THE OHIO STATE UNIVERSITY
HEALTH PLAN

Subject: Preimplantation Genetic Testing **Revision Date:** 6/24

DESCRIPTION

Preimplantation genetic testing (PGT) utilizes genetic assays to evaluate embryos prior to implantation in the uterus. False positives and false negatives are possible, so traditional diagnostic testing and screening for aneuploidy should be offered to all covered persons regardless of a normal or negative PGT result.

DEFINITIONS

Preimplantation genetic testing for monogenic (single-gene) disorders (PGT-M): The goal of PGT-M is to establish a pregnancy that is unaffected by specific genetic characteristics, such as a known heritable genetic mutation carried by one or both biological parents. It is also used to select embryos for transfer that have specific characteristics, such as a particular gender or compatible human leukocyte antigen complex type.

Preimplantation genetic testing for structural rearrangements (PGT-SR): The goal of PGT-SR is to establish a pregnancy that is unaffected by a structural chromosomal abnormality (translocation) in a couple with a balanced translocation or deletion/duplication.

Preimplantation genetic testing for aneuploidy (PGT-A): The goal of PGT-A is to identify embryos with de novo aneuploidy in embryo(s) of couples presumed to be chromosomally normal. PGT-A was formerly called preimplantation genetic screening [PGS].

POLICY

PGT-M or PGT-SR is covered in patients/couples who are undergoing IVF who meet one of the

following criteria:

1. Technical and clinical performance of the genetic test is supported by published peer-reviewed medical literature; and
2. PGT-M/PGT-SR is being performed for one of the following indications:
    a. When one of the partners is known to harbor a balanced (e.g., Robertsonian translocation, inversion) or unbalanced chromosomal rearrangement (e.g., insertion, deletion) translocation
    b. Both partners are known carriers of a single autosomal recessive gene
    c. One partner is a known carrier of a single gene autosomal recessive disorder and the partners have one offspring that has been diagnosed with that recessive disorder
    d. One partner is known carrier of a single gene autosomal dominant disorder
    e. One partner is known carrier of a single gene x linked disorder
3. A specific mutation(s) has been identified, that specifically identifies the genetic disease with a high degree of reliability; and
4. The genetic disorder is associated with clinically significant morbidity or disability.

Couples who are considering PGT must be aware of its limitations, as well as the risk of misdiagnosis. Therefore, counseling by an experienced individual prior to proceeding is extremely important.

The procedure to obtain the cell sample for PGT-M or PGT-SR (e.g., the embryo biopsy) is considered medically necessary when the above criteria are met. However, the IVF procedure (e.g., the procedures and services required to create the embryos to be tested and the transfer of the appropriate embryos back to the uterus after testing) is covered only when medical necessity criteria for infertility services are met. Refer to policy *MMPP 3.0 Infertility* for the definition of infertility and criteria for IVF coverage.

EXCLUSIONS

The OSU Health Plan considers PGT-A experimental and investigational for all indications, including the following:

- Advanced maternal age
- Recurrent pregnancy loss
- Repeated implantation failure (three or more failed IVF attempts)
- Male factor infertility

The OSU Health Plan does not cover preimplantation genetic testing (PGT) for sex selection or for other nonmedical purposes.

PRIOR AUTHORIZATION

Prior authorization is required.

RELATED CPT/HCPC CODES

CPT codes covered if selection criteria are met:

Code	Description
89290 - 89291	Biopsy, oocyte polar body or embryo blastomere, microtechnique (for **PGT- M/PGT-SR**); less than, equal, or greater than 5 embryos

CPT codes not covered for indications listed:

Code	Description
89290 - 89291	Biopsy, oocyte polar body or embryo blastomere, microtechnique (for **PGT- A**); less than, equal, or greater than 5 embryos
0254U	Reproductive medicine (preimplantation genetic assessment), analysis of 24 chromosomes using embryonic DNA genomic sequence analysis for aneuploidy, and a mitochondrial DNA score in euploid embryos, results reported as normal (euploidy), monosomy, trisomy, or partial deletion/duplications, mosaicism, and segmental aneuploidy, per embryo tested

0396U	Obstetrics (pre-hyphenimplantation genetic testing), evaluation of 300000 DNA single-hyphennucleotide polymorphisms (SNPs) by microarray, embryonic tissue, algorithm reported as a probability for single-hyphengene germline conditions

REFERENCES

Aetna. (2024). Invasive prenatal diagnosis of genetic diseases. https://www.aetna.com/cpb/medical/data/300_399/0358.html

American Congress of Obstetricians and Gynecologists. (2009). Preimplantation genetic screening for aneuploidy. *ACOG Committee Opinion, 430*, 1-2.

American Congress of Obstetricians and Gynecologists. (2020). ACOG Committee Opinion Number 799: Preimplantation genetic testing. *Obstetrics & Gynecology, 135*(3), e133-e137.

American Society for Reproductive Medicine. (2008). Preimplantation genetic testing: A Practice Committee opinion. *Fertility and Sterility, 90*(3), S136-S143.

Schattman, G.L. (2020, Nov. 17). Preimplantation genetic testing. Retrieved April 30, 2021, from https://www.uptodate.com/contents/preimplantation-genetic-testing?search=pgd&source=search_result&selectedTitle=1~27&usage_type=default&display_rank=1