Preimplantation genetic testing for aneuploidy is associated with reduced live birth rates in fresh but not frozen donor oocyte in vitro fertilization cycles: an analysis of 18,562 donor cycles reported to Society for Assisted Reproductive Technology Clinic Outcome Reporting System

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Objective: To evaluate the impact of preimplantation genetic testing for aneuploidy (PGT-A) on first transfer live birth rate (LBR) and cumulative LBR (CLBR) in donor oocyte in vitro fertilization (IVF) cycles.
Design: Retrospective cohort study of the Society for Assisted Reproductive Technology Clinic Outcome Reporting System database.
Setting: Fertility centers reporting to Society for Assisted Reproductive Technology.
Patient(s): A total of 11,348 fresh and 7,214 frozen-thawed donor oocyte IVF cycles were analyzed.
Intervention(s): The first reported donor stimulation cycle per patient between January 1, 2014, and December 31, 2015, and all linked embryo transfer cycles between January 1, 2014, and December 31, 2016, were included in the study.
Main Outcome Measure(s): Live birth rate was compared for patients using fresh and frozen-thawed donor oocytes, with or without PGT-A. Logistic regression models were adjusted for age, body mass index, gravidity, infertility etiology, and prior IVF cycles.
Result(s): Among patients who had blastocysts available for transfer or PGT-A, the use of PGT-A was associated with a decreased first transfer LBR (46.9 vs. 53.2%) and CLBR (58.4 vs. 66.6%) in fresh oocyte donor cycles compared with no PGT-A. Live birth rate in frozen-thawed oocyte donor cycles with PGT-A were nominally higher than those without PGT-A (48.3% vs. 40.5%) but were not statistically significant in multivariable logistic regression models. Early pregnancy loss was not significantly different with and without PGT-A. Multiple gestation, preterm birth, and low birth weight infants were all reduced with the addition of PGT-A in fresh donor oocyte cycles, although these outcomes were not significantly different when comparing single embryo transfers in fresh oocyte cycles and also not significantly different among frozen-thawed donor oocyte cycles.

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Conclusion(s): Preimplantation genetic testing for aneuploidy in fresh oocyte donor cycles was associated with decreased LBR and CLBR, whereas effects on frozen-thawed oocyte donor cycles were clinically negligible. Obstetric benefits associated with PGT-A in fresh donor cycles appear linked to increased single embryo transfer. (Fertil Steril® 2025;123:50–60. ©2024 by American Society for Reproductive Medicine.)
El resumen está disponible en Español al final del artículo.

Key Words: Preimplantation genetic testing, donor oocytes, IVF outcomes, national registry, live birth rate

Oocyte donation has enabled many infertile couples and potential parents unable to use autologous oocytes to build their families, but optimal clinical practices for this population remain controversial. American Society for Reproductive Medicine (ASRM) has endorsed multiple indications for considering using donor oocytes, including hypergonadotropic hypogonadism, advanced reproductive age, diminished ovarian reserve (DOR), poor oocyte/embryo quality or multiple prior failed attempts, potential for harboring a significant genetic disorder in the intended recipient and men lacking a female partner seeking to use a gestational carrier (1).

Efforts to perform genetic analysis of preimplantation gametes or embryos have closely followed the development of in vitro fertilization (IVF) techniques. Contemporary use of preimplantation genetic testing (PGT) almost exclusively uses trophectoderm biopsy (2) to remove approximately 5–10 cells from blastocyst-stage embryos (3). One of the most common applications of PGT is to screen for aneuploidy (PGT for aneuploidy [PGT-A]) using high-throughput sequencing. Preimplantation genetic testing for aneuploidy represents 40%–50% of all European PGT applications, and an even larger proportion of all PGT cycles in the United States (4, 5).

Despite multiple technical advances in the methodology used for PGT-A, compelling evidence supporting its benefits, particularly on cumulative live birth rates, is lacking. A recent analysis from our group analyzed outcomes from the Society for Assisted Reproductive Technology (SART) Clinic Outcome Reporting System (CORS) registry focusing on autologous IVF cycles with blastocysts available for either embryo transfer (ET) or PGT-A (6). This study showed that IVF cycles using PGT-A were associated with a lower cumulative live birth rate compared with IVF cycles without PGT-A after multivariate adjustment for all age groups $<$40 years (6).

However, the utility of PGT-A in donor oocyte cycles has never been systematically explored at scale, although the population has unique considerations. The ASRM Practice Committee recommended that all oocyte donors undergo careful genetic screening and preferably be 21–34 years of age (1). Because the rates of aneuploidy among IVF-generated blastocysts (7) and live births in general (8) increase with maternal age, particularly above the age of 35, embryos generated from the "ideal" oocyte donor would be expected to have low aneuploidy rates. Indeed, donor oocyte recipient cycles are recognized to have some of the highest pregnancy and live birth rates among all subgroups undergoing IVF (9).

Existing data on the utility of PGT-A in the donor population are mixed. One analysis of 392 donor oocyte recipient cycles using PGT found a 35% reduced odds of live birth compared with 20,606 cycles not using PGT (9). Another analysis of 1,291 recipient cycles, 262 cycles with and 1,029 without PGT-A from 223 unique donors, reported no difference in live birth rate, cumulative live birth, or miscarriage rate with the use of PGT-A (10). Nonetheless, large-scale observations from national registry data have not been reported to date. To better understand the implications of PGT-A in the donor oocyte population, we performed an analysis of the SART CORS national registry with a focus on oocyte donation cycles.

MATERIALS AND METHODS

Donor oocyte IVF embryo creation cycles from 2014 to 2016 reported to the SART CORS national registry were evaluated for study inclusion. Data were collected through voluntary submission, verified by SART, and reported to the Centers for Disease Control and Prevention (CDC) in compliance with the Fertility Clinic Success Rate and Certification Act of 1992 (Public Law 102-493) (11). Society for Assisted Reproductive Technology maintains Health Insurance Portability and Accountability Act-compliant business associates' agreements with reporting clinics. In 2004, after a contract change with the CDC, SART gained access to the SART CORS data system to conduct research. In 2021, 80% of all assisted reproductive technology clinics were SART members (11).

The data in the SART CORS are validated annually with some clinics receiving on-site visits for chart review based on an algorithm for clinic selection. During each visit, data reported by the clinic were compared with information recorded in patients' charts. In 2021, records for 1,945 cycles at 33 clinics were randomly selected for full validation, along with 262 fertility preservation cycles selected for partial validation. Nine out of 10 data fields selected for validation were found to have discrepancy rates of $\leq$5% (12). The exception was the diagnosis field, which, depending on the diagnosis, had a discrepancy rate between 0.7% and 9.1% (12).

All first reported donor oocyte stimulation embryo creation cycles conducted between January 1, 2014, and December 31, 2015, were identified and linked to all ET cycles between January 1, 2014, and December 31, 2016, using the generated embryos. These dates were chosen to allow for ample time to proceed with multiple ETs after a completed oocyte retrieval cycle. The oocyte donor stimulation cycles were either categorized as fresh or frozen based on whether the retrieved oocytes were vitrified/frozen before fertilization.

Exclusion criteria were autologous oocyte cycles, donor embryo cycles, gestational carrier cycles, and cycles that

included both a fresh ET and frozen-thawed embryo transfer (FET) at the same time (to avoid the possibility of transfer of both PGT tested and untested embryos simultaneously), or ET cycles in which a fresh ET followed PGT. Transfers of non-blastocyst (e.g., cleavage-stage) embryos, elective sex selection cycles, and cycles in which use of PGT was unknown were excluded. Embryo creation cycles using PGT for single gene analysis and human leukocyte antigen typing were excluded, thus restricting the study population to those performing PGT for aneuploidy. ET cycles that were recorded as fresh ET with PGT were excluded, as the difficulty of obtaining next-day results from PGT of blastocyst-stage embryos suggested the possibility of data entry errors (and, most probably, transfer of an untested fresh embryo with PGT on the remaining ones) or use of an alternative (nontrophectoderm biopsy) methodology.

Embryo creation cycles in which PGT was used for some or all embryos were compared against cycles in which PGT was used for none of the embryos. As PGT cytogenetic analysis methods were not available in the SART CORS database until 2016, all PGT methods were included.

Two primary groups were defined based on the use of PGT-A. In the control (no PGT-A) group, the first fresh ET or FET and all subsequent FETs linked to the original stimulation cycle were analyzed for pregnancy outcomes. In the study (PGT-A) group, all FETs linked to the original stimulation cycle were analyzed for pregnancy outcomes. PGT-A cycles without a subsequent linked FET and not classified as "multiple cycles for embryo banking" were categorized as negative pregnancy outcomes, due to the likely absence of euploid embryos available for transfer.

The primary outcome measure was live birth rate (LBR) for the first fresh or frozen-thawed transfer to a given patient on a donor cycle start basis. Secondary outcome measures included cumulative live birth rate (CLBR) for fresh donor oocyte cycles, rates of multiple gestations (as determined by the number of infants delivered at the first birth event after a stimulation cycle), implantation rate (defined as any transfer leading to a positive pregnancy test, including those resulting in spontaneous abortion or ectopic pregnancy), preterm and very preterm birth (defined as delivery <37 and <34 weeks gestation, respectively), pregnancy loss (defined as pregnancies with a positive human chorionic gonadotropin that ended before 20 weeks gestation), and low birth weight (LBW) infants (defined as birth weight $<2,500$ g). Only the first live birth linked to a stimulation cycle was recorded for each patient. Pregnancy outcomes, including pregnancy loss, were calculated on a per-pregnancy basis, whereas infant outcomes were reported on a per-infant basis. Cumulative LBR was not analyzed for frozen donor oocytes because of inconsistent distribution of batches of oocytes to multiple intended recipients.

Descriptive statistics such as count (%) and mean (standard deviation) and all outcomes were presented stratified by use of PGT-A and fresh vs. frozen-thawed donor oocytes. Associations between birth outcomes and group (PGT-A vs. no PGT-A) within each age group category were assessed via logistic regression models. Models were adjusted for age, body mass index (BMI), gravidity, infertility etiology, and history of any prior autologous intended IVF cycle. Two-sided P values $<.05$ were considered statistically significant. All analyses were performed using SAS version 9.4 (SAS Institute Inc, Cary, NC). Approval for this study was obtained from the Albert Einstein College of Medicine Institutional Review Board (IRB# 2016-7031).

RESULTS

Patient demographics per cycle start

The first reported intended embryo creation cycle starts for 18,562 oocyte donor cycles were analyzed, comprising fresh oocyte donor cycles (n = 11,348) and frozen-thawed oocyte donor cycles (n = 7,214). Among the fresh donor cycles, 1,766 (15.6%) used PGT-A, and 9,582 (84.4%) did not. Among the frozen-thawed donor cycles, 522 (7.2%) used PGT-A, and 6,692 (92.8%) did not. Most recipients initiating a fresh donor oocyte cycle were nulliparous (79.3% and 73.4% for the PGT-A and no PGT-A groups, respectively, $P<.001$), although patients with DOR were more common in the no PGT-A compared with the PGT-A group (75.9% vs. 55.3%, respectively, $P<.001$) (Table 1). Similarly, most patients initiating frozen-thawed donor oocyte cycles for intended embryo creation were nulliparous (57.3% and 42.8% for the PGT-A and no PGT-A groups, respectively, $P<.001$) and with higher rates of DOR among those not using PGT-A (59.2% for those with PGT-A vs. 75.8% among those without PGT-A, $P<.001$) (Table 1).

Many fresh oocyte recipients had undergone a prior fresh ET (30.7% vs. 41.8% for those with and without PGT-A, $P<.001$) or FET (9.7% vs. 12.1% for those with and without PGT-A, $P=.004$), whereas the vast majority of frozen-thawed oocyte recipients had undergone a prior fresh ET (72.4% vs. 79.5% for those with and without PGT-A, $P<.001$) or FET (39.7% vs. 37.8% for those with and without PGT-A, $P=.42$) (Table 1).

Slightly fewer embryos were used per transfer attempt when PGT-A was used for fresh oocytes (1.35 ± 0.51 vs. 1.58 ± 0.51, $P<.001$) and frozen-thawed oocytes (1.39 ± 0.50 vs. 1.49 ± 0.56, $P<.001$) compared with no PGT-A (Table 1). Fresh donor oocyte cycles using PGT-A had more two-pronuclear embryos available (7.73 ± 4.84 vs. 5.93 ± 4.35, $P<.001$), completed slightly more transfers (1.81 ± 0.88 vs. 1.54 ± 0.85, $P<.001$) and used more embryos (1.91 ± 2.47 vs. 2.47 ± 1.58, $P<.001$) during the study period compared with those not using PGT-A (Table 1).

Implantation rate per embryo transfer

In fresh donor oocyte cycles, the implantation rate per ET was lower when using PGT-A compared with a transfer without PGT-A (68.9% vs. 81.2%, adjusted $P<.001$ in logistic regression model controlling for age, BMI, gravidity, infertility etiology, and history of any prior autologous intended IVF cycle) (Supplemental Table 1, available online). This effect remained significant across all recipient age groups (adjusted $P \leq .01$ for all age groups).

In frozen-thawed donor oocyte cycles, the implantation rate per ET was slightly higher when using PGT-A compared with not using PGT-A (69.8% vs. 61.0%, adjusted $P=.03$)

TABLE 1

Demographic and clinical characteristics of study population.

	Fresh (N = 11,348)			Frozen (N=7,214)		
	PGT-A (N = 1,766)	No PGT-A (N = 9,582)	*P* value	PGT-A (N = 522)	No PGT-A (N = 6,692)	*P* value
Recipient age at start						
<35	279 (15.8)	1,327 (13.8)	<.001	88 (16.9)	856 (12.8)	.165
35–37	194 (11.0)	904 (9.4)	—	36 (6.9)	553 (8.3)	—
38–40	250 (14.2)	1,495 (15.6)	—	66 (12.6)	889 (13.3)	—
41–42	242 (13.7)	1,478 (15.4)	—	65 (12.5)	851 (12.7)	—
43–44	287 (16.3)	1,770 (18.5)	—	80 (15.3)	1,178 (17.6)	—
45–47	303 (17.2)	1,716 (17.9)	—	114 (21.8)	1,395 (20.8)	—
≥48	211 (11.9)	892 (9.3)	—	73 (14.0)	970 (14.5)	—
Recipient BMI (kg/m^2)						
Continuous	24.21 (4.64)	25.74 (5.41)	<.001	24.36 (4.98)	25.68 (5.51)	<.001
Gravidity						
Nulligravida	1,050 (59.6)	4,196 (44.0)	<.001	187 (36.1)	1,306 (19.6)	<.001
Parity						
Nulliparous	1,401 (79.3)	7,035 (73.4)	<.001	299 (57.3)	2,863 (42.8)	<.001
Etiology						
Male infertility	207 (11.7)	1,322 (13.8)	.02	58 (11.1)	978 (14.6)	.03
Endometriosis	46 (2.6)	459 (4.8)	<.001	28 (5.4)	347 (5.2)	.94
PCOS	31 (1.8)	308 (3.2)	.001	6 (1.1)	203 (3.0)	.02
Diminished ovarian reserve	976 (55.3)	7,273 (75.9)	<.001	309 (59.2)	5,070 (75.8)	<.001
Uterine factor	93 (5.3)	547 (5.7)	.49	36 (6.9)	492 (7.4)	.77
Tubal	47 (2.7)	586 (6.1)	<.001	14 (2.7)	399 (6.0)	.003
Other	811 (45.9)	1,787 (18.6)	<.001	220 (42.1)	1,401 (20.9)	<.001
Unexplained	93 (5.3)	390 (4.1)	.03	25 (4.8)	253 (3.8)	.30
Prior fresh cycle	543 (30.7)	4,007 (41.8)	<.001	378 (72.4)	5,323 (79.5)	<.001
Prior FET cycle	171 (9.7)	1,160 (12.1)	.004	207 (39.7)	2,528 (37.8)	.42
Max FSH[a] (continuous)	17.58 (21.68)	18.29 (21.63)	.54	14.49 (17.83)	19.46 (22.78)	.005
Mean embryos per transfer[b] (continuous)	1.35 (0.51)	1.58 (0.51)	<.001	1.39 (0.50)	1.49 (0.56)	<.001
Number of embryos available (continuous)	7.73 (4.84)	5.93 (4.35)	<.001	—	—	—
Total embryos transferred (continuous)	1.91 (2.47)	2.47 (1.58)	<.001	—	—	—
Total number of cycles during study period (2014–2016) (continuous)	1.81 (0.88)	1.54 (0.85)	<.001	—	—	—
Total number of live births			<.001	—	—	—
0	717 (40.6)	3,202 (33.4)	—	—	—	—
1	982 (55.6)	6,043 (63.1)	—	—	—	—
2	24 (1.4)	287 (3.0)	—	—	—	—
3	0 (0.0)	2 (0.0)	—	—	—	—

Note: Data are presented as n (%) unless continuous variable, which are summarized as mean (SD). BMI, body mass index; FET = frozen-thawed embryo transfer; FSH, follicle stimulating hormone; PCOS, polycystic ovary syndrome; PGT-A = preimplantation genetic testing for aneuploidy.

[a] BMI missing: n = 5,048. Gravidity missing: n = 98. Parity missing: n = 125. Max FSH missing: n = 11,434.

[b] Calculated from cycles with attempted transfer.

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(Supplemental Table 1). This effect was not significant when stratified by recipient age (Supplemental Table 1).

Live birth rate from first transfer

In fresh oocyte donor cycles, the LBR from the first ET was lower with PGT-A compared with no PGT-A (46.9% vs. 53.2%, $P<.001$ after adjustment for age, BMI, gravidity, etiology, and history of any prior cycle) (Table 2). These findings remained significant on adjusted analyses across many recipient age groups, including patients aged 35–37, 41–42, and 45–47 years (Table 2).

Live birth rate in the first ET from frozen-thawed oocyte donor cycles was not significantly different with or without PGT-A overall (48.3% vs. 40.5%, adjusted $P=.14$) (Table 2). However, the LBR from the first transfer was slightly higher among recipients ≥48 years (46.6% vs. 34.6%, adjusted $P=.04$) (Table 2).

Cumulative live birth rate per cycle start

In fresh oocyte donor cycles, PGT-A was associated with a reduced CLBR (58.4% for PGT-A and 66.6% for no PGT-A, respectively) ($P<.001$, after adjustment for age, BMI, gravidity, etiology, and history of any prior cycle) (Table 2), despite the increased number of available two-pronuclear embryos (Table 1). The numerically lower CLBR was observed across all recipient age groups and met significance for recipients aged 35–37, 38–40, 41–42, 45–47, and 48+ years (Table 2).

TABLE 2

Live birth rate by age and fresh/frozen donor status.

	Cumulative					First transfer cycle								
	Fresh donor oocytes					Fresh donor oocytes					Frozen-thawed donor oocytes			
	PGT-A + FET	No PGT-A	OR	95% CI	*P* value	PGT-A + FET	No PGT-A	OR	95% CI	*P* value	PGT-A + FET	No PGT-A	OR	95% CI	*P* value
	PGT-A vs. no PGT-A					PGT-A vs. no PGT-A							PGT-A vs. no PGT-A		
Overall	1,006 (58.4)	6,332 (66.6)	0.7	0.57–0.75	<.001	829 (46.9)	5,093 (53.2)	0.7	0.63–0.82	<.001	252 (48.3)	2,712 (40.5)	1.2	0.94–1.50	.14
Recipient age															
<35	165 (61.1)	894 (68.3)	0.71	0.49–1.05	.085	143 (51.3)	726 (54.7)	0.88	0.61–1.27	.49	49 (55.7)	381 (44.5)	1.57	1.01–2.45	.05
35–37	114 (59.4)	621 (69.5)	0.62	0.4–0.97	.037	86 (44.3)	496 (54.9)	0.64	0.41–0.98	.04	17 (47.2)	241 (43.6)	1.16	0.58–2.28	.67
38–40	145 (59.9)	1,011 (68)	0.68	0.48–0.98	.036	129 (51.6)	827 (55.3)	0.84	0.6–1.19	.34	30 (45.5)	366 (41.2)	1.19	0.72–1.97	.50
41–42	138 (58.5)	999 (68.1)	0.61	0.43–0.88	.008	109 (45)	811 (54.9)	0.54	0.38–0.77	.001	34 (52.3)	363 (42.7)	1.47	0.89–2.45	.13
43–44	172 (61)	1,146 (65.2)	0.84	0.61–1.17	.299	142 (49.5)	940 (53.1)	0.81	0.6–1.11	.19	39 (48.8)	465 (39.5)	1.46	0.92–2.3	.10
45–47	170 (57.6)	1,118 (65.6)	0.55	0.4–0.75	<.001	135 (44.6)	861 (50.2)	0.64	0.47–0.88	.01	49 (43)	560 (40.1)	1.12	0.76–1.65	.55
≥48	102 (49.5)	543 (61.6)	0.54	0.36–0.82	.004	85 (40.3)	432 (48.4)	0.73	0.48–1.09	.13	34 (46.6)	336 (34.6)	1.64	1.02–2.65	.04

Note: *P* values calculated from logistic regression models adjusting for BMI, gravidity, etiology, and prior cycle (any). Overall estimate additionally adjusted for age. Individuals with no transfers were defined as no live birth. BMI = body mass index; CI = confidence interval; FET = frozen-thawed embryo transfer; OR = odds ratio; PGT-A = preimplantation genetic testing for aneuploidy.

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Early pregnancy loss

In fresh donor oocyte cycles, the early pregnancy loss rate was not significantly different between the PGT-A group and the no PGT-A group overall (8.8% vs. 11.1%, adjusted $P=.07$) or in subanalyses stratified by recipient age group (adjusted $P>.05$ for all comparisons) (Table 3).

In frozen-thawed donor oocyte cycles, there were no significant differences in the early pregnancy loss rates between PGT-A and no PGT-A cycles, either overall (9.3% vs. 10.0%, adjusted $P=.95$), or between specific age groups (adjusted $P>.05$ for all comparisons) (Table 3).

Multiple gestations

Among deliveries resulting from fresh donor oocyte embryo creation cycles, use of PGT-A was associated with reduced multiple (twin or higher order) gestations compared with no PGT-A (21.2% vs. 26.3%, respectively, adjusted $P<.001$) (Table 4). On subanalysis, multiple gestations were more common in the no PGT-A group among recipients ages 35–37, 38–40, and 41–42 (adjusted $P=.04$, .02, and .02, respectively). Among deliveries resulting from frozen-thawed donor oocyte cycles, multiple gestation rates were not significantly different between the PGT-A and no PGT-A groups (adjusted $P=.47$) with similar findings across recipient age groups (Table 4).

Preterm births

In fresh oocyte donor cycles, rates of preterm birth were lower in cycles with PGT-A compared with those that did not use PGT-A at <37 weeks (31.3% vs. 39.2%, adjusted $P<.001$) and at <34 weeks (7.9% vs. 12.3%, adjusted $P=.005$) (Table 5). On subanalysis, preterm delivery at < 37 weeks was less common in PGT-A compared with non-PGT-A transfers among women aged 38–40 years (33.1% vs. 38.1%, adjusted $P=.01$) and 43–44 (27.3% vs. 39.5%, adjusted $P=.01$). In the remaining age groups, preterm deliveries between PGT-A and non-PGT-A cycles were not significantly different. Among single ETs resulting from fresh oocyte donor cycles, preterm deliveries (20.2% vs. 25.1%, adjusted $P=.18$) and very preterm deliveries (4.3% vs. 5.9%, adjusted $P=.3$) were not significantly different with or without PGT-A (Supplemental Table 3).

In frozen-thawed donor oocyte cycles, there was no significant difference in the rate of preterm birth at <37 weeks or <34 weeks between the PGT-A and no PGT-A groups (adjusted $P\geq.05$ for all comparisons) (Table 5). Similar findings were noted for frozen-thawed donor oocyte cycles restricted to single ET (Supplemental Table 3).

Low birth weight infants

Patients who used fresh donor oocytes with PGT-A delivered infants with a higher mean birthweight (2,980 g) compared with transfers without PGT-A (2,843 g) (adjusted $P=.001$) (Supplemental Table 2). In the subgroup analysis, this difference was statistically significant at recipient aged 38–40 (adjusted $P=.02$) and 43–44 ($P=.03$), but not at other recipient ages (Supplemental Table 2). Preimplantation genetic testing

TABLE 3

Early pregnancy loss by age and fresh/frozen donor status.

	Fresh donor oocytes					Frozen-thawed donor oocytes				
			PGT-A vs. no PGT-A					PGT-A vs. no PGT-A		
	PGT-A + FET	No PGT-A	OR	95% CI	*P* value	PGT-A + FET	No PGT-A	OR	95% CI	*P* value
Overall	151 (8.8)	1,058 (11.1)	0.81	0.64–1.02	.07	46 (9.3)	667 (10)	0.99	0.65–1.45	.95
Recipient age										
<35	21 (7.8)	141 (10.8)	0.77	0.37–1.46	.45	12 (14)	74 (8.6)	1.76	0.56–4.63	.29
35–37	11 (5.7)	89 (10)	0.92	0.38–2	.84	4 (11.4)	56 (10.1)	1.76	0.38–5.98	.41
38–40	22 (9.1)	166 (11.2)	0.69	0.34–1.27	.27	4 (6.3)	92 (10.3)	0.93	0.27–2.47	.90
41–42	21 (8.9)	164 (11.2)	0.67	0.33–1.24	.23	7 (12.1)	89 (10.5)	1.12	0.36–2.89	.83
43–44	29 (10.3)	212 (12.1)	0.98	0.59–1.57	.94	4 (5.4)	112 (9.5)	0.89	0.26–2.32	.82
45–47	29 (9.8)	190 (11.2)	0.88	0.5–1.46	.63	8 (7.5)	133 (9.5)	0.83	0.28–1.97	.70
≥48	18 (8.7)	96 (10.9)	0.80	0.37–1.61	.56	7 (9.9)	111 (11.4)	0.59	0.14–1.73	.40

Note: P values calculated from logistic regression models adjusting for BMI, gravidity, etiology, and prior cycle (any). Overall estimate additionally adjusted for age. BMI = body mass index; CI = confidence interval; FET = frozen-thawed embryo transfer; OR odds ratio; PGT-A = preimplantation genetic testing for aneuploidy.

Gingold. PGT-A in SART-CORS donor oocyte cycles . Fertil Steril 2025.

for aneuploidy was associated with a decreased incidence of LBW (< 2,500 g) infants (24.5% vs. 31.4%, adjusted $P=.002$). However, on subanalysis by recipient age, only recipients aged 38–40 and 43–44 demonstrated a significant difference in the rate of LBW with and without PGT-A. When restricted to single ETs, LBW for fresh donor oocyte cycles was not significantly different with and without PGT-A (Supplemental Table 3).

Infant birth weights for frozen-thawed donor oocytes were not significantly different between cycles with and without PGT-A (3,029 g vs. 3,000 g, adjusted $P\geq.05$), with similar findings across all recipient age groups (Supplemental Table 2). Incidence of LBW infants among frozen donor oocytes was not significantly different with and without PGT (21.9% vs. 23.9%, adjusted $P=.47$), and across all recipient age subgroups (Supplemental Table 2). When restricted to single ETs, LBW was not significantly different for frozen-thawed donor oocyte cycle cycles with and without PGT-A (Supplemental Table 3).

DISCUSSION

This is the largest study using SART national registry data assessing the implications of PGT-A in donor oocyte cycles. Remarkably, the study found that use of PGT-A was associated with a lower CLBR and LBR from the first ET in fresh donor oocyte embryo creation cycles, whereas the LBR from the first ET in frozen donor oocyte cycles was not significantly different with and without PGT-A. The first transfer LBR was highest when using fresh donor oocytes without PGT-A (53.2%), which was higher than fresh donor oocytes with PGT-A (46.9%), frozen-thawed oocytes with PGT-A (48.3%) or frozen-thawed oocytes without PGT-A (40.5%).

The difference in CLBR outcomes in fresh donor oocyte cycles without and with PGT-A (66.6% vs. 58.4%) implies that 12 additional applications of PGT-A in fresh donor oocyte cycles will lead to one intended recipient not experiencing a live birth after use of the embryos generated from that retrieval within this study's follow-up time. Given the increased two-pronuclear embryo availability among the

TABLE 4

Multiple pregnancy rate by age and fresh/frozen donor status.

	Fresh					Frozen				
			PGT-A vs. no PGT-A					PGT-A vs. no PGT-A		
	PGT-A + FET	No PGT-A	OR	95% CI	*P* value	PGT-A + FET	No PGT-A	OR	95% CI	*P* value
Overall	214 (21.2)	1,664 (26.3)	0.59	0.47–0.73	<.001	54 (21.4)	471 (17.4)	1.18	0.75–1.8	.47
Recipient age										
<35	47 (28.5)	277 (31)	0.74	0.43–1.23	.26	16 (32.7)	73 (19.2)	1.58	0.54–4.29	.38
35–37	29 (25.4)	187 (30.1)	0.46	0.2–0.94	.04	6 (35.3)	47 (19.5)	2.20	0.28–11.92	.39
38–40	33 (22.6)	269 (26.6)	0.46	0.24–0.84	.02	6 (20)	67 (18.3)	1.43	0.37–4.54	.57
41–42	22 (15.9)	263 (26.3)	0.46	0.23–0.83	.02	4 (11.8)	69 (19)	0.92	0.2–3.07	.90
43–44	29 (16.9)	277 (24.2)	0.60	0.33–1.02	.07	9 (23.1)	66 (14.3)	1.75	0.58–4.71	.29
45–47	31 (18.2)	261 (23.3)	0.75	0.42–1.26	.30	7 (14.3)	84 (15)	0.67	0.15–2.08	.53
≥48	23 (22.3)	130 (23.9)	0.69	0.31–1.42	.34	6 (17.6)	65 (19.3)	0.87	0.23–2.66	.83

Note: P values calculated from logistic regression models adjusting for BMI, gravidity, etiology, and prior cycle (any). Overall estimate additionally adjusted for age. BMI = body mass index; CI = confidence interval; FET = frozen-thawed embryo transfer; OR = odds ratio; PGT-A = preimplantation genetic testing for aneuploidy.

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TABLE 5

Prematurity by age and fresh/frozen donor status.

	< 37 wk					< 34 wk				
			PGT-A vs. no PGT-A					PGT-A vs. no PGT-A		
	PGT-A + FET	No PGT-A	OR	95% CI	*P* value	PGT-A + FET	No PGT-A	OR	95% CI	*P* value
Overall	315 (31.3)	2,475 (39.2)	0.65	0.54, 0.78	<.001	79 (7.9)	774 (12.3)	0.63	0.46, 0.86	.005
Fresh										
<35	55 (33.3)	352 (39.5)	0.87	0.54–1.4	.58	12 (7.3)	128 (14.3)	0.42	0.14–0.99	.07
35–37	41 (36)	248 (40)	0.79	0.43–1.45	.46	10 (8.8)	81 (13.1)	0.60	0.2–1.49	.31
38–40	48 (33.1)	385 (38.1)	0.48	0.28–0.8	.01	15 (10.3)	121 (12)	0.43	0.15–1.01	.08
41–42	40 (29)	384 (38.6)	0.73	0.44–1.17	.20	11 (8)	127 (12.8)	0.88	0.39–1.74	.73
43–44	47 (27.3)	452 (39.5)	0.52	0.33–0.81	.01	11 (6.4)	139 (12.2)	0.55	0.24–1.11	.12
45–47	51 (30)	421 (37.8)	0.66	0.41–1.03	.08	13 (7.6)	121 (10.9)	1.09	0.51–2.12	.80
≥48	33 (32.4)	233 (43)	0.68	0.36–1.25	.22	7 (6.9)	57 (10.5)	0.66	0.19–1.85	.48
Overall	89 (35.5)	953 (35.2)	1.02	0.70–1.45	.93	28 (11.2)	259 (9.6)	1.09	0.58–1.91	.76
Frozen										
<35	21 (42.9)	122 (32.1)	1.41	0.57–3.39	.45	3 (6.1)	38 (10)	0.35	0.02–1.95	.33
35–37	6 (35.3)	83 (34.4)	0.59	0.08–2.89	.54	4 (23.5)	21 (8.7)	5.97	0.24–78.45	.18
38–40	10 (33.3)	140 (38.3)	0.97	0.32–2.69	.95	4 (13.3)	49 (13.4)	0.94	0.14–3.73	.93
41–42	10 (30.3)	131 (36.1)	1.27	0.43–3.54	.65	4 (12.1)	29 (8)	1.39	0.2–5.75	.69
43–44	14 (35.9)	145 (31.4)	1.12	0.43–2.69	.81	5 (12.8)	39 (8.4)	2.60	0.68–8.21	.12
45–47	15 (30.6)	200 (35.7)	0.98	0.4–2.24	.96	3 (6.1)	49 (8.8)	0.48	0.03–2.5	.48
≥48	13 (38.2)	132 (39.4)	0.94	0.34–2.41	.89	5 (14.7)	34 (10.1)	1.75	0.34–6.88	.46

Note: P values calculated from logistic regression models adjusting for BMI, gravidity, etiology, and prior cycle (any). Overall estimate additionally adjusted for age. BMI = body mass index; CI = confidence interval; FET = frozen-thawed embryo transfer; OR = odds ratio; PGT-A = preimplantation genetic testing for aneuploidy.

Gingold. PGT-A in SART-CORS donor oocyte cycles . Fertil Steril 2025.

cycles using PGT-A (7.73 ± 4.84 vs. 5.93 ± 4.35), the potential harm from PGT-A in fresh donor oocyte cycles may be even greater. Despite the lack of any evident benefit, PGT-A was surprisingly prevalent among both fresh and frozen donor oocyte cycles, at approximately 13.7% of fresh and 8.0% of frozen-thawed cycles. Although this utilization is far lower than among autologous cycles, the SART registry provides little insight into the indications for such testing or the source of such a preference.

This study of donor oocyte IVF cycle outcomes with and without PGT-A is highly consistent with its sister study on autologous IVF cycles (using fresh autologous oocytes) (6), which reported a significant reduction in the CLBR with use of PGT-A among patients ≤40 years but a clear reduction in multiple pregnancies. This study failed to demonstrate a lower pregnancy loss rate with the use of PGT-A in adjusted analyses, although this may have been limited by the sample size. It is also highly consistent with reported findings from the CDC's Web-based National Assisted Reproductive Technology Surveillance System highlighting the lack of benefit in pregnancy and live birth rate among women <35 years undergoing autologous IVF (13). The literature regarding donor oocyte cycles is admittedly more sparse, but these findings are compatible with retrospective cohort studies reporting lower live birth rates in donor oocyte cycles using PGT (9) and lack of benefit in CLBR with use of PGT-A (10).

Evidence from randomized control trials (RCTs) regarding PGT-A is mostly consistent with this study's primary findings. One RCT that assessed the effect of addition of PGT-A via an array of comparative genomic hybridization of polar body biopsy among women 36–40 undergoing intracytoplasmic sperm injection failed to identify different cumulative live birth rates between the PGT-A and no PGT groups (14). The lack of differences in this study may reflect its use of a different PGT-A methodology or study limitations because of sample size.

Similarly, the addition of PGT-A for women with at least two blastocysts available for biopsy in another RCT also failed to identify differences in overall pregnancy rate after the first transfer by intention-to-treat analysis (15). Our work, using a larger but less controlled cohort, highlights a reduced live birth rate with addition of PGT-A after the first ET when using fresh donor oocytes. This finding is particularly remarkable if one assumes that PGT-A is being used to select out aneuploid embryos with very poor pregnancy potential and that any completed ET with PGT-A is more likely to be euploid than an untested ET. Although it is impossible to control for all confounders that may impact LBR across this retrospective cohort (including specific PGT-A results, methodology of PGT-A, embryo and laboratory technique particularly regarding trophectoderm biopsy, patient- and donor-specific factors, etc.), this study on donor oocytes suggests that the PGT process may be detrimental to embryo survival and implantation ability. However, at least some of the reduced LBR with PGT-A is likely due to more consistent use of single ET.

Although the aforementioned RCT (15) did not report cumulative live birth rates, it is reasonable to infer that they were also lower in the PGT-A group, as fewer normal-appearing embryos in the PGT-A group would be considered fit for transfer despite having comparable per embryo success rates. This lack of compelling evidence in favor of PGT-A improving reproductive outcomes led the investigators of a recent Cochrane systematic review to conclude that "it is uncertain whether PGT-A and genome-wide analysis is an effective addition to IVF" (16).

Although multiple ETs occurred more frequently when not using PGT-A, if one assumes that PGT-A carries no harm and all embryos with pregnancy potential are used, the subsequent transfers of additional embryos left over (and not yet transferred) in the PGT-A group should have allowed the CLBR to catch up and potentially exceed that of cycles without PGT-A. This is because a single ET strategy is most likely to maximize the cumulative live birth (17) if all embryos are used. However, the reduced CLBR with PGT-A among fresh oocyte cohorts demonstrates that they never catch up. This suggests that not all available embryos with theoretical live birth potential are being used (e.g., because of falsely "abnormal" results on PGT-A or patients using PGT-A intentionally not transferring available "normal" embryos) or that the embryos themselves may be directly harmed from the biopsy procedure. Alternatively, confounding in the cohort may explain these findings. For example, older patients with greater financial resources and ability to pay for PGT-A may also have increased rates of uterine disorders known to impact live birth rates or have older partners, which may also negatively impact live birth rates. Similarly, patients choosing to use PGT-A on their donor oocytes may also be more likely to select oocyte donors with lower live birth potential, perhaps due to other traits. We are unable to identify all motivations for completing PGT-A, some of which may significantly impair the CLBR. For example, patients who are requesting PGT-A for sex selection or subsequently elect to transfer only embryos of a particular sex after receiving PGT-A results would be expected to have lower LBR and CLBR rates. Unfortunately, it is unknown how many such euploid ETs were not completed.

The benefits of PGT-A in fresh donor oocyte cycles overall appear limited, although there is a clear suggestion of potential harm. Although our companion study on autologous cycles showed a decreased pregnancy loss rate with PGT-A (6), we failed to identify such differences in this cohort. This may be due to sample size limitations or perhaps due to the low rate of aneuploidy among potential oocyte donors. Any true effect size among donor oocytes with or without PGT-A is likely very small (8.8% vs. 11.1% loss rates, respectively, were reported in this study).

The other supposed benefits of PGT-A in fresh donor oocyte cycles are more controversial. Although PGT-A use was associated with a lower rate of multiple pregnancies and a lower incidence of prematurity and LBW infants, this benefit was entirely attributable to differential use of elective single embryo transfers (eSETs), and these outcomes were nearly identical when analysis was restricted to eSETs. Because only approximately 2% of pregnancies (i.e., approximately 4% of live births) after single blastocyst transfers among favorable-prognosis patients <35 years are multiples (17), the higher rates of multiple gestation observed in excess of this level in this study (Table 4) almost certainly reflect transfer of more than one embryo. Given that ASRM recommends elective single ETs for untested embryos from women (including oocyte donors) under 38 years and for all euploid embryos regardless of oocyte age (18), such multiple ETs (both with and without PGT-A) were likely at variance with ASRM practice guidance. Nonetheless, this study's data as well as prior data from autologous cycles (17) suggest that obstetric and neonatal complications are reduced with an eSET strategy. One might be able to attribute medical benefits to PGT-A to the extent that the use of PGT-A in donor oocyte cycles in clinical practice is associated with an increase in eSET compared with a no PGT strategy.

The reduction in LBWs (and increase in overall birth weight) with PGT-A among fresh donor oocytes may be affected by factors other than the lower multiple pregnancy rate, although these are probably second-order effects. For example, the trophectoderm biopsy may directly impact early intrauterine development and placentation. However, this mechanism is divergent from other reports suggesting a higher rate of preeclampsia without an increase in preterm or LBW deliveries after trophectoderm biopsy (19).

One of the major limitations of this study is that outcomes were not adjusted for the age of the oocyte donors, as this was not available in the SART database. As a result, it was not possible to control for age-related aneuploidy among donors. We speculate that fresh donor oocytes are more likely than frozen-thawed donor oocytes to include oocytes that come from directed donors, who may be more likely to have age-related aneuploidy or other oocyte quality issues than non-identified donors. A future study may consider restricting the analysis to nondirected donors. We also were unable to control for paternal age in this study.

The ETs from this retrospective cohort correspond to embryos created ≤ 10 years ago. Society for Assisted Reproductive Technology data are finalized approximately 2 years after the treatment cycles because of the need for reporting pregnancy outcomes collected by clinics from their former patients. Although this dataset was obtained from SART after obtaining Institutional Review Board approval and submitting a competitive research proposal in 2019, we are unable to obtain updated registry data without completing a new research proposal and a likely 2-year delay. Although multiple factors contribute to the diagnosis of mosaicism in biopsied embryos (which ranges from 2% to 40%) (20,21), improved bioinformatics analysis pipelines over the last 10 years may enable lower mosaicism call rates and more completed euploid ETs in the PGT-A group, potentially driving better outcomes than were observed in this older cohort.

Preimplantation genetic testing for aneuploidy was used in a surprisingly small minority of donor oocyte cycles in this cohort (15.5% of fresh oocyte cycles and 7.2% of frozen oocyte cycles) (Table 1). This low utilization of PGT-A among donor oocyte cycles, in contrast to the widespread reported utilization of PGT-A in autologous cycles (4, 5), is arguably expected, as most oocyte donors are young. Although we lack any primary data to establish that PGT-A has been increasing among donor oocyte cycles since 2014–2016 when the dataset was collected, we speculate that a more contemporary cohort would demonstrate higher PGT-A utilization among donor cycles as well. Many patients, especially in the past 10 years, have bought into the idea that PGT-A shortens the time to conception by allowing selection against aneuploid embryos with low pregnancy or live birth potential. Notably, this study fails to establish such benefits in donor oocyte cycles.

We lack a compelling explanation for the lower utilization of fresh oocytes among patients with a prior autologous cycle history. We speculate that patients without a prior

autologous IVF cycle would be enriched for those who were discouraged from retrieving autologous oocytes at the time of presentation, either due to having severe ovarian insufficiency or DOR or for lack of financial resources to pursue any less successful autologous cycles first. Nonetheless, the impact of these biases on success rates when using donor oocytes is unclear. Socioeconomic status is correlated with multiple health conditions and measures, such as body mass index, and may thus introduce a layer of confounding that can adversely impact clinical outcomes. Patients with more constrained finances completing a donor oocyte cycle might be expected to preferentially use a known donor who might be more affordable but less carefully selected and associated with inferior live birth outcomes. Alternatively, perhaps patients who previously underwent autologous IVF cycles are merely more comfortable with the prospect of requiring multiple cycles using frozen donor oocytes to conceive and may prioritize convenience over absolute success rates.

Despite our efforts to control for known covariates, there remain multiple unmeasurable potential confounders. For example, patients looking for oocyte donors from a specific ethnicity might have difficulty finding fresh donors and be biased toward using frozen donor oocytes. Patients using known/directed donors would be expected to have worse outcomes, largely driven by donor age. There is likely significant local/regional variation across states, fertility networks, fertility clinics, and even embryologists. Although it is possible to measure and mostly standardize aspects of the stimulation protocol, retrieval/transfer technique plus laboratory variation is much more challenging. This variation likely includes measurable differences such as rate of use of intracytoplasmic sperm injection, PGT-A, patient, and oocyte donor population demographic differences, and selection of laboratories performing PGT (and their respective mosaicism and no-result rates). More difficult-to-measure variation may also include technique when performing the trophectoderm biopsy (with the potential to affect embryonic quality and further development), growth media and embryo culture conditions, and center-specific patterns in offering fresh vs. frozen donor oocytes to their patients. Unfortunately, SART does not provide clinic-level granularity (or even state-level granularity) because of concern that such details could be used to unmask individual centers and discourage member sites from participating in their voluntary reporting system, significantly impeding any attempts at statistical adjustment.

There is strong evidence that embryos reported to be aneuploid or harbor mosaicism based on trophectoderm biopsy can lead to euploid pregnancies and live births, although at significantly lower rates than those with euploid results (13). Although the viability of aneuploid embryos does not come close to accounting for the difference in live birth rates between the groups, mosaicism call rates vary significantly across laboratories, potentially because of false positives (22). The live birth potential of "mosaic" embryos is significant (23). By definition, PGT-A cannot improve embryo quality or increase the cumulative live birth rate if all embryos are used, although it may improve the CLBR if it enables more efficient prioritization of embryos for transfer within a given time period or before the intended recipient becoming discouraged and stopping treatment. In this national registry cohort, adoption of PGT-A in fresh donor oocyte cycles is associated with decreased CLBR without enabling more efficient prioritization of embryos for the first transfer. One analysis estimated that 30%–40% of potential implantations are lost by addition of PGT-A (13). It appears that any potential harm from PGT-A is much lower than this in clinical practice, but the overall direction is consistent.

Notably, the LBR among frozen-thawed donor oocyte cycles was markedly lower than that of fresh donor oocyte cycles without PGT. This suggests that a different process is likely in play for the frozen-thawed donor oocytes. Oocyte vitrification has been demonstrated to induce epigenetic and transcriptional changes (13) that may compromise normal oocyte and embryonic development, based on extrapolation from mouse models (24). It is possible that whatever damage is sustained by the oocyte from vitrification dictates the IVF cycle outcome and is fully masking any potential harm that PGT-A from a trophectoderm biopsy might normally induce. However, other differences in both the patients who choose to use frozen-thawed donor oocytes and the oocyte donors who provide them may explain some of the disparities between the fresh and frozen donor oocyte groups.

Because the SART CORS database does not report the number of donor oocytes directed toward each recipient, we were unable to meaningfully measure the CLBR for frozen-thawed donor oocyte cycles. This study did not exclude split donor oocyte cycles, which are particularly prevalent among frozen-thawed donor oocyte cycles and may contribute to outcome heterogeneity. Shipment of frozen oocytes from commercial egg banks to IVF programs, in combination with warming of oocytes within the IVF laboratory, may reduce the potential of these oocytes to form embryos because of their fragility and nuances in warming protocol and introduce an additional source of outcome variability.

In conclusion, addition of PGT-A is associated with a detrimental effect on the LBR and CLBR among fresh donor oocyte cycles. It also potentially encourages eSET and is associated with fewer multiple gestations, preterm deliveries and LBW deliveries, although these benefits appear achievable without the need for PGT-A merely by consistently using eSET. For unclear reasons, detrimental effects of PGT-A among frozen-thawed donor oocyte cycles (if any) appear to be overall negligible. However, the slightly higher LBR in recipients 48 years or older undergoing transfers made from frozen-thawed donor oocytes may reflect PGT-A enabling more efficient prioritization of embryos. Given the reduced first transfer LBR and CLBR in association with PGT-A in fresh donor oocyte cycles despite increased two-pronuclear embryo availability, use of PGT-A in fresh oocyte cycles should be undertaken with significant caution.

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CRediT Authorship Contribution Statement

Julian A. Gingold: Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Formal analysis. **Alexander Kucherov:** Writing – original draft, Methodology, Investigation, Formal analysis, Conceptualization. **Haotian Wu:** Writing – review & editing, Methodology, Investigation, Formal analysis, Data curation. **Melissa Fazzari:** Methodology, Investigation, Formal analysis. **Harry Lieman:** Writing – review & editing, Writing – original draft, Supervision, Conceptualization. **G. David Ball:** Writing – original draft, Supervision, Conceptualization. **Kevin Doody:** Writing – original draft, Investigation, Conceptualization. **Sangita Jindal:** Writing – review & editing, Writing – original draft, Supervision, Project administration, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization.

Declaration of Interests

J.A.G. has nothing to disclose. A.K. has nothing to disclose. H.W. has nothing to disclose. M.F. has nothing to disclose. H.L. has nothing to disclose. G.D.B. has nothing to disclose. K.D. has nothing to disclose. S.J. has nothing to disclose.

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La prueba genética preimplantacional para aneuploidía está asociada con una disminución de la tasa de nacidos vivos en ciclos de fertilización in vitro con ovocitos donados frescos pero no en ciclos con ovocitos congelados: un análisis de 18,562 ciclos de donantes reportados al Sistema de Reportes de Resultados Clínicos de la Sociedad de Tecnología de Reproducción Asistida

Objetivo: Evaluar el impacto de la prueba de preimplantación genética para aneuploidía (PGT-A) en la tasa de nacidos vivos en la primer transferencia (LBR) y la tasa acumulativa de nacidos vivos (CLBR) en ciclos de fertilización in vitro (IVF) de ovocitos donados.

Diseño: Estudio de cohorte retrospectivo del Sistema de Reportes de Resultados Clínicos de la Sociedad de Tecnología de Reproducción Asistida.

Lugar: Centros de fertilidad que reportan a la Sociedad de Tecnologías de Reproducción Asistida.

Paciente (s): Se analizaron un total de 11,348 ciclos frescos y 7,214 ciclos congelados-descongelados de fertilización in vitro de ovocitos donados.

Intervención (es): Se incluyeron en el estudio el primer ciclo de estimulación de donantes reportado por paciente entre Enero 1 de 2014 y Diciembre 31 de 2015, y todos los ciclos vinculados de transferencia embrionaria entre Enero 1 del 2014 y Diciembre 31 del 2016.

Principal (es) Medida (s) de Resultado (s): La tasa de nacidos vivos fue comparada en pacientes usando ovocitos donados frescos y congelados-descongelados, con o sin PGT-A. Los modelos de regresión de logística fueron ajustados por edad, índice de masa corporal, embarazo, etiología de infertilidad, y ciclos previos de IVF.

Resultado (s): Entre las pacientes que tenían blastocistos disponibles para transferencia o PGT-A, el uso de PGT-A fue asociado con una disminución de LBR en la primera transferencia (46.9% vs. 53.2%) y CLBR (58.4% vs. 66.6%) en ciclos de ovocitos donados frescos comparados con aquellos sin PGT-A. La tasa de nacidos vivos en ciclos de ovocitos donados congelados-descongelados con PGT-A fueron ligeramente más altas que aquellas sin PGT-A (48.3% vs. 40.5%) pero no fueron significativamente diferentes en los modelos de regresión de logística multivariables. La pérdida temprana de embarazo no fue significativamente diferente con o sin PGT-A. Gestación múltiple, parto prematuro, y bajo nivel de peso de los infantes fueron todas disminuidas con la adición de PGT-A en ciclos de ovocitos donados frescos, a pesar que estos resultados no fueron significativamente diferentes al comparar transferencias de embriones únicas en ciclos de ovocitos frescos ni tampoco fueron significativamente diferentes entre los ciclos de ovocitos donados congelados-descongelados.

Conclusión (es): La prueba de preimplantación genética para aneuploidía en ciclos de ovocitos donados frescos fue asociada con una disminución de LBR y CLBR, mientras que los efectos en ciclos de ovocitos donados congelados-descongelados fueron clínicamente insignificantes. Los beneficios obstétricos asociados con PGT-A en ciclos de ovocitos donados frescos parecen estar vinculados con un aumento de transferencia embrionaria única.