

inti  
LABS

pixl.  
NEXT GENERATION PGT-A

SHARPER INSIGHTS.  
SMARTER SELECTION.  
BETTER OUTCOMES.

# Is your PGT-A giving you the **WHOLE** picture?

Euploidy

Aneuploidy

Mosaicism

Micro-deletions and duplications

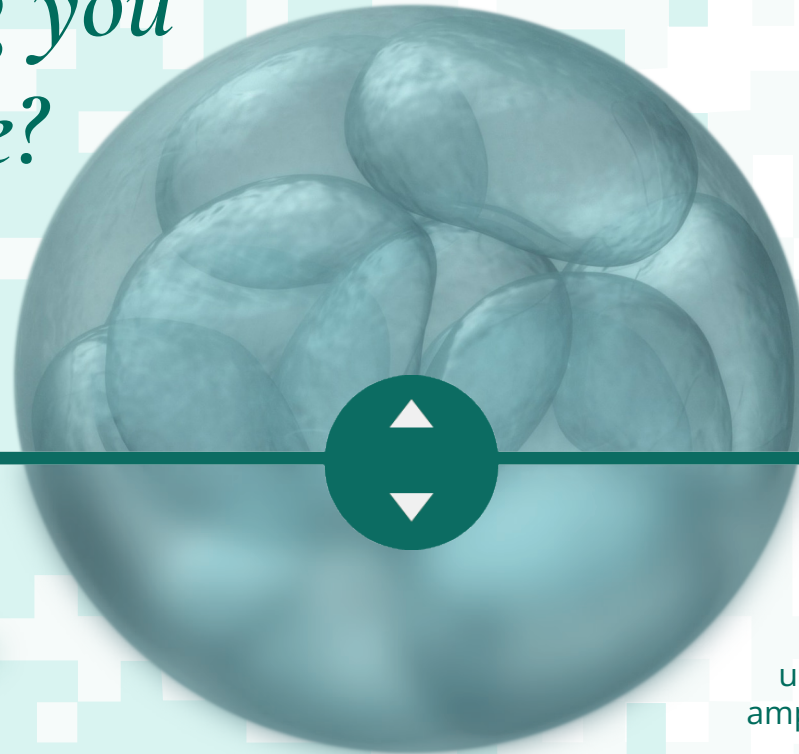
Uniparental Disomy (UPD)

Ploidy Status (haploidy, diploidy, triploidy, tetraploidy)

Monogenic mutations

Validation of mosaicism

Sample contamination



# pixl.

NEXT GENERATION PGT-A

**Pixl Next Generation PGT-A** is a transformative preimplantation genetic testing (PGT-A) platform that uses **SNP-based targeted sequencing (stNGS)** to identify chromosomal abnormalities often missed or undetectable by traditional low-coverage whole-genome amplification methods.

### **Pixl offers superior accuracy in detecting**

1. Aneuploidy and mosaicism
2. Abnormal ploidy
3. Uniparental disomy (UPD)
4. Microdeletions / microduplications

**Pixl reduces false positives, maximizes embryo utilization, and improves implantation success — ultimately enabling clinics to achieve higher live birth rates.**

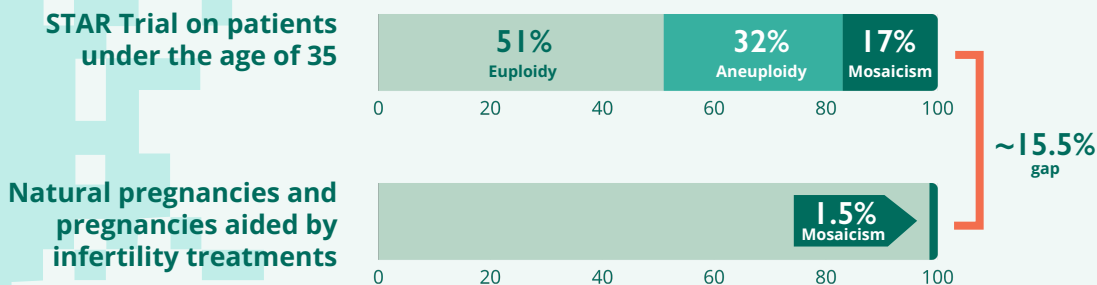
# Current Challenges of Traditional PGT-A

## #1 Embryo wastage

**Traditional PGT-A** detects chromosomal abnormalities, but reports high rates of **aneuploidy and mosaicism**.

The STAR Trial found **17% mosaicism** in embryos from **patients under the age of 35** (Munné et al., 2019).

In contrast, another study found **mosaic rates below 1.5%** in both natural pregnancies and pregnancies aided by infertility treatment (Huang et al., 2009).



This stark difference suggests that some embryos labeled as abnormal **may still be viable**—leading to **unnecessary loss of embryos** suitable for transfer.

**Additional peer-reviewed studies have demonstrated that PGT-A results for mosaicism are inconsistent and often unreliable:**



**Low concordance across studies:**

Mosaic results show only ~42% consistency, vs. >90% for euploid embryos (Marin et al., 2021).



**Poor predictive value:**

Among 2,700+ mosaic embryo transfers, confirmed mosaicism after pregnancy was rare (Treff & Marin, 2021).



**False positives due to technical bias:**

Technical noise and uneven cell sampling can lead to misclassification of embryos as mosaic (Treff & Marin, 2021).

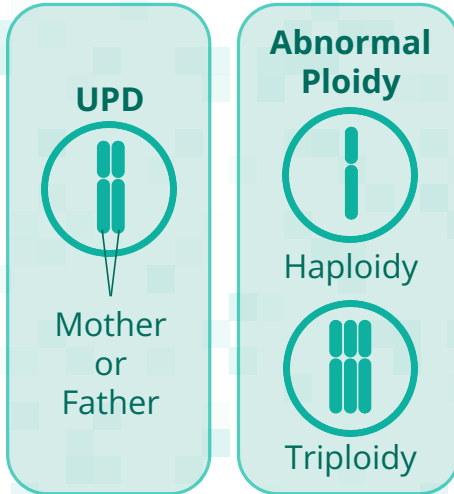


**False positives and low reproducibility mean that many embryos labeled as mosaic may in fact be healthy.**

**The misclassification can lead to unnecessary embryo discard, ultimately lowering IVF efficiency.**

## #2 Failure to detect ploidy status and UPD

Traditional PGT-A cannot reliably detect certain chromosomal abnormalities:



- **Abnormal ploidy** (e.g., triploidy and haploidy)
- **Uniparental disomy (UPD)**, which can cause imprinting disorders.

*These limitations may lead to embryo misclassification, impact clinical decisions and implantation outcome (Xu et al., 2016).*


















detects conditions such as ploidy status and UPD, helping to increase pregnancy success rates.

**Pixl** redefines embryo testing by **overcoming the limitations** of traditional PGT-A.

By integrating copy number analysis with SNP assessment, it delivers **higher accuracy, more reliable results, fewer false positives, and greater confidence for both clinicians and patients.**

## Product Differentiation

Testing Capabilities	Traditional PGT-A	 <small>NEXT GENERATION PGT-A</small>
Copy number variation (including mosaicism)		
Verification of CNV result		
Abnormal ploidy		
Uniparental disomy (UPD)		
Sample contamination (maternal, sibling, or other sample)		
Additional microdeletion syndromes and monogenic disorders		
Y chromosome specific design		



# Why Choose Pixl?

**Pixl** was created to **overcome the limitations of traditional PGT-A** and give clinics greater clarity in embryo selection.

## Targeted sequencing for SNPs

### Benefits

Identification of Haploidy, Triploidy and Tetraploidy

Reduces risk of transferring non-viable embryos, improving implantation and live birth rates

Uniparental Disomy (UPD) detection

Reduces risk of transferring non-viable embryos, reduces transferring embryos with genetic disorder risk

Identification of sample contamination from maternal, sibling, or another sample

Ensures accuracy and strengthens clinician and patient trust

Verification of copy number variation result (BAF pattern)

Reduces false-positive aneuploid and mosaic calls to avoid unnecessary embryo wastage

## Targeted sequencing for microdeletion syndrome and monogenic disorder

Identification of rare microdeletions and mutations (PGT-M Focus) in one single test

### Benefits

1. Broadens genetic screening in a single test, lowers risk of passing on inherited conditions
2. Saves time while reducing costs for patients

## Targeted sequencing for Y chromosome specific regions

Decrease of noise and contamination from autosomes that can lead to inaccurate results

### Benefits

1. Produces greater accuracy and reliability
2. Increases confidence in clinical decisions with reduced misinterpretation risk

By improving accuracy, reducing false positives and expanding the scope of detectable conditions, Pixl helps ensure that **more healthy embryos are recognized and preserved.**

# Expanded Coverage

## PGT-M Focus

**Pixl** can include the detection of targeted microdeletions, and monogenic mutations within the same workflow — without the need for additional sampling and complex testing.

## Microdeletion Syndromes

Pixl enables detection of clinically relevant microdeletions associated with severe developmental and health conditions:

- Cri-du-Chat syndrome
- DiGeorge's syndrome

## Monogenic Mutations

Pixl incorporates targeted markers for common inherited disorders, allowing early risk assessment and informed embryo selection:

- Thalassemia (HBA1, HBA2, HBB)
- G6PD deficiency (G6PD)
- Hearing loss-associated mutations (GJB2, SLC26A4, OTOF)

*This list is subject to change. Target diseases and genes may be updated, and not all variants are covered. For the full gene locus list and more details, feel free to get in touch with our team.*

# Data Validation

To ensure confidence, our platform has undergone **analytical validation** for both **accuracy and reproducibility**.

The results demonstrate **strong concordance with established reference standards**, confirming the robustness of our approach:

Indicated target category/disease	Expected karyotype	Results by Pixl	Concordance (Yes/No)
Diploidy	47,XX,seq(21)x3	47,XX,seq(21)x3	Yes
Diploidy	47,XY,seq(13)x3	47,XY,seq(13)x3	Yes
Diploidy	X0	X0	Yes
Triploidy	69,XXY	69,XXY	Yes
Triploidy	69,XXX	69,XXX,dup(21)(p11.2q21.3)(~20.25Mb,~56%)	Yes
Triploidy	69,XXX	69,XXX	Yes
UPD	XX,UPD7	XX,UPD7	Yes
UPD	XY,UPD8	XY,UPD8	Yes
Microdeletion	XY,del(5)(p15.2p14)	XY,del(5)(p15.21p14.3)(~10.65Mb)	Yes

# The Pixl Workflow

Sample From Embryo

1

**SNP**

Analyze BAF distribution  
Confirm chromosome ploidy



3

2

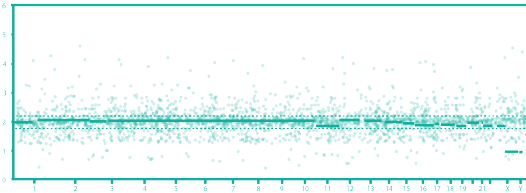
**SNP**

Use SNP count  
Confirm UPD / Triploidy /  
Contamination / Sample QC

**NGS**

Use sequencing reads  
Confirm chromosome copy number

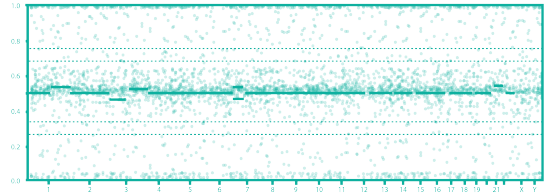
4



**SNP**

Analyze BAF distribution  
Verify copy number results

5



6

Issue Test Report

# About Inti Labs

Inti Labs is dedicated to providing our clinical partners with tools that consider the unique needs of each individual patient to enable more successful IVF outcomes. Furthermore, we strive to empower patients and their families in making informed decisions at each stage of their fertility journey.

Inti Labs was founded by IVF industry leaders Dr. Barry Behr, a pioneer of PGT-A testing, and biotech start-up veteran Dr. Eric Pok Yang — each representing different aspects of the IVF process.

## Where Inti Labs' Products Are Offered



## References:

Xu, J., Niu, W., Peng, Z., Bao, X., Zhang, M., Wang, L., Du, L., Zhang, N., & Sun, Y. (2016). Comparative study of single-nucleotide polymorphism array and next generation sequencing based strategies on triploid identification in preimplantation genetic diagnosis and screen. *Oncotarget*, 7(49), 81839–81848. <https://doi.org/10.18632/oncotarget.13247>

Huang, A., Adusumalli, J., Patel, S., Liem, J., Williams, J., 3rd, & Pisarska, M. D. (2009). Prevalence of chromosomal mosaicism in pregnancies from couples with infertility. *Fertility and sterility*, 91(6), 2355–2360. <https://doi.org/10.1016/j.fertnstert.2008.03.044>

Marin, D., Xu, J., & Treff, N. R. (2021). Preimplantation genetic testing for aneuploidy: A review of published blastocyst reanalysis concordance data. *Prenatal diagnosis*, 41(5), 545–553. <https://doi.org/10.1002/pd.5828>

Treff, N. R., & Marin, D. (2021). The “mosaic” embryo: misconceptions and misinterpretations in preimplantation genetic testing for aneuploidy. *Fertility and sterility*, 116(5), 1205–1211. <https://doi.org/10.1016/j.fertnstert.2021.06.027>

Munné, S., Kaplan, B., Frattarelli, J. L., Child, T., Nakhuda, G., Shamma, F. N., Silverberg, K., Kalista, T., Handside, A. H., Katz-Jaffe, M., Wells, D., Gordon, T., Stock-Myer, S., Willman, S., & STAR Study Group (2019). Preimplantation genetic testing for aneuploidy versus morphology as selection criteria for single frozen-thawed embryo transfer in good-prognosis patients: a multicenter randomized clinical trial. *Fertility and sterility*, 112(6), 1071–1079. e7. <https://doi.org/10.1016/j.fertnstert.2019.07.1346>



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