

MEDICAL UPDATE

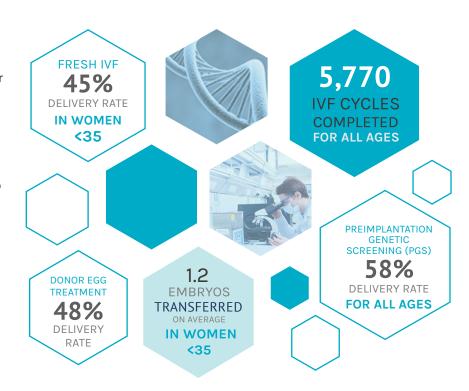
## 2016 SGF Assisted Reproductive Technology Annual Report

In Vitro Fertilization, Donor Egg Treatment & Egg Freezing Programs in Review

The release of our 26th Assisted Reproductive Technology Annual Report represents an important part of the culture at Shady Grove Fertility. It is of the utmost importance to us that we provide accurate information about our success rates for each treatment program.

This past year, we made a significant change to our in vitro fertilization (IVF) treatment protocol that is helping more patients reach their dreams of parenthood. Historically, fresh IVF transfers were preferred over frozen embryo transfers (FETs) but with the improvements made to freezing technology over the last decade the approach has changed. These advances, paired with evidence-based new practice guidelines, are resulting in improved outcomes for patients.

The evolving IVF Program along with our Egg Freezing Program and internationally recognized Donor Egg Program are giving more options to more women on their path to parenthood. For these reasons and more, the physicians and staff at Shady Grove Fertility are proud of the success achieved for our patients in 2016.



#### 2016 FRESH IVF PROGRAM STATISTICS FOR WOMEN UNDER 35

Laboratory	Rockville, MD	Towson, MD	Chesterbrook, PA	SGF Total
Initiated Cycles	1,486	533	148	2,167
Egg Retrievals (ER)	1,417	511	140	2,068
Embryo Transfers (ET)	1,024	373	51	1,448
Clinical Pregnancies	522	205	25	752
Clinical Pregnancy Rate per ET	51%	55%	49%	52%
Average Embryos Transferred	1.3	1.2	1.2	1.2
Miscarriages	63	31	2	96
Ongoing Pregnancy or Live Birth	459	174	23	656
Ongoing Pregnancy or Live Birth per ET	45%	47%	45%	45%

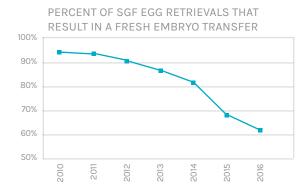
SGF Autologous In Vitro Fertilization Program Rockville, MD; Towson, MD; and Chesterbrook, PA Jan. 1, 2016-Dec. 31, 2016

### **Advancements in IVF Care Are Helping More Women Conceive**

Over the past several years, there has been a steady decline in the number of fresh transfers that resulted from each egg retrieval. In fact, 2016 showed an all time low of 62 percent of retrievals resulting in a fresh transfer. This shift in treatment approach is the result of research that showed freezing all embryos after retrieval to be later thawed and transferred increased the outcomes for certain patients. Two of the most common reasons for this approach center around abnormal hormone levels at the time of transfer and the increased use of embryo genetic testing.

# Freeze All Cycles Bypass the Negative Impact of High Progesterone Levels

In about 5 percent of all fresh cycles the progesterone level in the late follicular phase is found to be high resulting in a decreased likelihood of implantation and subsequent pregnancy. Freezing all of the available embryos allows preparation of an optimal endometrium giving each embryo the greatest chance of success in a subsequent FET cycle.



### Embryo Genetic Screening Improves Pregnancy Outcomes

As a woman ages, the quality of her eggs begins to decline. As a result, there is a higher instance of chromosomally abnormal embryos that decrease her chances of pregnancy and increase her risk of a miscarriage. In fact, the percent of aneuploid blastocysts is 30 percent in women under 35 and 70 percent in women over 40. Unfortunately many older women will have no embryos to transfer. For many patients, however, the answer is IVF with preimplantation genetic screening (PGS) of the embryos, followed by a frozen embryo transfer (FET) with prescreened embryos. Prior to the transfer, each embryo is screened to identify the chromosomally normal from the abnormal allowing for improved embryo selection and treatment outcomes. When using PGS with IVF, pregnancy and live birth rates per embryo transfer are similar for all women, regardless of age.

#### 2016 PREIMPLANTATION GENETIC SCREENING (PGS) AND INITIATED FET CYCLE OUTCOMES

Maternal Age	<35	35-37	38-40	>40	Total
Initiated Cycles	293	258	459	366	1,376
Fresh Biopsy	268 (92%)	226 (88%)	370 (81%)	257 (70%)	1,121 (82%)
Rate of Normal Embryos per Embryo Biopsy	61%	53%	41%	23%	47%
Rate of Abnormal Embryos per Embryo Biopsy	30%	36%	52%	70%	44%
Initiated Frozen Embryo Transfer (FET) Cycles	206	144	201	82	633
Clinical Pregnancy Rate (% of FET)	130 (63%)	104 (72%)	126 (63%)	57 (70%)	417 (66%)
Miscarriages	16	7	18	8	49
Ongoing Pregnancy/Live Birth per FET	114 (55%)	97 (67%)	108 (54%)	49 (60%)	368 (58%)

Some embryos biopsied will either be mosaic or yield no results and therefore are not counted in this data.

SGF Autologous PGS Program Rockville, MD Jan. 1, 2016-Dec. 31, 2016

### Shared Donor Egg Program Provides More Affordable Care without Compromising Pregnancy Rates

Donor egg treatment is often the answer for women unable to conceive with their own eggs. The treatment process using donor egg is very similar to IVF except the egg used comes from a prescreened donor between the ages of 21 and 32.

Historically, donor egg treatment was not accessible for many due to the cost. The introduction of SGF's Shared Donor Egg Program reduced the cost of treatment up to 50 percent, making it more obtainable for patients.

Donor Egg Treatment	Program Enrollment	Clinical Pregnancy Rate per ET	Miscarriage per Clinical Pregnancy	Ongoing Pregnancy/Live Birth per ET
1 Recipient to 1 Donor	75 (9%)	55%	23%	43%
2 Recipients to 1 Donor	234 (29%)	63%	16%	53%
3 Recipients to 1 Donor	491 (61%)	59%	21%	46%

### More Women Than Ever Are Choosing to Freeze their Eggs

As the average age a woman has her first child continues to increase, so does the number of women electively choosing to freeze their eggs to preserve their fertility. Egg freezing is giving women the time that their biology won't. Since 2013, we have seen an 83 percent increase in the number of women who choose to freeze their eggs, making the process even more common today than ever before.

### Who to Refer for Egg Freezing

- Women in their early- to mid-30s who are not actively trying to conceive but have plans to in the next several years
- Women with a history of endometriosis or dermoids
- Women with a recent cancer diagnosis
- Women with a family history of early menopause or premature ovarian failure
- Women who wish to extend their fertility potential

#### 2 Step Process

- 1. Test the ovarian reserve
  - Anti-Müllerian hormone (AMH)
  - Follicle-stimulating hormone (FSH)
  - Antral follicle count (AFC)
- 2. Consult with an SGF physician

70-80% will take home

84% OF FROZEN EGGS SURVIVE THE THAW

83%
INCREASE IN
WOMEN FREEZING
THEIR EGGS SINCE
2013

#### **EGG FREEZING PROGRAM STATISTICS 2009-2016**

Age at Time of Freezing	<35	35-37	38-40	>40	Total
Total Number of Egg Thaw Cycles	110	61	61	26	258
Total Number of Eggs Thawed	1,017	730	680	329	2,756
Average Number of Eggs Per Thaw	7.8	9.7	8.9	9.8	8.7
Cumulative Ongoing Pregnancy/Live Birth Rate per Egg Thaw	41%	44%	25%	42%	38%
Post Thaw Survival Rate	84%	81%	85%	86%	84%
Fertilization Rate	73%	69%	69%	68%	71%
Number of Fresh Embryo Tranfers (ET)	88	46	44	16	194
Cycles with Resulting Cryopreservation (%)	34%	51%	36%	35%	38%
Average Number of Embryos Cryopreserved	3.0	3.2	3.2	2.0	3.0

SGF Elective and Non-Elective Egg Freezing Program Rockville, MD Jan. 1, 2009-Dec. 31, 2016

### **New Physicians to Serve Your Patients**



REBECCA J. CHASON, M.D. Annapolis, MD



CALEB KALLEN, M.D., PH.D. Chesterbrook, PA



RYAN MARTIN, M.D. Bala Cynwyd, PA



KARA NGUYEN, M.D., PH.D. Reading, PA



ANDREA E. REH, M.D. Arlington, VA Fredericksburg, VA



MEDICAL UPDATE

## **Building Families Together**

We Are Partners in Care

For the majority of Shady Grove Fertility patients, their successful treatment starts with you, and your timely referral to one of our providers. The trust between SGF and over 1,700 referring physicians every year is the reason why over 40,000 SGF babies have been born over the last quarter century. We are honored and humbled by your continued support.

Look inside for an in-depth look into the successful programs that are helping your patients conceive at Shady Grove Fertility.



SHADY GROVE FERTILITY
Refer Your Patients with Confidence
1.888.548.5599



