PRESBYTERIAN

Medical Policy

Subject: Genetic Testing for Non-Invasive Prenatal Testing (NIPT)

Medical Policy #: 20.15

Original Effective Date: 07-01-2015

Status: Reviewed

Last Annual Review Date: 03-26-2025

Disclaimer

Refer to the member's specific benefit plan and Schedule of Benefits to determine coverage. This may not be a benefit on all plans or the plan may have broader or more limited benefits than those listed in this Medical Policy.

Description

Genetic testing is the use of specific assays to determine the genetic status of individuals already suspected to be at high risk for a particular inherited condition. High risk means that the individual has a known family history or classic symptoms of the disorder. Genetic testing includes a variety of techniques that test for genetic diseases and analyzes genetic risk factors that may contribute to disease. Techniques involve the examination of a blood sample, or other body fluid, or tissue to indicate the presence, absence, or alteration (mutation) of genes linked to specific diseases or conditions.

Non-invasive prenatal testing (NIPT) employs genetic sequencing technology to magnify fetal cell-free DNA (cfDNA) obtained from maternal bloodstream. Through a variety of techniques, fetal DNA is prenatally identified early in a singleton pregnancy, as early 10 weeks.

Screening is performed for the presence of fetal aneuploidy, specifically trisomy 13 (Patau Syndrome), trisomy 18 (Edwards Syndrome) and trisomy 21 (Down Syndrome). It is estimated that 6% to 11% of stillbirths and neonatal deaths result from aneuploidy. The tests cannot diagnose or exclude the possibility of other chromosomal disorders.

The use of NIPT is offered in all singleton pregnancies as an alternative to invasive procedures such as amniocentesis and chorionic villus sampling (CVS), and the potential risks of infection, bleeding, fetal injury and pregnancy termination.

NIPT can produce a no-call test result in 4-5% of cases due to lack of sufficient quantity of cell-free fetal DNA in the sample.

False- positive rate is less than 1%. Each NIPT assay is different with respect to its exact methodology and algorithms for data analysis.

See also, Genetic Testing for Carrier Testing and Prenatal Diagnosis, MPM 713

Coverage Determination

Prior Authorization is required except for 81420, 81507, 0327U. Please use the Prior Authorization/Benefit Certification Guide to determine when a prior authorization/benefit certification is required: https://ds.phs.org/preslogin/index.jsp

General Requirements:

1. Pregnant woman (regardless of maternal age or risk of chromosomal abnormality) with a singleton and twin pregnancy that is greater than 10 weeks:
2. NIPT test can only be ordered by those who regularly manage pregnancy.
3. No documentation that a chromosomal abnormality screening test has been performed **in this** pregnancy to include:
    a. Sequential serum Part 1 screening, CPT code 81508;
    b. Sequential serum Part 2 screening, CPT 81511;
    c. Quadruple screen, CPT code 81511;
    d. Penta screen, CPT code 81512;
    e. Serum integrated, or contingent.
4. Individual must have the capacity to make fully informed decisions and consent for treatment.
5. Individual must receive genetic counseling from a certified genetic counselor or a qualified healthcare professional and the test is ordered by individual who regularly manage pregnancy.

6. When screening for aneuploidy, only one screening approach should be used. Analyte screening and cell-free DNA screening should not be sent concurrently as this strategy is not cost-effective and simultaneous, seemingly discordant results can be more distressing to patients than screen positive analyte results followed by reassuring cell-free DNA screening. The use of cell-free DNA screening as follow-up will be reviewed on a case-by-case basis, for patients with a screen positive serum analyte screening test result is an option for patients who want to avoid a diagnostic test (i.e amniocentesis or chorionic villus sampling).

Limitations:

No more than two NIPT testing in a rolling 12-month period. If it is repeated there needs to be documentation this is a new pregnancy.

Regulatory Status:

No Food and Drug Administration regulatory information for NIPT. Genetic tests are regulated under the Clinical Laboratory Improvement Amendments (CLIA) certifications.

Exclusions:

Presbyterian Health Plan considers NIPT for all other indications to be experimental or investigational, including higher order multiple gestations (e.g. triplets and higher).

Sequencing-based non-invasive prenatal testing for any other indication, including but not limited to the following, are considered experimental:

- twin zygosity
- screening for trisomy 7, 9, 16, 22 or other rare autosomal trisomies (RATs)
- screening for microdeletions
- single-gene disorders
- when used to determine genetic cause of miscarriage (e.g., missed abortion, incomplete abortion)
- screening for nonmedical traits (e.g., biologic sex)
- Luna Prenatal Test

For use of cell-free DNA (cfDNA) screening for fetal chromosomal copy number variants (**microdeletions**), (CPT Code 81422) have not been validated clinically and are not currently recommended (which includes both singleton or multiple gestation pregnancies). See Investigative List & New Technology Assessment (Non-Covered Services), MPM 36.0.

Definitions

Aneuploidy: any deviation from an exact multiple of the haploid number of chromosomes

Triple Screen: Alpha-fetoprotein (AFP) + Human Chorionic Gonadotropin (hCG) + Estriol

Quadruple Screen: Alpha-fetoprotein (AFP) + Human Chorionic Gonadotropin (hCG) + Estriol + Inhibin-A, Penta' screen: (AFP, uE3, total hCG, hyperglycosylated hCG, DIA), CPT code 81512.

Coding

The coding listed in this medical policy is for reference only. Covered and non-covered codes are within this list.

CPT	Description
81420	Fetal chromosomal aneuploidy (eg, trisomy 21, monosomy X) genomic sequence analysis panel, circulating cell-free fetal DNA in maternal blood, must include analysis of chromosomes 13, 18, and 21
81507	Fetal aneuploidy (trisomy 21, 18, and 13) DNA sequence analysis of selected regions using maternal plasma, algorithm reported as a risk score for each trisomy
0252U	Fetal aneuploidy short tandem–repeat comparative analysis, fetal DNA from products of conception, reported as normal (euploidy), monosomy, trisomy, or partial deletion/duplications, mosaicism, and segmental aneuploidy
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
0327U	Fetal aneuploidy (trisomy 13, 18, and 21), DNA sequence analysis of selected regions using maternal plasma, algorithm reported as a risk score for each trisomy, includes sex reporting, if performed.

CPT	Non-covered
0341U	Fetal aneuploidy DNA sequencing comparative analysis, fetal DNA from products of conception, reported as normal (euploidy), monosomy, trisomy, or partial deletion/duplication, mosaicism, and segmental aneuploidy. Includes: Single Cell Prenatal Diagnosis (SCPD) Test, Luna Genetics, Inc, Luna Genetics, Inc
81422	Fetal chromosomal microdeletion(s) genomic sequence analysis (eg, DiGeorge syndrome, Cri-du-chat syndrome), circulating cell-free fetal DNA in maternal blood

Only one screening approach is considered medically necessary. **NOTE: The following congenital abnormalities tests may not be covered, if screening for aneuploidy (81420 & 81507) has been performed, it is not medically necessary to test for other chromosomal abnormality screening test for the same pregnancy.**	
81508	Fetal congenital abnormalities, biochemical assays of two proteins (PAPP-A, HCG [any form]), utilizing maternal serum, algorithm reported as a risk score
81511	Fetal congenital abnormalities, biochemical assays of four analytes (AFP, uE3, HCG [any form], DIA) utilizing maternal serum, algorithm reported as a risk score (may include additional results from previous biochemical testing)
81512	Fetal congenital abnormalities, biochemical assays of five analytes (AFP, uE3, total HCG, hyperglycosylated HCG, DIA) utilizing maternal serum, algorithm reported as a risk score

Reviewed by / Approval Signatures

Population Health & Clinical Quality Committee: Clinton White MD
Senior Medical Director: Jim Romero MD
Date Approved: 03-26-2025

References

1. ACOG, Screening for fetal chromosomal abnormalities. ACOG Practice Bulletin No. 226. American College of Obstetricians and Gynecologists. VOL. 136, NO. 4, OCTOBER 2020. [Cited 02/13/2025]
2. ACOG Microarrays and Next-Generation Sequencing Technology The Use of Advanced Genetic Diagnostic Tools in Obstetrics and Gynecology, Number 682, December 2016. [Cited 02/14/2025]
3. Hayes, Cell-Free DNA (cfDNA) [Formerly NIPS, NIPT] Screening for Fetal Trisomy 21, 18, and 13 in Low-Risk Women with Singleton Pregnancy, Annual reviewJune14, 2024. [Cited 02/13/2025]
4. MCG, Noninvasive Prenatal Testing (Cell-Free Fetal DNA) - Microdeletion Syndromes, (A-0848), 28th Edition. Last Update: 3/14/2024 Cited 02/13/2025]
5. MCG, Noninvasive Prenatal Testing (Cell-Free Fetal DNA) – Aneuploidy Testing, (A-0724 (AC), 28th Edition, Last Update: 3-14-2024. [Cited 02-13-2025]
6. Hayes, Cell-Free DNA (cfDNA) [Formerly NIPS, NIPT] Screening for Fetal Trisomy 21, 18, and 13 in Women with Twin Pregnancies, Clinical Utility Evaluation Jul 7, 2021 Annual Review: Aug 23, 2024, SOMATIC
7. RadMD, Concert Genetics Proprietary, Genetic Testing: Non-invasive Prenatal Screening (NIPS), V1.2024, Effective: 01/01/2024, Last Review: 09/01/2023. [Cited 02/13/2025]
8. Aetna, Serum and Urine Marker Screening for Fetal Aneuploidy No. 0464, Last review 05/05/2023, Next review: 08/14/2025 [Cited 02/13/2025]
9. Cigna, Genetic Testing for Reproductive Carrier Screening and Prenatal Diagnosis, No. 0514, Next review: 02/15/2025. [Cited 02/13/2025]
10. Humana, Noninvasive Prenatal Testing Policy Number: HUM-0430-034, Review Date: 08/29/2024. [Cited 02/13/2025]

11. UHC Cell-Free Fetal DNA Testing, Policy Number: 2023T0560CC, Effective Date: Jan 01, 2025 [Cited 02-13-2025]
12. HSD, LOD#101, Prenatal Genetic Screening for Cystic Fibrosis, Spinal Muscular Atrophy (SMA) and Fetal Chromosomal Aneuploidy Billing and Guidance, Date Sept 05, 2023 [Cited 02/13/2025]
13. HSD, LOD#32 Prenatal Genetic Screening. November 17, 2024, [Cited 02/13/2025

Publication History

07/01/2015	Original effective date
01/01/2016	Update
01/24/2018	Annual review. No change
03/27/2019	Annual review. Update CPT and ICD-10 codes also added additional information for fetal ultrasound findings on increased risk of fetal aneuploidy from article on Sonographic findings associated with fetal aneuploidy from UpToDate.
06/24/2019	Update to include the use of cell-free DNA technology for single gene disorder testing is not covered.
10/16/2019	Correction on effective date, should be 07/01/2015 not 05/22/2006.
07/22/2020	Annual review. Reviewed by PHP Medical Policy Committee on July 01, 2020. No change to criteria but stated genetic testing for Microdeletion (CPT-81422) is not covered per recommendation by MCG A-0848 and ACOG. Continue prior authorization for CPT codes 81420 and 81507. Title changed to add "Genetic Testing."
03/24/2021	Annual review. Reviewed by PHP Medical Policy Committee. Coverage for all singleton pregnancies after 10 weeks gestational age. CPT codes 81420 and 81507 continue PA. The policy has been updated with limitation language, that no more than two NIPT testing in a rolling 12-month period will be paid. When screening for aneuploidy (81420/81507), only one screening approach should be used no other chromosomal abnormality screening test (81508, 81511 & 81512) should be performed in the same pregnancy and NIPT test can only be ordered by those who regularly manage pregnancy. CPT code (81422) will be set as investigational, per ACOG and MCG.
06/29/2021	Language update only to say, "*a case-by-case*" review for when cell-free DNA screening is done as a follow-up for patients with a screen positive serum, (see #6) section.
03-23-2022	Annual review. Reviewed by PHP Medical Policy Committee on 03-02-2022. No change. Continue to use the homegrown policy. Continue requiring PA for NIPT codes 81420 and 81507 and for screening code 81512. Microdeletions with ctDNA (code 81422) will be removed from the PA grid; the test is considered investigational and will be listed in the Investigative List (non-Covered Services), MPM 36.0. Updated CPT codes only on 05-25-2022. The annual review date will remain as 03-23-2022. Reviewed by PHP Medical Policy Committee on 04-13-2022 for CPT code update only. Moved the fetal aneuploidy codes from Genetic and Genomic Testing, MPM 7.1 to this policy: 0252U and 0254U. New CPT code (0327U) announced by American Medical Association, Proprietary Laboratory Analyses (PLA) to be effective July 01, 2022. All three codes 0252U, 0254U and 0327U will be added to require PA. Update only on 09-28-2022. Annual review date will remain as 03-23-2022. Reviewed by PHP Medical Policy Committee on 08/24/2022, code 81420 will not require PA for all LOB, effective 10-01-2022. Update 01-25-2023: Committee approved on 11-11-22 to add code 0341U to policy and to also require PA.
03-22-2023	Annual review. Reviewed by PHP Medical Policy Committee on 01/18/2023. Language was added to include "regardless of maternal age or risk of chromosomal abnormality" and the overall criteria remains unchanged. Code 81420 will continue no PA requirement.
03-20-2024	Annual review. Reviewed by PHP Medical Policy Committee on 01/26/2024. Coverage expanded to include testing for "twin" pregnancy and not just for single pregnancy for gestational age of greater than 10 weeks. Added language under the Exclusion section: Testing for "*higher order multiple gestations (e.g. triplets and higher*" are considered experimental. Added a list of examples to describe when these tests are considered experimental/investigational, such as Twins Zygosity (code 0060U); Luna test (0341U); screening for microdeletion (81422); screening for trisomy 7, 9, 16, 22 or other rare autosomal trisomy; single-gene disorders; when used to determine genetic cause of miscarriage; screening for nonmedical traits. Added code 0060U to policy and configured code 0060U, 0341U and 81422 as investigation for ALOB. Data are very limited in the published, peer-reviewed scientific literature regarding the predictive value of these tests to detect these additional fetal abnormalities, and whether maternal outcomes are improved if further invasive testing is required is unknown. Codes 0060U, 0341U PA requirement will be removed. Removed PA requirement for 81507 and 0327U for ALOB. These are sequencing-based non-invasive prenatal testing to screen for fetal trisomy 13, 18 and 21 and are considered medically necessary in a viable single or twin gestation pregnancy ≥ 10 weeks gestation and should not require PA. **Update 08/21/2024:** MPC meeting on 07-26-2024, determined that prior auth requirement will be removed for ALOB when Laboratory Benefit Management (LBM) Program Routine, Testing Management (RTM) product becomes effective for policies which includes Q1 and 07/01/2024 updates. The following CPT code previously required PA as part of this policy, is now listed in the LBM policy which can be found in the PHP Administrative Claims Edits Guide under Appendix A, LBM Program Policy. The policy can be found at this weblink: CORRECT CODING MEDICAL REVIEW GUIDES/ Administrative Claims Edits Guide. CPT code(s) include: 0060U. Configuration will fall under the newly adopted Presbyterian LBM policy for this code as well.03-26-2025
03-26-2025	Annual review. Reviewed by PHP Medical Policy Committee on 02/14/2025. No change to criteria but will re-request previously requested configuration since they were not completed. Configure 0341U as investigation for

ALOB and remove PA requirement. Code 81422 does not require PA but will configure 81422 as investigation for ALOB. There is very limited data in the published, peer-reviewed scientific literature regarding the predictive value for both 0341U and 81422. The NIPT codes (81507, 0327U) to screen for fetal trisomy 13, 18 and 21 are considered medically necessary in a viable single or twin gestation pregnancy ≥ 10 weeks gestation and should not require PA. Previous request to remove PA for ALOB for 81507 and 0327U was not completed.

08-13-2025 to correct erroneous information about MCG A-0848 for code 81422

This Medical Policy is intended to represent clinical guidelines describing medical appropriateness and is developed to assist Presbyterian Health Plan and Presbyterian Insurance Company, Inc. (Presbyterian) Health Services staff and Presbyterian medical directors in determination of coverage. The Medical Policy is not a treatment guide and should not be used as such.

For those instances where a member does not meet the criteria described in these guidelines, additional information supporting medical necessity is welcome and may be utilized by the medical director in reviewing the case. Please note that all Presbyterian Medical Policies are available online at: ***Click here for Medical Policies***

Web links:

At any time during your visit to this policy and find the source material web links has been updated, retired or superseded, PHP is not responsible for the continued viability of websites listed in this policy.

When PHP follows a particular guideline such as LCDs, NCDs, MCG, NCCN etc., for the purposes of determining coverage; it is expected providers maintain or have access to appropriate documentation when requested to support coverage. See the References section to view the source materials used to develop this resource document.