



2026 PCRS ANNUAL MEETING

REPRODUCTIVE FRONTIERS: BRIDGING BIOLOGY,
PRACTICE, AND POSSIBILITY

MARCH 18-22 | RANCHO MIRAGE, CA



PACIFIC COAST
REPRODUCTIVE
SOCIETY

Engaging Patients in Embryo Disposition Decisions After PGT

Alleigh Boyd, MS, CGC



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Disclosures

- Neither I nor members of my immediate family have any actual or potential financial interests to disclose relating to the content of this presentation.

Needs Assessment Statement and Expected Learning Outcomes

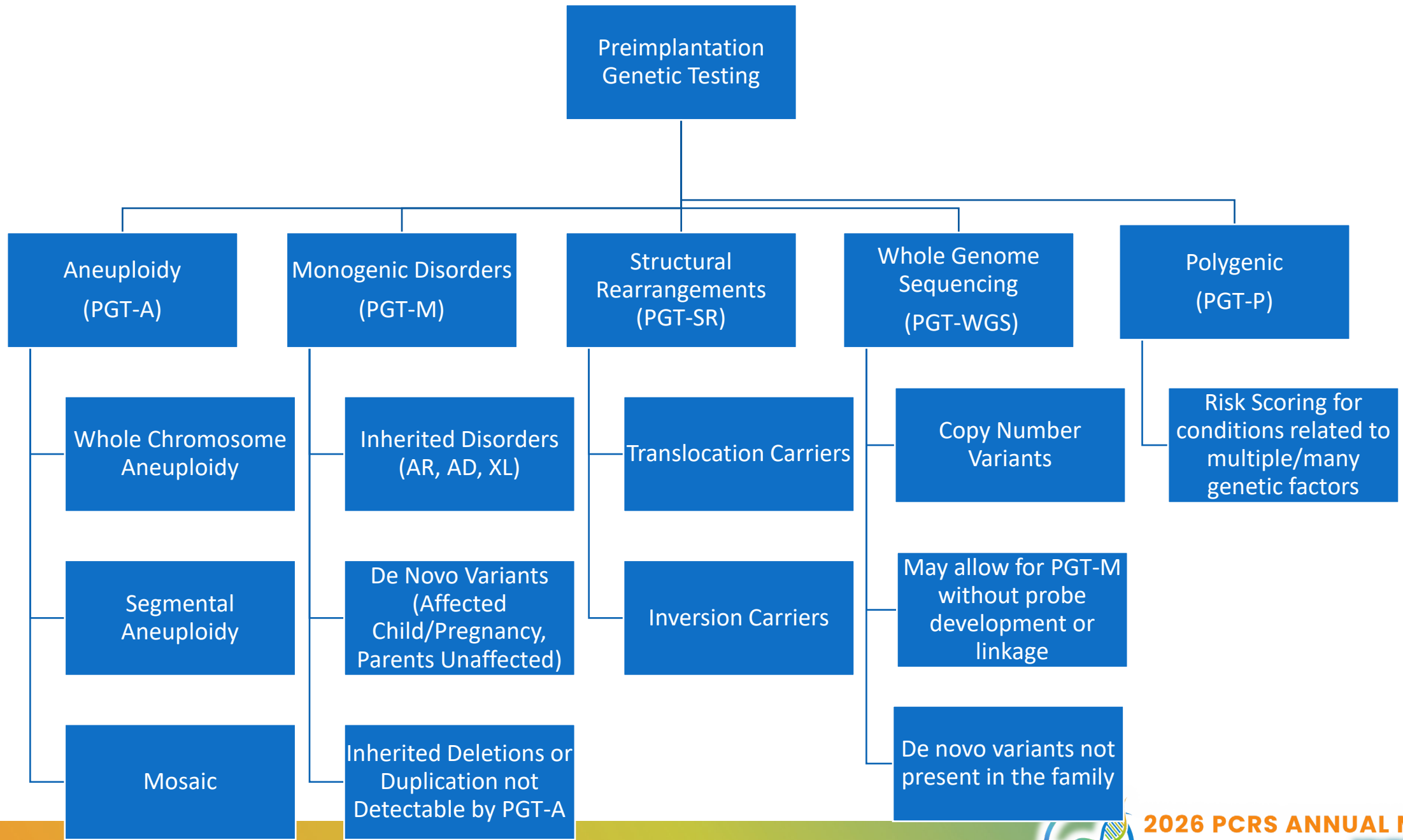
- Examine opportunities to engage patients in shared decision-making regarding use of PGT and disposition of embryos
- Describe the complexities of establishing embryo disposition policies which acknowledge the limitations of PGT
- Summarize different approaches to scale pre and post-test counseling



Topics to be Covered

- PGT Categories
- Intention vs Practice
- Controversy of mosaicism
- Legal controversy of PGT
- Counseling Pre test
- Result Review/Post test counseling
- When to discard
- Options to scale counseling





Intention vs. Reality

PGT-A = Screening for Aneuploid

+

Aneuploidy= failed implantation, miscarriage or aneuploid pregnancy

PGT-A screened embryo ? better OPR/LBR



Mosaic Chaos

Healthy Babies after Intrauterine Transfer of Mosaic

Aneuploid Blastocysts

GYNECOLOGY

Published Nov

VOL. 373 NO.

Mosaic human preimplantation embryos and

Preimplantation genetic testing for aneuploidy mosaicism reporting lacks clinical predictive value for live birth in a multisite, double-blinded study with independent validation

tassini,¹ Marco Fabiani,¹ armen Rubio,^{6,7} likli,^{9,10} Onder Coban,¹¹ E. Levi-Setti,⁸

**One hu
transfe
clinic: exploring when and why
result in healthy pregnancies**

Pavan Gill, MD; Xin Tao, PhD; Yiping Zhan, PhD; Francesca Mulas, PhD; Christian Simon Ottolini, PhD;

formulate an embryo ranking system for clinical use

Andrea R. Victor, M.S.,^{a,b} Jack C. Tyndall, B.A.,^a Alan J. Brake, M.S.,^a Laura T. Lepkowsky, B.S.,^a Alex E. Murphy, B.S.,^a Darren K. Griffin, Ph.D., D.Sc.,^b Rajiv C. McCoy, Ph.D.,^c Frank L. Barnes, Ph.D.,^a Christo G. Zouves, M.D.,^{a,d} and Manuel Viotti, Ph.D.^{a,d}

Manuel Viotti, Ph.D.,^{a,b} Andrea R. Victor, M.S.,^a Frank L. Barnes, Ph.D.,^{a,b} Christo G. Zouves, M.D.,^{a,b}



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My Tipping Point

Healthy euploid dizygotic twin birth after transfer of nonmosaic aneuploid embryos

Christina G. Tise, M.D., Ph.D.,^a Kajal Verma, M.D.,^a Greysa Rivera-Cruz, M.D.,^b Solmaz Chamanara, M.D.,^b Sara K. Gerber, B.A.,^c Allison Boyd, L.C.G.C.,^b Ronit Mazzone, L.C.G.C.,^b Liesl Nel-Themaat, Ph.D., H.C.L.D., M.B.A.,^b Barry Behr, Ph.D., H.C.L.D.,^b Amin A. Milki, M.D.,^b and Ruth B. Lathi, M.D.^b

1. 5AB XX—monosomy 5, monosomy 18
2. 4CC XX—monosomy 11p
3. 4CC XX—monosomy 7, monosomy 9, monosomy 18



Legal Trouble

Complaints:

- Misleading marketing regarding accuracy of PGT-A
- Significant added cost
- Discard of potentially viable embryos

TIME

MAR 6, 2025 12:32 PM ET


IVF Patients Say a Test Caused Them to Discard Embryos. Now They're Suing



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Segmental Aneuploid

Healthy live births achieved from embryos diagnosed as non-mosaic segmental aneuploid

Andria Besser¹  · Emily Weidenbaum² · Julia Buldo-Licciardi² · Caroline McCaffrey¹ · James Grifo¹ · Jennifer Blakemore¹

NAPGO-S

Kaplun, Amber, Emily Mounts, Chaim Jalas, Sarah Polesuk, Allison Boyd, and Christine Whitehead. 2025. "CLINICAL TRANSFER OUTCOMES OF EMBRYOS WITH NON-MOSAIC SEGMENTAL ANEUPLOID RESULTS ON THE PGTSEQ-A ASSAY: A RETROSPECTIVE CHART REVIEW." *North American Proceedings in Gynecology and Obstetrics - Supplemental*, June. <https://doi.org/10.54053/001c.140419>.

179 SET
58% IR
27.3% LBR/ET

O-9 INVESTIGATING THE REPRODUCTIVE POTENTIAL OF NON-MOSAIC SEGMENTAL ANEUPLOIDY: A DOUBLE-BLINDED, MULTICENTER NON-SELECTION STUDY OF 176 SINGLE FROZEN EMBRYO TRANSFERS
Stephanie Willson, MD



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Can we ever confidently discard!?

Yes. With *informed* consent



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Genetic Counseling – PGT-A

- Pretest counseling of patients or informed consent regarding clinical policy for abnormal test results
- Thorough discussion of risks, benefits, and limitations of the technology used.
- Possible outcomes including no result, embryos with results consistent with mosaicism or segmental aneuploidy
- Pros/cons of mosaic reporting.
 - Is this opt in?
 - If opt out, will embryos be reported as euploid or aneuploid?
- The possibility/likelihood of misdiagnosis
- Counseling should include the option of not performing PGT-A.
 - Declination?
- Ready access to genetic counseling at any point in patients' decision-making process is also consistent with best practice regarding the use of PGT-A.
- Comprehensive post-test counseling is also warranted in many cases



Disposition Considerations – PGT-A

- Stratification of results based on category
 - Euploid/PGT-A Negative
 - Mosaic
 - Non-mosaic Segmental Aneuploid
 - Whole chromosome aneuploidy
- Clinics should implement a written policy which is made available to patients
- Discard policy should be disclosed prior to testing



Genetic Counseling – PGT-SR

- Discussion of karyotype and reproductive and non-reproductive implications for carriers
- Discussion of limitations of technology.
- Not all rearrangements are amenable to PGT-SR
- May not be able to differentiate between balanced vs normal.
- Confirmatory testing by karyotype available to confirm fetus is balanced or normal
- Confirmatory testing is recommended given small risk of misdiagnosis
- Can couples decline PGT-SR given increased reproductive risk? If so, is there a necessary consent? If not, who reviews for exceptions?
- If PGT-SR is declined and PGT-A elected? Would embryos with “segmental aneuploid” be eligible for transfer?



Disposition Considerations – PGT-SR

- Separate designation for unbalanced embryos apart from whole chromosome aneuploidy, de novo segmental aneuploidy and inherited del/dups
- Risk related to transfer of unbalanced embryos higher than any other category?
- Disposition preference confirmed before discard



Genetic Counseling – PGT-M

Genetic Counseling Considerations (ASRM)

- Natural history of the condition
- Genotype/phenotype correlation
- Are relatives needed?
- Incidental findings (CNV, discrepant result, nonparentage, consanguinity)
- Implications of different results
- Clinic policies on management of PGT-M positives
- Eligibility and disposition of embryos
- Timeline, need to postpone cycle?
- Possibility of failed test development
- Accuracy and availability of prenatal testing



Disposition of PGT-M Positive Embryos

- “PGT-M is by far the most complex form of PGT because of the need for patient specific genetic counseling, variant (mutation) confirmation, case review, and laboratory test customization—all ideally occurring before initiation of the IVF cycle.” [ASRM *Indications and management of preimplantation genetic testing for monogenic conditions: a committee opinion \(2023\)* | American Society for Reproductive Medicine | ASRM](#)
- Pretest counseling should include discussion of disposition policy
- Is there a way for a patient to request exception to current policy?
- Does the patient seek care elsewhere?
- Is there an obligation to provide information regarding clinics with policies that align with patient preference?



PGT-M Positive Transfer

“Valid and reasoned arguments exist to support physicians as they decide to either assist in transferring an embryo with a known monogenic condition or decline to assist in such transfers. Principles of reproductive liberty, physician autonomy, professional conscience, nonmaleficence, procreative beneficence, and child welfare are potentially invoked in decision-making in this area.” - Transfer of embryos affected by monogenic conditions: an Ethics Committee Opinion² (ASRM, May 2025)

- Treated on a case-by-case basis?
- Who reviews availability of PGT-M positive transfer during prePGT-M consult
- Is sex selection enough justification for PGT-M positive transfer if PGT-M negatives are available
- Access to medical geneticist or bioethicist?



Practical considerations for individualized disposition

- Increased administrative burden
- Increased constraints on storage capacity
- Embryo abandonment

- Inappropriate discard= legal liability





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Scaling Counseling

- More patients = more resources
- More complicated disposition SOPs= more resources

| | Pros | Cons | Other Considerations |
|------------------------|--|--|---|
| Automated Education | <ul style="list-style-type: none"> • Time saved for clinic staff pre-cycle • Can select appropriate modules based on patient’s plan (PGT-M vs PGT-SR etc) • Can cover both medical procedures as well as genetic topics • May be customizable for clinic | <ul style="list-style-type: none"> • Patient engagement? • May be more general and not specific to clinic • No ability for post-test results review • Cost? • May not be available in multiple languages | <ul style="list-style-type: none"> • Are the modules customizable to cover clinic specific policies? • Who assigns and checks for completion? • Still need SOP for result review |
| Pamphlets | <ul style="list-style-type: none"> • Can be easily accessible in person and in clinic • Fairly cheap to produce • Can be made available in different languages • Can be made to represent clinic specific policies | <ul style="list-style-type: none"> • Only allow brief summaries of topics. Would not cover nuances of PGT • Updates require additional printing, removal of physical copies in physical or electronic locations | |
| Group Classes | <ul style="list-style-type: none"> • Possible time saving on basic patient education • Webinars could be recorded and distributed as necessary • Live events (online or in person) allow for patients to engage and create relationships with the staff • Ability to ask questions | <ul style="list-style-type: none"> • Patients may not feel comfortable sharing personal details or asking questions in front of others • May still need separate counseling to review • In-person classes may be less well attended | <ul style="list-style-type: none"> • Is this required? • Who signs patients up? • Who checks for completion? • Who leads these sessions? MD? RN? GC? |
| Counseling through Lab | <ul style="list-style-type: none"> • Time saved by clinic staff • Counseling specific to results issued • Well suited to review lab specific categories (high/low level mosaicism etc) and outcome data | <ul style="list-style-type: none"> • May not sufficiently cover clinic specific policies | <ul style="list-style-type: none"> • How are patients connected with the lab? • Is this required? If so, who checks for completion? • Who ensures patients are notified of clinic policies and procedures? |

Take Away

- Clear verbal and written documentation is key
- Consistent pretest and post test counseling allows patients to engage in decision making based on limitations of testing and personal/family goals
- Multi-resource strategy to reinforce clinic policies
- Each clinic needs to develop SOPs for each category of PGT and expected results
- Consider active discard process so patients can assess risks/benefits of using/discarding embryos AFTER results are available



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Q&A



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