantation.

Progesterone and Estrogen levels will be checked one week after the embryo transfer. A blood pregnancy test can be performed at 14 days after the transfer. If you have not started a period by that “target date”, please call the office to make arrangements for testing. Keep in mind that it is possible to have not begun a period by the target date, and still not be pregnant. This is due to the large amount of progesterone you will be taking for those 2 weeks after the retrieval. Progesterone can cause a delay in the onset of a menstrual period.

If the blood test is positive (>5.0), we will want you to have a second pregnancy test in two more days. This second test lets us know if the pregnancy is developing normally, and gives a clue about the possibility of twins. Progesterone levels will also be checked. Dr. Donahue will adjust your continued need for progesterone and estrogen support accordingly. If your blood test is negative, or if you start a full period, we will instruct you to stop the progesterone injections. A period should start, if it hasn't already, within 3 to 4 days of stopping the shots. Those patients who experience an unsuccessful cycle are strongly encouraged to come in for a follow-up consult with Dr. Donahue to review and discuss the cycle, and discuss future options.