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9600 Blackwell Road, 5th Floor
Rockville, MD 20850

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MEDICAL UPDATE | November 2022

ASRM 2022
Scientific Congress & Expo

Shady Grove Fertility presents award-winning research focused on safer and more efficient paths to parenthood for infertility patients. Look inside for an in-depth view at this year's research.

Shady Grove Fertility's research team presents 19 studies at this year's American Society for Reproductive Medicine Scientific Congress, demonstrating its commitment to continuously improving outcomes for fertility patients

Shady Grove Fertility's (SGF) physician-scientists presented 19 research abstracts during the 2022 American Society for Reproductive Medicine (ASRM) Scientific Congress & Expo as part of the practice's commitment to advancing knowledge and improving assisted reproductive technology (ART) treatment outcomes. This year's research by SGF presented at ASRM covered many important topics care including optimized outcomes for frozen embryo transfers, third-party reproduction, male fertility, and fertility preservation for patients with cancer, to name a few.

Hosted in Anaheim, California, the 78th ASRM Scientific Congress & Expo took place October 22 through 26, 2022, and attracted more than 8,000 national and international physicians and professionals — distinguished academicians, clinicians, and scientific investigators in the field of human reproduction.

SGF is one of only a few private practice fertility centers in the country to employ a full-time dedicated research team, which operates under Director of Research, Kate Devine, M.D., a board certified reproductive endocrinologist who sees patients at SGF's Washington, D.C., K Street location. Dr. Devine also serves as the Executive Medical Director and Chief Research Officer at US Fertility, the largest network of physician-owned and physician-led fertility practices in the United States, of which SGF is a founding partner practice.

As a premier IVF and fertility center of excellence, SGF demonstrates a sustained commitment to clinical research and clinical education. Many of the studies presented at the meeting this year resulted from collaborations between SGF and academic institutions. SGF physicians act as clinical instructors and research mentors to physicians in training from the National Institutes of Health (NIH), Georgetown University, Eastern Virginia Medical School, University of South Florida, and the University of Colorado.

> **Year after year, the SGF research team is proud to participate in the ASRM Scientific Congress and Expo and collaborate with reproductive scientists from the U.S. and around the world to improve outcomes for those facing infertility. Our research efforts offer hope to those struggling to conceive and push us to continue providing innovative, evidence-based care to fertility patients."**

— Kate Devine, M.D., Director of Research

Ovarian response and anti-Mullerian hormone in fertility preservation versus elective oocyte cryopreservation cycles: A Society for Assisted Reproductive Technology registry study of 10,040 cycles

Fertility Preservation Special Interest Group Prize Paper

SGF research team
Ivy Lersten, M.D., and Cassandra Roeca, M.D.

Research contributors
Angela J. Fought, M.S.

The study

This national retrospective cohort study of ovarian response and anti-Mullerian hormone (AMH) in cancer patients undergoing fertility preservation treatment compared to patients who are electively freezing their eggs looked at data from 10,040 cycles from the Society for Assisted Reproductive Technology (SART) registry and found the relationship between the number of eggs retrieved or cryopreserved and AMH did not differ for fertility preservation versus elective egg freezing groups.

	Adjusted Estimated Oocyte Yield	
AMH (ng/mL)	FP	Elective OC
0 - <0.25	5.40	5.14
0.25 - <0.5	6.69	6.73
0.5 - <0.75	7.07	8.08
0.75 - <1	8.82	9.68
1 - <2	11.84	12.75
2 - <3	14.55	16.12
3 - <4	17.94	18.56
> 4	21.86	23.43

The results The study concludes that the relationship between retrieved and frozen eggs, as well as AMH levels, for cancer patients undergoing fertility preservation treatment are comparable to those who are electively freezing their eggs.

For your patients

This new information can provide additional reassurance for patients with cancer who are planning to have biological children in the future.

Table 1: Estimated adjusted oocyte yield in medically indicated FP cycles versus elective OC cycles for categories of AMH. Negative binomial model used and adjusted for age, BMI, smoking status, and gonadotropin usage. Nonsignificant interaction of AMH and groups, p=0.95.

The association between oocyte age and reproductive potential in donor oocytes between 21 to 32 years

SGF research team
Phillip A. Romanski, M.D., M.Sc., and Kate Devine, M.D.

Donor Egg Bank USA Research Team
Melissa Stratton, B.A., and Wayne Caswell, M.S

The study

The retrospective cohort study looked at egg donor recipient cycles at Donor Egg Bank USA between 2013 and 2021. In total, the study looked at 3,678 donor egg cycles.

The results The study found that the pregnancy outcomes for each year of donor ages between 21 and 32 were comparable to donor eggs age 29.

For your patients

The findings reassure patients using eggs from donors ages 21 through 32 yielded a similar ongoing pregnancy rate.

Differences in reproductive and neonatal outcomes based on time interval from cesarean section to frozen embryo transfer (FET)

SGF research team
Laura Zalles, M.D.; Samad Jahandideh, Ph.D.; Kate Devine, M.D.; and Janet Bruno-Gaston, M.D.

US Fertility Research Contributors
Jiarui Wang, M.S.; Michael Vance Homer, M.D.; Meike L. Uhler, M.D.; and Luis R Hoyos, M.D.

The study

The study looked at 6,545 FETs grouped by three-month duration of time between c-section and subsequent embryo transfer. There were no statistically significant differences in implantation rate, ongoing pregnancy rate, or live birth rate. Birthweight and gestational age at time of delivery were slightly lower with shorter duration between caesarean delivery (CD) and FET. However, it is unclear whether such small differences in these parameters were clinically significant in terms of the health of the newborn.

The results Comparing those who underwent FET less than 6 months versus more than 24 months following CD, there was less than a 200-gram difference in birthweight and less than one week difference in gestational age at delivery. While the findings were reassuring overall, it must be noted that the study was not large enough to assess rare outcomes thought to be associated with a short interval from CD to next pregnancy, such as uterine rupture.

Interval between CD and FET (months)									
	<6	6-9	9-12	12-15	15-18	18-21	21-24	>24	p
n	74	260	598	969	914	759	578	2393	
Age at transfer (years)	36.5 ± 4.1	36.2 ± 4.6	36.5 ± 4.1	36.2 ± 3.9	36.2 ± 4.0	36.3 ± 3.7	36 ± 3.7	36.8 ± 3.9	<0.001
BMI kg/m2	26.6 ± 5.1	26.5 ± 6.1	26.2 ± 5.5	26.1 ± 5.6	25.9 ± 5.4	26.3 ± 5.9	25.9 ± 5.4	26.4 ± 5.8	0.175
Embryos transferred	1.31 (0.52)	1.36 (0.57)	1.29 (0.60)	1.25 (0.5)	1.25 (0.54)	1.20 (0.47)	1.25 (0.52)	1.24 (0.54)	0.002
Primary uterine factor (%)	0 (0.0)	10 (3.8)	21 (3.5)	20 (2.1)	28 (3.1)	12 (1.6)	13 (2.2)	43 (1.8)	0.030
IR (%)	40 (54.1)	113 (43.5)	284 (47.5)	482 (49.7)	467 (51.1)	395 (52.0)	277 (47.9)	1133 (47.3)	0.101
SAB (%)	11 (14.9)	28 (10.8)	49 (8.2)	93 (9.6)	83 (9.1)	65 (8.6)	51 (8.8)	216 (9)	0.652
LBR (%)	28 (37.8)	95 (36.5)	233 (39)	377 (38.9)	372 (40.7)	294 (38.7)	215 (37.2)	875 (36.6)	0.533
Multiple gestation (%)	4 (5.4)	24 (9.2)	30 (5.0)	49 (5.1)	39 (4.3)	29 (3.8)	22 (3.8)	108 (4.5)	0.030
Gestational age at delivery (%)	37.3 ± 3	37.3 ± 3.3	37.9 ± 2.4	38.1 ± 2.4	38.3 ± 1.9	37.8 ± 2.8	38.0 ± 2.3	37.7 ± 2.7	0.003
Birth weight (g)	3147 ± 673	3185 ± 781	3351 ± 728	3382 ± 630	3469 ± 591	3423 ± 618	3380 ± 666	3339 ± 718	0.002

For your patients

This analysis can guide patients and physicians who are balancing short interval risks with the disadvantages of delaying fertility treatment due to increasing maternal age.