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The Department of Vermont Health Access Clinical Criteria

Subject: Human Platelet Antigen Genotyping

Last Review: June 26, 2024

Past Revisions: February 10, 2023, April 5, 2022, October 28, 2020

***Please note: Most current content changes will be highlighted in yellow.**

Description of Service or Procedure

Neonatal alloimmune thrombocytopenia (NAIT) defined as a fetal/neonatal platelet count of less than 150,000/microliter, is a rare syndrome in which maternal-fetal platelet incompatibility leads to formation of maternal antibodies that result in fetal and neonatal thrombocytopenia. Occurring in one in 1,000-1,5000 live births, this condition can cause severe thrombocytopenia and intracranial hemorrhage in term infants if not detected in genotype testing. The results of the genotyping will help clinicians decide the best antenatal treatment and the route of delivery.

Human platelet antigen genotyping is used for fetal or neonatal testing following detection of unexplained intracranial hemorrhage (ICH) or thrombocytopenia, which raises suspicion for NAIT. Maternal and paternal testing is performed when the fetus or neonate is suspected of having NAIT. Women who have had a previously affected pregnancy, have a history of posttransfusion purpura, or have a sister with a previously affected pregnancy are candidates for this testing. If a fetus or neonate is diagnosed with NAIT, the couple has an increased chance of reoccurrence in each subsequent pregnancy.

Please note a more expensive genetic test (generally one with a wider scope or more detailed testing) is not covered if a less expensive (smaller scope) test is available and has, in this clinical context, a substantially similar sensitivity.

Disclaimer

Coverage is limited to that outlined in Medicaid Rule or Health Care Administrative Rules that pertain to the member's aid category. Prior Authorization (PA) is only valid if the member is eligible for the applicable item or service on the date of service.



Medicaid Rule

Medicaid and Health Care Administrative Rules can be found at

<https://humanservices.vermont.gov/rules-policies/health-care-rules/health-care-administrative-rules-hcar/adopted-rules>

- 7102.2 Prior Authorization Determination
- 4.101 Medical Necessity for Covered Services
- 4.104 Medicaid Non-Covered Services
- 4.106 Early and Periodic Screening, Diagnostic and Treatment (EPSDT) Services
- 4.218 Laboratory and Radiology Services

Coverage Position

Human Platelet Antigen Genotyping may be covered for members:

- When the test is prescribed by a licensed medical provider, enrolled in the Vermont Medicaid program, operating within their scope of practice as described on the Vermont Office of Professional Regulation's website*, Statute, or rule who is knowledgeable regarding Human Platelet Antigen Genotyping, and who provides medical care to the member AND
- When the clinical criteria below are met.

* Vermont's Office of Professional Regulation's website: <https://sos.vermont.gov/opr/>

Coverage Criteria

Human Platelet Antigen Genotyping may be covered for:

Fetal or neonatal testing:

1. Either parent has had a prior affected pregnancy, OR
2. An unexplained intracranial hemorrhage is detected, OR
3. When thrombocytopenia is discovered

Maternal and paternal testing:

1. Should be performed when the fetus or neonate is suspected of having NAIT

Female members:

1. When planning a pregnancy, and the sister has had a previously affected pregnancy or a pregnancy with posttransfusion purpura
2. Who have had an adverse reaction (severe thrombocytopenia) to a blood or platelet transfusion

Considerations: Providers requesting this test should provide pre- and post-test genetic counseling for the member and family, if applicable.

Early and Periodic Screening, Diagnostic and Treatment (EPSDT): Vermont Medicaid will provide comprehensive services and furnish all Medicaid coverable, appropriate, and medically

necessary services needed to correct and ameliorate health conditions for Medicaid members under age 21.

Please note, Vermont Medicaid Clinical Criteria is reviewed based on available literature, evidence-based guidelines/standards, Medicaid rule and policy, and Medicare coverage determinations that may be appropriate to incorporate when applicable.

Clinical criteria for repeat service or procedure

Human Platelet Antigen Genotyping for fetal or neonatal testing may be repeated for a subsequent pregnancy if above referenced conditions are met.

Type of service or procedure covered

Human Platelet Antigen 1, 2, 3, 4, 5, 6, 9, 15 (HPA-1 to HPA-6, HPA-9, and HPA-15) genotyping

Type of service or procedure not covered (this list may not be all inclusive)

Generalized screening is not covered.

References

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- Paidas, M. (2023, April 4). Fetal and neonatal alloimmune thrombocytopenia: Parental evaluation and pregnancy management. *UpToDate*. https://www.uptodate.com/contents/fetal-and-neonatal-alloimmune-thrombocytopenia-parental-evaluation-and-pregnancy-management?search=%20Neonatal%20alloimmune%20thrombocytopenia&source=search_result&selectedTitle=1~21&usage_type=default&display_rank=1

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