Combined PGT

PGT for Monogenic / Single Gene Defects and Aneuploidy

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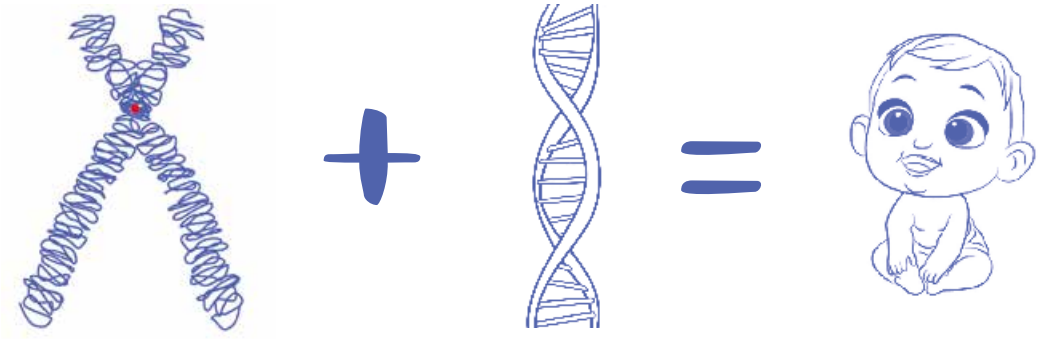
REPRODUCTIVE GENETICS COMPANY



Eventhough single gene disease patients are relatively young and fertile couples, pregnancy rates obtained following PGT-M application is not satisfying for the family and physicians, who are trying to manage such a difficult process. Chromosomal disorders such as Down Syndrome are frequently observed in embryos found suitable for transfer after PGT-M. Therefore, aneuploidy screening has a significant importance in single gene disease cases.

> *"Combined PGT enables screening of single gene disorders and aneuploidy screening simultaneously"*

Process of Combined PGT

Preimplantation Genetic Testing for Monogenic/Single Gene Defects and Aneuploidies

1 PATIENT COUNSELING
Case should be registered with the mutation report to discuss if additional genetic testing of the couple or other family members is required

2 PATIENT REGISTRATION
Blood samples of related family members collected by PGT laboratory and informativity test is performed in order to understand which copy of the gene contains the disease causing mutation in each couple

3 PGT SETUP REPORT
IVF procedure should not be initiated before "Preliminary Setup Report" is generated by PGT Laboratory. Embryo biopsy on each embryo is performed by Embryologist

4 PGT-M
PGT-M is performed and results are shared with the IVF center

5 PGT-A
PGT-A is performed on the unaffected embryos selected with PGT-M

6 EMBRYO TRANSFER
Embryos designated as unaffected and euploid are transferred. If available, additional transferable embryos are vitrified upon request of the family for future use

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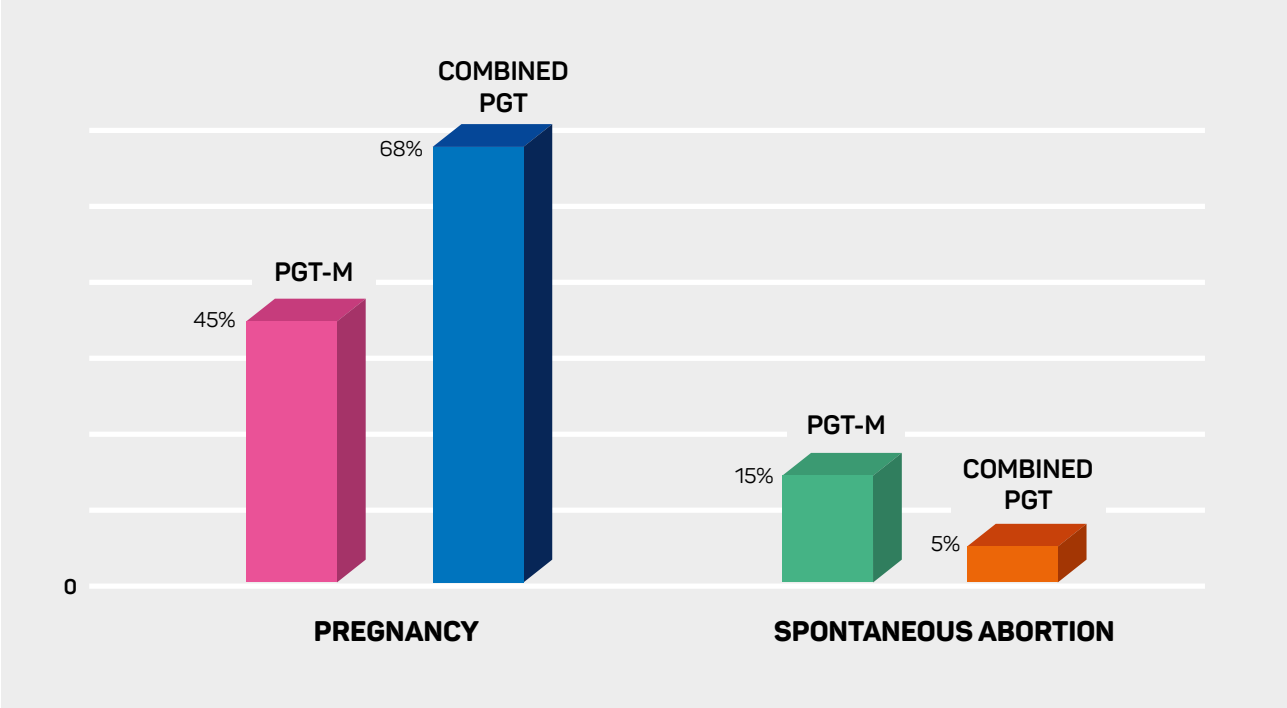
With the spread of trophectoderm biopsy and vitrifcation methods together with the development of whole genome amplifcation technologies, both single gene disease testing in embryos and euploid embryo selection with 24 chromosome screening became possible. When embryos are included in 24 chromosome aneuploidy test in addition to single gene disease screening, it was reported that pregnancy rate increases from 45% to 68% and spontaneous abortion rate decreases from 15% to 5%.



Who is Combined PGT Applied to?

- Single gene disease carriers with advanced maternal age
- Single gene disease carriers with additional trranslocation karyotype
- In cases of urgent need for HLA-matched sibling
- In cases of implantation failure or miscarriage after PGT-M application
- Double embryo biopsy decreases the chance of pregnancy. **Mikrogen protects your embryo by allowing single gene disease testing and aneuploidy screening on a single biopsy source** with target enrichment in NGS technology.