

FERTILITY FACT SHEET

San Ramon / Orinda / San Jose

IVF After Forty

Fertility and Age

Numerous demographic studies show a consistent decline in the ability to conceive as we age. An average 25 year old woman with normal fertility and who is trying to conceive may have a 25% chance for pregnancy each month. Compare this to a 40 year old woman whose monthly chance for conception is only 5%. Even with IVF, live birth rates rapidly decline as a woman enters her early 40's. By age 45, successful IVF pregnancies are rare in woman using their own eggs.

Treatment

IVF treatment strategies for women over age 40 include more aggressive stimulation protocols, assisted hatching of embryos, and replacing more embryos at the time of embryo transfer. Pre-implantation genetic diagnosis (PGD) may help to decrease the rate of miscarriages in this group of older patients by excluding the transfer of genetically abnormal embryos. Blastocyst embryo transfer (allowing the embryos to develop longer outside of the body before transfer) has also proven more successful in our center in older women who have more than four good quality embryos on day three. Below is CDC data from the 2010 US ART Report. The Data from 2011, while not yet in tabular form, is essentially unchanged.

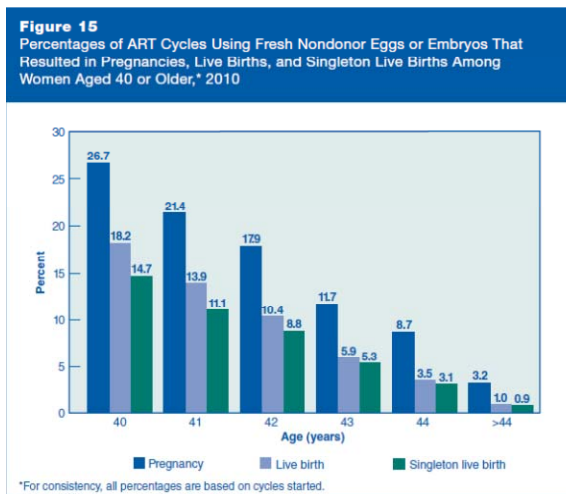


Figure 15 is a bar graph representing the percentages of ART cycles using fresh non-donor eggs or embryos that resulted in pregnancies, live births, and singleton live births among women aged 40 or older, 2010. Note: For consistency, all percentages are based on cycles started.

- Age 40, Pregnancy 26.7%, Live birth 18.2%, Singleton live birth 14.7%
- Age 41, Pregnancy 21.4%, Live birth 13.9%, Singleton live birth 11.1%
- Age 42, Pregnancy 17.9%, Live birth 10.4%, Singleton live birth 8.8%
- Age 43, Pregnancy 11.7%, Live birth 5.9%, Singleton live birth 5.3%
- Age 44, Pregnancy 8.7%, Live birth 3.5%, Singleton live birth 3.1%
- Age >44, Pregnancy 3.2%, Live birth 1.0%, Singleton live birth 0.9%

At RSC, we feel that it is reasonable for women age 43 and 44 to attempt IVF with their own eggs (if their day 2-3 FSH level is < 10, AMH > 0.9, and antral follicle count is > 9), as long as they are aware of the low chance for a successful pregnancy. In addition, if less than 5 mature follicles develop during the IVF stimulation cycle we would convert the IVF cycle to an insemination cycle (if appropriate) because success rates with IVF with less than 5 mature follicles in this age group are close to zero. In such cases, insemination is less involved, less expensive, and may offer the same success rate as IVF.

Egg Donation

Egg donation has become an accepted and successful technique to achieve pregnancy in women in their late 30's and 40's. Studies show that a pregnancy rate of over 50% per cycle can be expected in recipients regardless of their age. This treatment is the only treatment available to improve egg and embryo quality in older women. Egg donation involves preparing the recipient's uterus with estrogen and progesterone to create an optimal uterus for implantation. An egg donor undergoes essentially the first half of an IVF cycle with hormonal stimulation to produce multiple eggs. The eggs are retrieved with a minor surgical procedure and fertilized with sperm from the recipient's husband. Fertilized embryos are then replaced into the recipient's uterus. Below is data from the 2010 US ART Report. The data from 2011, while not yet in tabular form, is essentially unchanged.

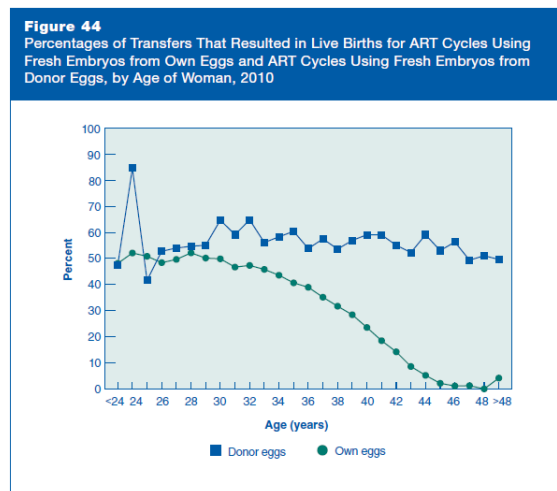


Figure 44 is a line graph with two lines, one line represents percentages of transfers that resulted in live births for ART cycles using fresh embryos from the patient's own eggs and one line represents percentages of transfers that resulted in live births for ART cycles using fresh embryos from donor eggs, by ART patient's age, 2010.

Summary

A woman in her early 40's has a reasonable chance of pregnancy with IVF using her own eggs. Each year that passes, success rates drop with few successful pregnancies beyond age 44. Aggressive diagnosis and treatment in the early 40's will allow for the best opportunity for a successful pregnancy using one's own eggs. Egg donation is available for successful conception when other treatments fail.