

## REI Case 3 – Mentor Answer Key

### A. Case Questions:

1. What is your diagnosis? What are the possible etiologies?

#### **Primary Infertility**

**Etiologies include tubal factor, anovulation, male factor, other less definable etiologies such as ovarian aging, endometriosis or cervical factor and unexplained infertility.**

2. What further evaluation would you perform?

**Hysterosalpingogram (or laparoscopy if performed for another indication), semen analysis, confirmation of ovulation (such day 21 progesterone, ovulation prediction kits or basal body temperature chart). After female age of 30, many REI providers would also assess ovarian reserve.**

### B. Case Questions:

1. Is this a normal evaluation? How would you counsel this couple?

**All results are normal, except that semen analysis shows some leukocytospermia and a decrease in rapid and linear motility.**

**Would recommend that the male partner undergo an examination by a male fertility specialist and consider repeat semen analysis.**

2. What are the treatment options? What are the approximate costs, risks, and success rates of each option?

**Assuming that the male partner was examined and successfully treated, their empiric options are continued timed intercourse, intrauterine insemination alone, ovulation induction with either oral agents (such as clomiphene citrate) or gonadotropins with or without intrauterine insemination or in vitro fertilization. Diminished ovarian reserve or premature ovarian failure may require donor oocyte IVF.**

**The risks of oral medications, such as clomiphene citrate, include hot flashes, moodiness and an increased risk of multiple pregnancy (6-8% twins, <1% of higher-order pregnancies). The cost is less than \$50-100/cycle. An intrauterine insemination adds \$500-750/cycle. Both gonadotropin stimulation and in vitro fertilization carry the risk of ovarian hyperstimulation syndrome. The risk of higher order multiple pregnancy is higher with gonadotropin stimulation due to the loss of control of number of embryos transferred. The recommended embryo transfer number recommended by American Society of Reproductive Medicine has**

dramatically decreased recently, leading to a decrease in higher-order multiple pregnancy. In 2011, the cost of gonadotropin ovulation induction combined with intrauterine insemination is about \$3-4000/cycle, and the cost of IVF is about \$20,000/cycle. Success rates/cycle in this couple would be approximately: 1-2% with timed intercourse, 7-9% with clomiphene citrate/intrauterine insemination, 14-18% with gonadotropin/intrauterine insemination and 40% with in vitro fertilization.

3. How does the patient's age impact the success rate of the treatment you recommend?

**Fertility clearly declines with advancing female age. A significant decline in fertility typically occurs in the mid-thirties and forties. The success rates of all therapies decline also during this time period. The use of donor oocyte IVF is success in women who have experienced a decline in the function of their own eggs.**

C. Case Questions:

1. What do you recommend now?

**Considering of her tubal factor (ectopic) and continued male factor, the most likely therapy to yield pregnancy for her would be in vitro fertilization. Because she is symptomatic and has a large fibroid deviating the endometrial cavity, consideration should be given to a myomectomy.**

D. Case Questions:

1. What are your options now?

**Her options for treatment remain similar. However, the absence of her tube diminishes her pregnancy rates with any therapy requiring normal tubal function. With her prior ectopic pregnancy in the right tube, it is often presumed that the function of the contralateral tube is also compromised. She should give consideration to IVF therapy.**

2. What are her risks during pregnancy if she does conceive?

**Aside from her risk of fertility treatment itself, she is at risk of uterine rupture during pregnancy due to the transmural myomectomy.**