Patient information

Pre-Implantation Genetic Testing for Aneuploidy (PGT-A)

Principles

PGT-A is a genetic test used during in vitro fertilization, and is carried out 5 – 6 days after fertilization of the oocyte before being implanted into the uterus. The aim of the test is to rule out chromosomal abnormalities in order to be able to select suitable embryos for transfer to the womb. This can shorten the time it takes until a pregnancy occurs.

Procedure

Initially, the fertilized oocyte develops into a blastocyst. The blastocyst is made up of the tissue that forms the placenta (trophoblast) and an inner cell mass, from which the embryo develops (Figure 1).

On the 5th or 6th day after fertilization, between 3 – 8 trophectoderm cells are biopsied. No cells are removed from the embryo. The blastocysts are then frozen separately. The 3 – 8 cells taken from the placenta tissue undergo molecular genetic analysis.

Blastocysts with a normal number of chromosomes (Figure 2) can be defrosted in a cryo cycle for embryo transfer.

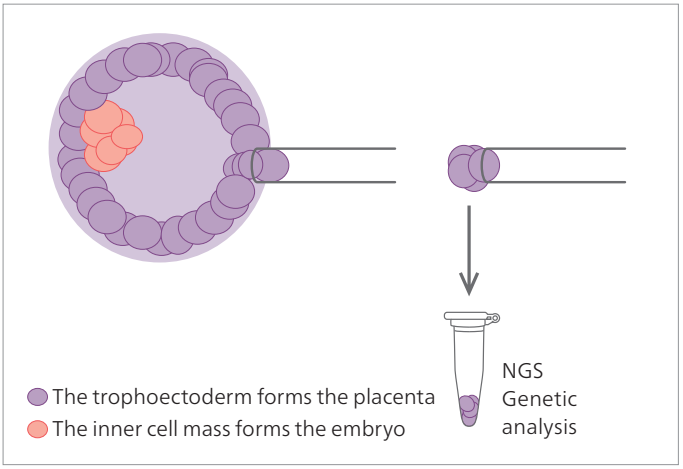

Figure 1:
Trophectoderm biopsy of cells forming the placenta on the 5th day

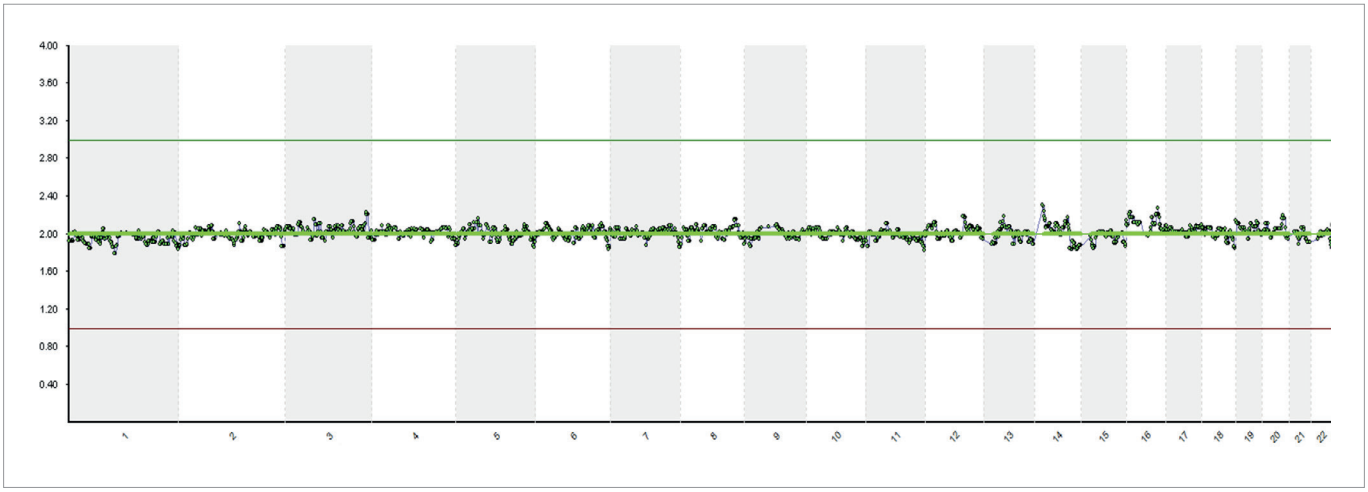

Figure 2: Normal number of chromosomes

Blastocysts with an abnormal number of chromosomes (Figure 3) are destroyed, with the parents' consent.

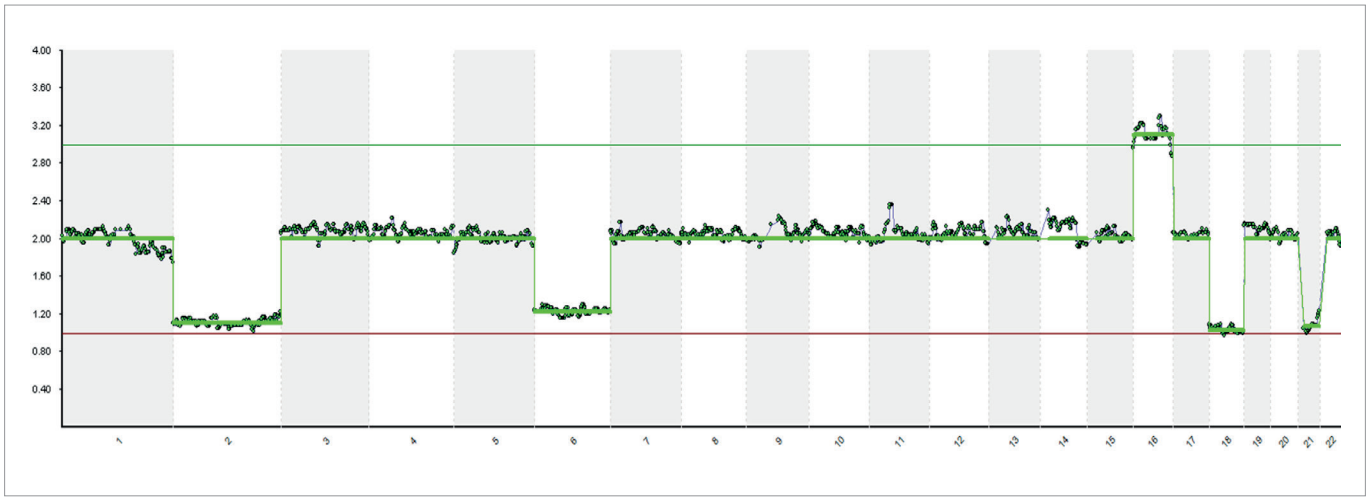

Figure 3: Abnormal number of chromosomes

Method limitations

- It is not always possible to obtain a reliable result from a biopsy
- The biopsy, freezing, storage and thawing of the cells is performed using tried and tested scientific methods. Viollier AG cannot, however, provide any warranty that the cells will be viable and suitable for establishing a pregnancy after thawing
- Balanced chromosomal translocations, inversions, uni-parental disomies, triploidies, minor mosaicism (< 20%) and genetic defects cannot be detected using this method
- A transfer during the collection cycle (fresh transfer) is not possible
- PGT-A is not a substitute for recommended prenatal care (e. g. prenatal ultrasounds, first trimester screening, noninvasive prenatal testing, and invasive tests for chromosomal abnormalities)

Incidental findings

The PGT-A screening may result in incidental findings. This refers to information unrelated to the aneuploidy screening that may be discovered as a result of increasingly precise genetic analysis (e. g. evidence of chromosomal translocation in one parent). The couple have the right to know or not to know and can decide for themselves whether or not they would like to receive informations about incidental findings.

Declaration of consent

Pre-Implantation Genetic Testing for Aneuploidy (PGT-A)

→ Please read through the patient information (Pg. 1 – 2) and this form (Pg. 3) carefully.
→ If there is anything you do not understand, or you would like further information, please don't hesitate to ask.

Consultant
Name / First name

Patient (f)
Name / First name | Date of birth

Patient (m)
Name / First name | Date of birth

Indication for PGT-A screening

1.	The undersigned consultant has informed me orally and in writing of the goals and procedure of this method, the expected effects, possible advantages and disadvantages, and possible risks. Following the analysis, my consultant and I will confirm how to proceed with the embryos in writing in the PGT-A report.	☐ Yes	☐ No
2.	I have read and understood the patient information. My questions relating to this method have been answered to my satisfaction. I have received the written patient information and a copy of my written declaration of consent.	☐ Yes	☐ No
3.	I have had enough time to make my decision.	☐ Yes	☐ No
4.	I wish to be informed of any incidental findings identified during the course of the analysis.	☐ Yes	☐ No
5.	I understand that my personal data will only be provided to outside institutions in anonymized form and give my permission for this use of my personal data.		

Place, Date | Signature patient (f) | Signature patient (m)

Place, Date | Signature consultant