

## The IVF Lupron Down-Regulation Cycle

### Down-regulation

- Day 1 This is the first day of your menstrual period (spotting does not count). You **must** call on this day to notify us.
- Days 1-3 After you notify us, we will tell you to start birth control pills. Most patients will stay on the pills between 9 and 28 days. (Check with your nurse for the exact number of days.) The pills have several purposes but mainly help us time the events of your IVF cycle.
- Day 21\* You will begin Lupron injections on, or around this day. You will continue the birth control pills for several days. Lupron helps shut off your body's natural stimulation from the pituitary gland to the ovary. The medicine's purpose is to prevent you from ovulating unexpectedly during the stimulation part of the cycle.
- Your menses should begin a few days after stopping the birth control pills.
- You will continue to take Lupron during your stimulation, so don't change this medicine unless told to.
- \*We may modify this day depending on when you started your menses and depending on the lab schedule.
- Menses **Call us on this date.** At this point, You should be fully down-regulated (quiet), meaning your ovaries are not actively developing eggs.

When you call us, you will be scheduled for a baseline ultrasound and blood work to ensure that your ovaries are quiet.

### Stimulation

- Day 1 If you are down-regulated, you will reduce the Lupron dose by half and will begin injections with gonadotropins. Gonadotropins are hormones which cause eggs to grow. Many different brands are available, (Bravelle, Follistim, Gonal-F, Menopure and Repronex) but most are equally effective. The dose and brand will be selected by your physician prior to your treatment. Given in high doses, gonadotropins will cause multiple eggs to grow at the same time.
- Day 4 Return to clinic for a blood test to measure estrogen. This test helps determine when we need to have you return for an ultrasound and if we need to increase, decrease or continue at the same dose of gonadotropin.

Typically, we will know your estrogen levels by 2 p.m. You will be contacted by phone by 5 p.m. with your result and instructions regarding your medicine and when to return to clinic.

**Day 6** Most patients will return on this date for their first ultrasound and for a second estrogen level. Ideally, your estrogen level will be rising. We will also be able to see how big the follicles are getting. Over the course of the next 2-6 days, you will likely have several other follow up appointments to monitor your progress.

**Days 8-12** As directed by the physicians, you will return to clinic intermittently to monitor follicle growth.

**hCG Day** When an adequate group of eggs has reached maturity (usually 2 follicles measuring  $\geq 18\text{mm}$ ), you will be instructed to take an hCG injection. The brands of hCG include Ovidrel, Pregnyl and Profasi. hCG will complete the maturation process of the egg and promote ovulation.

On this day you will stop taking Lupron and gonadotropins.

### **Egg Retrieval**

36 hours  
after hCG

You will get an egg retrieval. This is a 15-30 minute, minor surgical procedure which requires minimal intravenous (IV) sedation. The procedure takes place in our office in the procedure room. After you are comfortably sedated, a needle will be inserted into each ovary. We use an ultrasound to guide the needle.

We will aspirate the fluid from the follicles to obtain eggs. Not every follicle will release an egg and it is not always possible to aspirate every follicle. Therefore, sometimes the number of eggs retrieved does not equal the number of follicles that we can see on ultrasound.

You will know this day how many eggs we have retrieved.

These eggs will be fertilized in the lab with the sperm provided by your partner. Ideally, your partner will provide a fresh sample on the day of your retrieval.

### **Fertilization and Embryo Development**

Day after  
retrieval

On this day you will learn how many of your eggs fertilized normally and be told when to expect an embryo transfer.

You will also begin taking progesterone on this day. Progesterone prevents menses from arriving prematurely. The IVF process can cause some women to produce inadequate amounts of progesterone.

You will take progesterone on a daily basis. If you do not get pregnant, you may stop the medication. If you are pregnant, you will continue the progesterone until 7 weeks of pregnancy.

Progesterone comes several ways: as an intramuscular injection, as a vaginal cream or vaginal suppository. The injections are the most widely used and we have the most experience with them. However, there is encouraging data to support the use of the vaginal progesterones.

2-5 days

after retrieval Over the next few days, the fertilized eggs turn into embryos. Our embryologists will carefully cultivate your embryos to maximize the chance that they progress through critical developmental stages. Embryos advance through several stages: zygote (fertilized egg) to cleavage stage (an embryo with more than one cell) to morula (a dense ball of small cells) to blastocyst (an embryo with a fluid filled cavity).

At what stage and what day the embryos are placed back into the uterus depends on how many embryos you now have and how well they are dividing.

**On the third day after retrieval**, the embryos are still at cleavage stage. These embryos are graded on a 1-5 scale with 1 being the best quality embryo. Grade 1 and Grade 2 embryos have the highest chance of resulting in pregnancy. If a couple has only a few, or no embryos of high quality, generally we recommend putting back into the uterus on this day.

If a woman has five or more Grade 1-2 embryos, we may recommend waiting until the blastocyst stage, which generally occurs on the 5<sup>th</sup> day after retrieval.

Blastocyst transfers have the highest pregnancy rate per embryo (implantation rate). Because not all good embryos will tolerate culture for 5 days, unless you have ample numbers of good quality embryos on day 3, we usually won't recommend blastocyst transfer.

14 days after  
retrieval

You will get a pregnancy test (blood test for hCG level). If pregnant, continue on progesterone. If you are not pregnant you will discontinue progesterone.

16 days after

retrieval

If pregnant, a repeat hCG test will be performed. If the levels are rising appropriately, you will be scheduled for an ultrasound in approximately 2 weeks.