 瑪麗醫院 QUEEN MARY HOSPITAL	Department of Obstetrics and Gynaecology	Document No.	OGRM223
	<u>Subject</u> Information on PGT-A English	Issue Date	April 2020
		Next review date	July 2022
		Approved by	HKU-QMH-KWH CARE
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Information on Preimplantation Genetic Testing (PGT) for Aneuploidy

1. Nature

This method aims at determining the chromosomal number of embryos before they are transferred to the womb. It allows selection and transfer of embryos with normal number of chromosomes.

2. Indications

- History of recurrent miscarriages without any obvious causes
- History of repeated failure in IVF cycles without any obvious causes
- Advanced age of women undergoing IVF
- Sex chromosome aneuploidy (wife / husband)
- Other, specify: _____

3. Procedure

In addition to IVF procedures, the following steps are involved:


- Fertilization by intracytoplasmic sperm injection
- Removal of 3-5 trophoctoderm cells from blastocysts and each blastocyst individually frozen
- Genetic study of the cells by next generation sequencing (NGS)
- Transfer of a blastocyst with normal chromosomal number to the womb in subsequent frozen-thawed transfer cycles.

4. Risks

The biopsy of cells from blastocysts carried less adverse effect on the pregnancy rate, compared with those from embryos.

5. Test accuracy and limitations

- PGT has <5% misdiagnosis.
- NGS **CANNOT** detect point mutations, small chromosomal aberrations (<20 Mb) nor polyploidies (e.g. 69,XXX).
- False result can be attributed to mosaicism of embryos.

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6. Follow up

After successful conception, conventional prenatal diagnosis may still be needed if clinically indicated.

After delivery, it is advisable to follow up the development of the baby.

7. Alternative

The alternative is to try natural conception (in case of idiopathic recurrent miscarriages) or to undergo IVF without PGT. After conception, prenatal diagnosis may be performed if clinically indicated.

There is no clear evidence so far to confirm an improvement in pregnancy outcomes after PGT in idiopathic recurrent pregnancy loss and repeated failure in IVF cycles.

Note:

- Please use contraception during the treatment cycle.**
- We will proceed to the blastocyst biopsy if there is even one blastocyst. Please make sure that you can be contacted by telephone during the treatment cycles.**
- There may NOT be any blastocyst transfer after PGT if all blastocysts have abnormal chromosomal number.**
- We CANNOT disclose the sex of the blastocyst, unless medically indicated.**
- Only one blastocyst will be replaced in each transfer after PGT.**

(Affix label)
Wife's name &
ID number

(Affix label)
Husband's name &
ID number

Signature of Wife: _____

Signature of Husband: _____

Date: _____