Clinical Review Criteria Related to Preimplantation Genetic Diagnosis (PGD)

PGD is a technique used to identify genetic defects in embryos created through in-vitro fertilization (IVF) before pregnancy, with a biopsy of the embryo. PGD refers specifically to when one or both genetic parents have a known genetic abnormality and testing is performed on an embryo to determine if it also carries this genetic abnormality. In contrast Preimplantation Genetic Screening (PGS) refers to techniques where embryos from presumed chromosomally normal genetic parents are screened for aneuploidy.

I. Criteria for Approval

A. Couples at high risk for single gene disorders who meet any of the following:

1. One parent has the diagnosis or is a known carrier of a single gene autosomal dominant disorder.

2. Both parents are known carriers of a single gene autosomal recessive disorder.

3. One parent is a known carrier of a single X-linked disorder.

B. One parent has a documented balanced chromosomal translocation.

1. Autosomal dominant disorders include but are not limited to Marfan's syndrome, myotonic dystrophy, tuberous sclerosis.

2. Autosomal recessive disorders include but are not limited to Cystic fibrosis, beta-thalassemia, Tay-Sachs, Sickle Cell Anemia, Spinal Muscular Atrophy.

3. X – linked disorders include but are not limited to hemophilia, fragile-X syndrome, Duchenne and Becker's muscular dystrophy.

II. Required Documentation

A. Clinical information from an Infertility Specialist or Medical Geneticist documenting the presence of the above disorders or carrier gene in one or more parents.

III. What is Not Covered

A. PGS as an adjunct to IVF is considered investigational in all situations. These can include but are not limited to advanced maternal age, recurrent pregnancy loss, recurrent IVF failure, sex selection.

B. PGD for HLA matching to provide a potential donor for transplantation.

C. PGD as an adjunct to IVF is considered investigational in all situations other than those specified above under Criteria for Approval.

HNE Review Dates: 12/01/2014, 09/09/2014, 09/08/2015
MHI Review Date: 01/01/2014, 10/23/2014, 10/07/2015

CPT Codes:

89290 Biopsy, oocyte polar body or embryo blastomere, microtechnique (for preimplantation genetic diagnosis); less than or equal to 5 embryos.

89291 Biopsy, oocyte polar body or embryo blastomere, microtechnique (for preimplantation genetic diagnosis); greater than 5 embryos.

REFERENCES:

NCQA Standard, UM 2, Clinical Criteria for Utilization Management Decisions, Element A

Preimplantation Genetic Diagnosis, An Overview, Indications, and Conditions: Molina B. Dayal, MD, MPH. Updated 11/04/13.
(Last Accessed 07/29/15)

ACOG Committee Opinion, Preimplantation Genetic Screening for Aneuploidy, American Congress of Obstetricians and Gynecologists, Number 430, March, 2009.
(Last Accessed 0729/15)

Preimplantation Genetic Diagnosis-An Overview, Ogilvie, Braud, Scriven. Journal of Histochemistry and Cytochemistry, March 2005, vol. 53, no.3, 255-260.
(Last Accessed 07/29/15)

Preimplantation Genetic Testing: A Practice Committee opinion. Practice Committee of the Society for Assisted Reproductive Technology; Practice Committee of the American Society for Reproductive Medicine. Fertil Steril 2007;88:1497-504.
(Last Accessed 07/29/15)