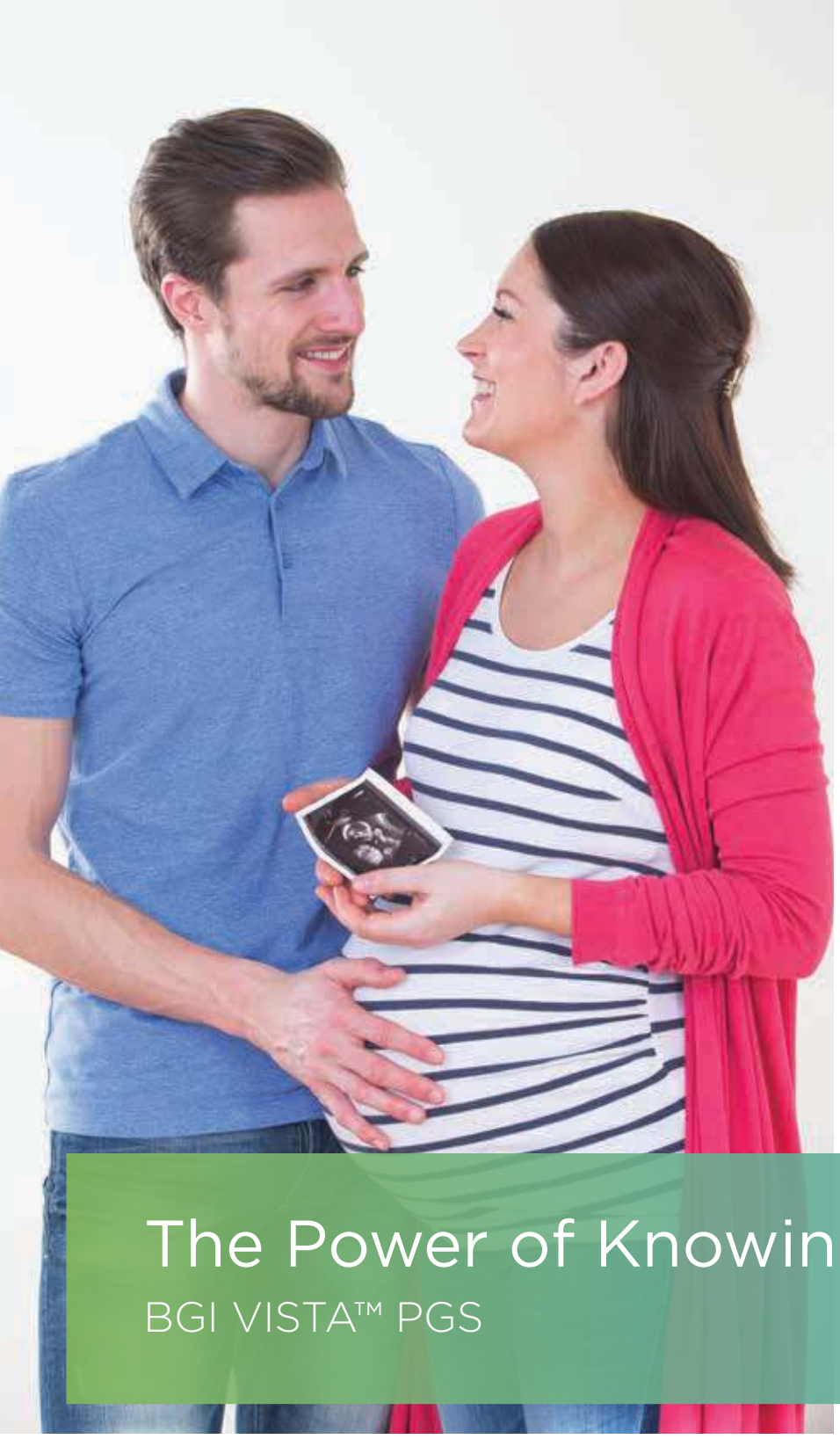

The Power of Knowing

BGI VISTA™ PGS

About

Preimplantation genetic screening (PGS) evaluates embryos for extra or missing chromosomes. PGS is an option for any in vitro fertilization (IVF) patient.

BGI VISTA™ PGS is used in conjunction with an IVF cycle. Embryos remain on-site at the patient's IVF center. Cells are removed from an embryo and sent to BGI for genetic analysis.

BGI VISTA™ PGS relies on proprietary single-cell whole genome amplification and low-coverage genome-wide sequencing technology to examine all 24-chromosomes, ensuring that there are the correct number.

BGI VISTA™ PGS can also detect chromosome deletions or duplications larger than 4Mb. Such deletions or duplications may be responsible for causing or contributing to some genetic diseases.

Who should consider Vista™ PGS?

Any Individual or couple undergoing IVF, especially those with the following indications:

- Advanced maternal age (AMA);
- Individuals/couples who have suffered repeated implantation failure (RIF);
- Individuals/couples who have suffered repeated miscarriage (RM);
- Severe male factor infertility;
- Individuals/couples who are carriers of chromosomal abnormalities or have given birth to a child with chromosomal abnormalities.

Why Choose BGI VISTA™ PGS?

BGI VISTA™ PGS can improve the chance of a successful pregnancy while reducing the chance of miscarriage or of having a child with a chromosome condition. Embryos with the normal number of chromosomes have a better chance of implanting and developing into a healthy pregnancy.

Sample Requirements

SAMPLE TYPE	QUALITY	CONSERVATION & SHIPMENT
Products after Whole Genome Amplification	DNA≥1.0μg Concentration≥30ng/μL OD260/280: 1.7-2.0 No degradation	We recommend to amplify genomic DNA from blastocysts using PCR-based single cell WGA kit. Sample should be stored at -20˚C or -80˚C, and delivered with dry ice.
Blastocysts (Frozen)	Control amount between 5 to 10 blastocysts per embryo Same amount for each batch	Frozen blastocysts shipped with dry ice to BGI with special BGI Cell Preserving Fluid

Methodology

Preimplantation genetic screening (PGS) is a method introduced to screen for chromosomal aneuploidy and structural aberrations of polar bodies, blastomeres or trophectoderm from oocytes, zygotes or embryos to avoid the implantation of embryos with serious chromosomal abnormalities. It works as a complementary tool in embryo transfer traditionally based on morphological evaluation in current IVF practice.

The purpose of VISTA™ PGS is to identify chromosomally normal embryos suitable for transfer in order to increase the successful implantation rate, reduce the chance of miscarriage or chances of giving birth to a baby with a serious genetic condition. Testing involves taking a biopsy from embryos on Day3 or Day5/6 by removing a single cell or a few cells. BGI uses Next Generation Sequencing (NGS), the most advanced technology for preimplantation genetic screening and diagnosis, to analyze for embryo aneuploidy and/or DNA gains and losses (larger than 4Mb). Normal cells are selected and transferred with reference to the test results.

Clinical Validation Data

SAMPLE TYPE	SAMPLE AMOUNT	RATIO	CONCORDANCE RATE
Normal	26	68.4%	100.0%
Translocation	6	15.8%	100.0%
Aneuploidy	6	15.8%	83.1%
Total	38	100%	94.7%

* Yin X1, Tan K et.al. 2013, Massively parallel sequencing for chromosomal abnormality testing in trophectoderm cells of human blastocysts.

Contact your local BGI representative for more information or email **info@bgi-international.com**. More information can also be found on our website. **www.bgi.com/global/**

Suitable for:

Any individual undergoing an IVF cycle and especially recommended for:

- Mothers of advanced maternal age (AMA)
- Couples who have suffered from repeated implantation failure (RIF)

TA Time: 10 working days

Sample: DNA from blastocyst cells (Recommended), or Blastocyst cells (Frozen)

Technology: Low coverage WGS

Workflow

1. 

Conduct pre-test genetic counseling with patient and sign consent form

2. 

Collect samples (after WGA or frozen blastocysts) and send it to BGI

3. 

Sequencing takes place at BGI laboratory

4. 

Receive test results 10 working days later

5. 

Conduct post-test genetic counseling with patient and transfer the selected embryos in the IVF center

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