Smart
PGT-A

Preimplantation Genetic
Testing for Aneuploidies

Igenomix®
WITH SCIENCE ON YOUR SIDE

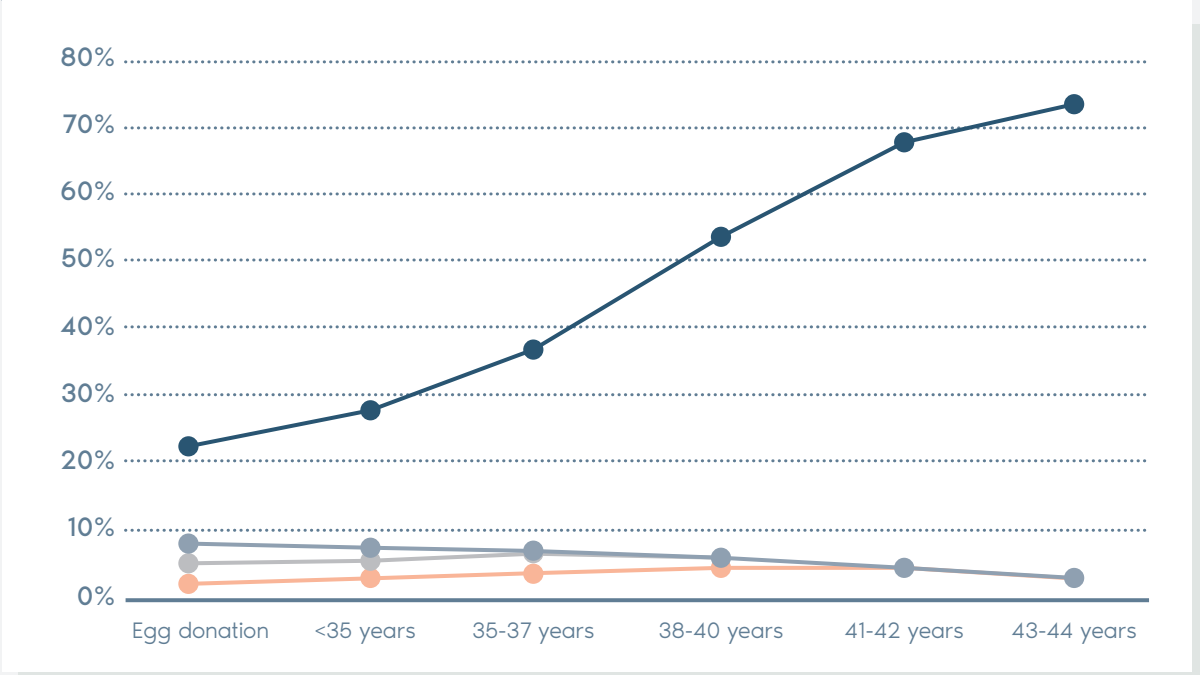
PGT-A is a genetic test performed on embryos to identify numerical chromosomal abnormalities (aneuploidy).

By analysing all embryos generated in an IVF treatment cycle, those free of chromosomal aneuploidy can be selectively transferred.

As a result, the pregnancy rates per transfer are significantly increased and the miscarriage rates decreased.

Igenomix uses an advanced bioinformatics algorithm developed in-house using 100,000 embryo samples to provide accurate results.

INCIDENCE OF ANEUPLOIDY AND MOSAICISM ACCORDING TO FEMALE AGE



Igenomix internal data from trophectoderm biopsies analyzed in 2019

Uniform aneuploidies: whole chromosome aneuploidies uniformly distributed in the biopsied cells.

High degree mosaicism: whole chromosome aneuploidies in 50-70% of the biopsied cells.

Low degree mosaicism: whole chromosome aneuploidies in 30-50% of the biopsied cells.

Segmental aneuploidies: aneuploidies observed for a small segment of the chromosome (duplications/deletions >10Mb).

- Uniform aneuploidies
- High degree mosaicism
- Low degree mosaicism
- Only segmental aneuploidies

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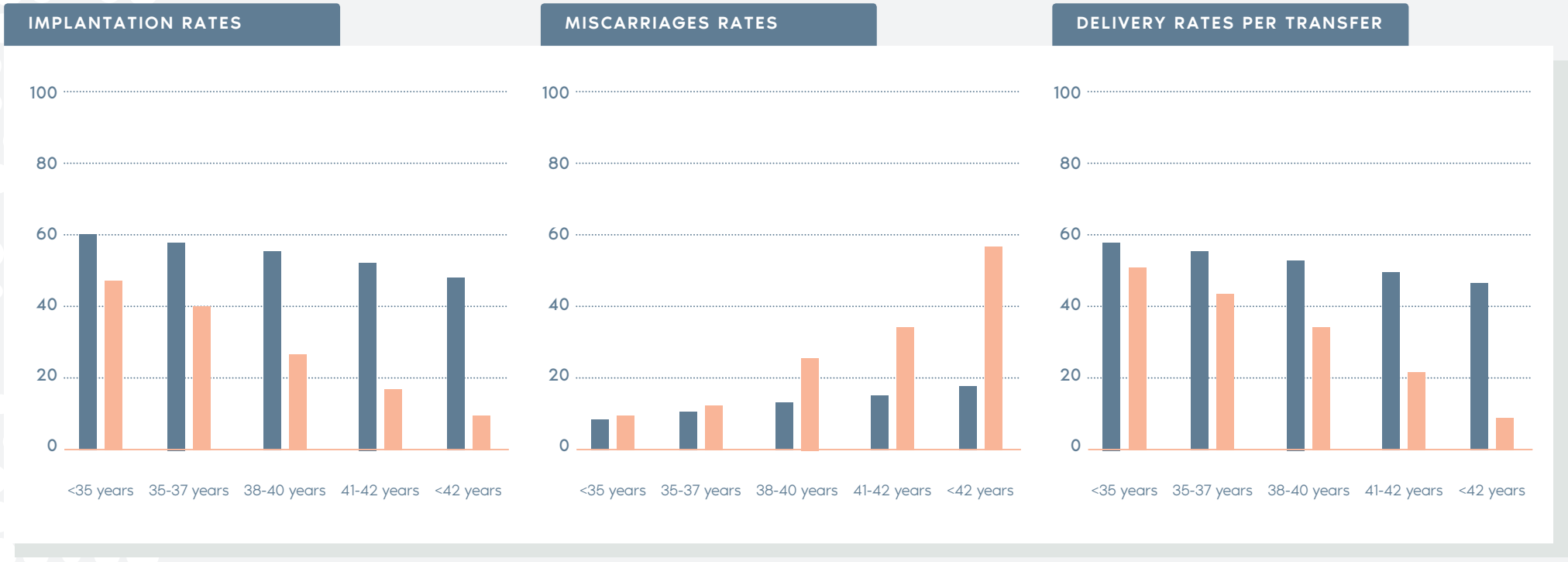
v1.2020

Clinical Outcome with and without PGT-A based on SART 2016 public database



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SART 2016 (https://www.sartcorsonline.com/rptCSR_PublicMultYear.aspx?reportingYear=2016)

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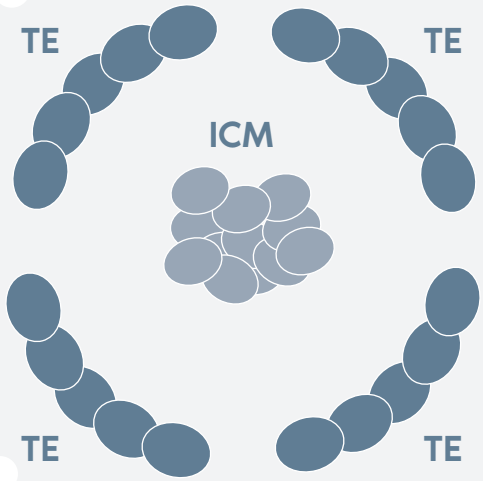
High concordance rates for uniform whole chromosome aneuploidy between multiple trophectoderm biopsies and the inner cell mass of the blastocyst.



n=312 biopsies analyzed

Full-karyotype concordance per sample = 98.7%
(n=308/312; 95%CI=96.75-99.65)

SENSITIVITY = 100.00%
n=40/40 [95%CI= 88.30-99.13]

SPECIFICITY= 99.26%
n=270/274 [95%CI=99.90-100.00]

Per chromosome concordance = 99.9%
(n=7171/7176; 95%CI=99.84-99.98)

SENSITIVITY = 95.83%
n=69/72 [95%CI= 88.30-99.13]

SPECIFICITY= 99.97%
n=7102/7104 [95%CI=99.90-100.00]

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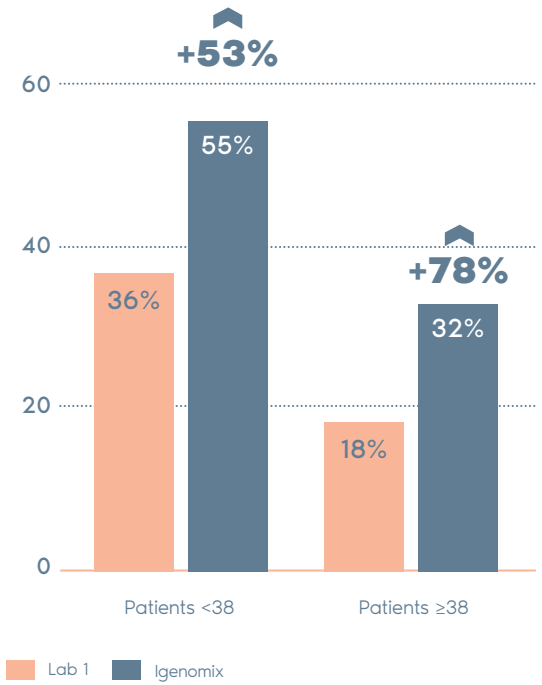
Girardi L, Serdarogullari M, Patassini C, Poli M, Fabiani M, Caroselli S, Coban O, Findikli N, Boynukalin K, Bahceci M, Chopra R, Canipari R, Cimadomo D, Rienzi L, Ubaldi F, Hoffmann E, Rubio C, Simon C, Capalbo A. The American Journal of Human Genetics, 106, 1-10, April 2, 2020

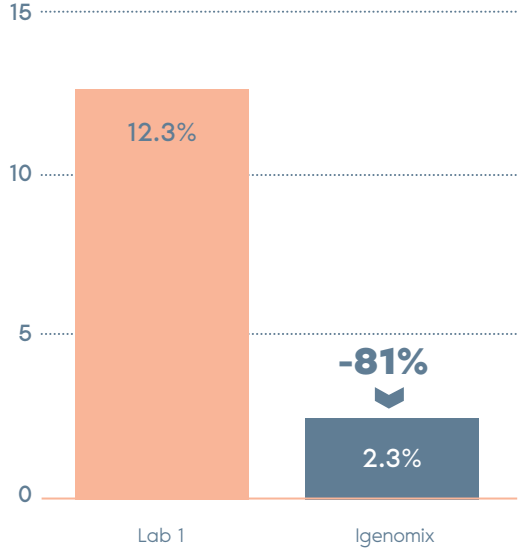
Independent studies back our statistics

Abstract - **ASRM 2018**

EUPLOID RATE*

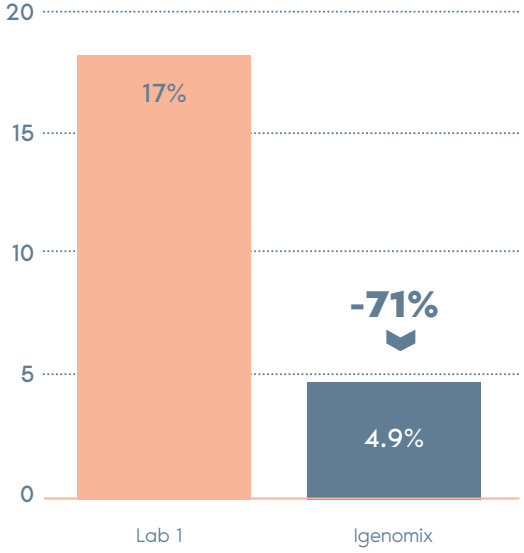


NO-DIAGNOSIS RATE*



Poster - **PGDIS 2019**

MOSAICISM**



*ABSTRACT - ASRM 2018: A comparison of diagnostic results of Preimplantation Genetic Testing for Aneuploidy (PGT-A) from reference laboratories during a period of transition; trends and inherences for patient care. D. Ioannou, M. D. Baker, S. D. Jones, I. R. Grass, K. A. Miller. Embryology, IVF Florida Reproductive Associates, Margate, FL.

**POSTER - PGDIS 2019: Clinical comparison of two pgt-a PLATFORMS UTILIZING DIFFERENT THRESHOLDS TO DETERMINE PLOIDY STATUS. D. Monahan, G. Harton, D. Griffin, M. Angle, C. Smikle. Laurel Fertility Care, San Francisco, CA.

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