Letrozole

Letrozole is an aromatase inhibitor used to induce ovulation in patients with irregular menses or no menses at all. Letrozole works to induce ovulation by blocking estrogen production, leading to increases in follicle-stimulating hormone (FSH) release. You may be prescribed this medication if you have polycystic ovary syndrome (PCOS) or problems with ovulation.

The use of letrozole for ovulation induction is off-label, meaning the FDA has not approved this indication. However, letrozole use for fertility has been widely studied. Most recently, the National Institutes of Health evaluated the effect of letrozole in patients with ovulatory infertility or PCOS. Dr Peter Casson was one of the principal investigators of this national, multi-center, randomized-controlled trial published in the New England Journal of Medicine that analyzed letrozole head to head with another commonly used medication, clomiphene citrate, and found letrozole to be superior.

Who may be a candidate for letrozole?

1. Patients with PCOS or ovulatory infertility.
2. Patients with other types of infertility that have side effects or contraindications to Clomid.

What is the success rate?

Success rates differ by female age and fertility diagnosis. In general, successful ovulation occurs in 60% of cycles, and live birth rate for patients with PCOS who are <35 years old is 15-17% per cycle.

What about twins? Triplets?

The risk of twins with letrozole is estimated to be approximately 3-5%, which appears to be lower than the risk of twins with clomiphene citrate (7-8%), but is still higher than the risk of twins in a spontaneous pregnancy (2-3%). Although triplets and higher-order pregnancies are rare, these may occur <1% of the time.

What are the side effects?

The most commonly reported side effects of short-term use include fatigue or dizziness, which occur in approximately 10-20% of patients.

Is the risk of birth defects increased?

Letrozole may increase the risk of birth defects if taken when pregnant. Therefore, all patients need a blood draw to check B-hCG and progesterone levels prior to starting the medication.

The use of letrozole prior to pregnancy (as utilized for ovulation induction) has also been studied to evaluate the risk of birth defects.

- One study compared the incidence of birth defects in 911 newborns of women conceived following letrozole or clomiphene citrate did not find a difference between the two groups. The rate of birth defects in the study was 2.5-5%, consistent with the national rate of birth defects for all women trying to conceive with or without infertility. (Tulandi, Fertility and Sterility, 2006).
- In the NIH trial described earlier, the rate of birth defects was not significantly different between letrozole and clomiphene citrate patients (4.9% of 102 infants, and 1.5% of 66 infants, respectively). (Legro et al, New England Journal of Medicine, 2014).

How is letrozole taken?

This medication is typically taken for 5 days, starting on the 3rd to 5th day of your menstrual cycle. Doses start at 2.5 mg daily. Your NRM physician will create your treatment plan based on your diagnosis and medical history.