

PRIOR AUTHORIZATION POLICY

- POLICY:** Thrombocytopenia – Nplate Prior Authorization Policy
- Nplate[®] (romiplostim subcutaneous injection – Amgen)

REVIEW DATE: 04/24/2024

OVERVIEW

Nplate, a thrombopoietin receptor agonist, is indicated for the treatment of:¹

- **Hematopoietic syndrome of acute radiation syndrome**, to increase survival in adults and pediatric patients (including term neonates) acutely exposed to myelosuppressive doses of radiation.
- **Immune thrombocytopenia (ITP), in adults** who have had an insufficient response to corticosteroids, immunoglobulins, or splenectomy.
- **Immune thrombocytopenia (ITP), in pediatric patients ≥ 1 year of age** with ITP for at least 6 months who have had an insufficient response to corticosteroids, immunoglobulins, or splenectomy.

Nplate should only be utilized in patients with ITP whose degree of thrombocytopenia and clinical condition increase the risk for bleeding.¹ Nplate should not be used in an attempt to normalize platelet counts.

Guidelines

Nplate is mentioned in various clinical guidelines.

- **Chemotherapy Induced Thrombocytopenia:** The National Comprehensive Cancer Network (NCCN) guidelines for hematopoietic growth factors (version 3.2024 – January 30, 2024) recommend consideration of Nplate for the management of suspected chemotherapy induced thrombocytopenia (category 2A) in addition to other modalities (e.g., platelet transfusion, chemotherapy dose reduction, or change in treatment regimen).¹⁴
- **Immune Thrombocytopenia:** The American Society of Hematology has updated guidelines for ITP (2019). For adults with ITP for at least 3 months who are corticosteroid-dependent or unresponsive to a corticosteroid, a thrombopoietin receptor agonist (Nplate or Promacta[®] [eltrombopag tablets and oral suspension]) or a splenectomy are recommended.² In children with newly diagnosed ITP who have non-life-threatening mucosal bleeding, corticosteroids are recommended. For children who have non-life-threatening mucosal bleeding and do not respond to first-line treatment, thrombopoietin receptor agonists are recommended.
- **Myelodysplastic Syndrome (MDS):** NCCN recommendations regarding MDS (version 1.2024 – February 12, 2024) state to consider treatment with a thrombopoietin receptor agonist in patients with lower-risk MDS who have severe or life-threatening thrombocytopenia.³ Data are available that describe the use of Nplate in patients with MDS.⁴⁻¹³ The data with Nplate are discussed noting an increased rate of platelet response and decreased overall bleeding events among patients with low to intermediate risk MDS.

POLICY STATEMENT

Prior Authorization is recommended for prescription benefit coverage of Nplate. All approvals are provided for the duration noted below. Regarding the approval duration of one dose, the approval is for 30 days, which is an adequate duration for the patient to receive one dose. Because of the specialized skills required for evaluation and diagnosis of patients treated with Nplate as well as the monitoring required for adverse events and efficacy, approval for some indications requires Nplate to be prescribed by or in consultation with a physician who specializes in the condition being treated.

Automation: None.

RECOMMENDED AUTHORIZATION CRITERIA

Coverage of Nplate is recommended in those who meet ONE of the following criteria:

FDA-Approved Indications

1. **Hematopoietic Syndrome of Acute Radiation Syndrome.** Approve for one dose if the patient has been acutely exposed to myelosuppressive doses of radiation.
2. **Immune Thrombocytopenia.** Approve if the patient meets ONE of the following (A or B):
 - A) **Initial Therapy.** Approve for 3 months if the patient meets ALL of the following (i, ii, and iii):
 - i. Patient meets ONE of the following (a or b):
 - a) Patient has a platelet count $< 30 \times 10^9/L$ ($< 30,000/mcL$); OR
 - b) Patient meets BOTH of the following [(1) and (2)]:
 - (1) Patient has a platelet count $< 50 \times 10^9/L$ ($< 50,000/mcL$); AND
 - (2) According to the prescriber the patient is at an increased risk of bleeding; AND
 - ii. Patient meets ONE of the following (a or b):
 - a) Patient has tried at least one other therapy; OR
Note: Examples of therapies are systemic corticosteroids, intravenous immunoglobulin, anti-D immunoglobulin, Promacta (eltrombopag tablets and oral suspension), Tavalisse (fostamatinib tablets), Doptelet (avatrombopag tablets), or ritixumab.
 - b) Patient has undergone splenectomy; AND
 - iii. Medication is prescribed by or in consultation with a hematologist; OR
 - B) **Patient is Currently Receiving Nplate.** Approve for 1 year if the patient meets BOTH of the following (i and ii):
 - i. According to the prescriber the patient demonstrates a beneficial clinical response; AND
Note: A beneficial response can include increased platelet counts, maintenance of platelet counts, and/or a decreased frequency of bleeding episodes.
 - ii. Patient remains at risk for bleeding complications.

Other Uses with Supportive Evidence

3. **Thrombocytopenia, Chemotherapy-Induced.** Approve if the patient meets ONE of the following (A or B):
 - A) **Initial Therapy.** Approve for 3 months if the patient meets ALL of the following (i, ii, iii, and iv):
 - i. Patient is ≥ 18 years of age; AND
 - ii. Patient has a platelet count $< 100 \times 10^9/L$ ($< 100,000/mcL$); AND
 - iii. Patient meets ONE of the following (a or b):
 - a) Patient has thrombocytopenia at least 3 weeks after the most recent dose of chemotherapy;
OR

- b) Patient has experienced a delay in chemotherapy administration related to thrombocytopenia; AND
 - iv. Medication is prescribed by or in consultation with a hematologist or an oncologist; OR
 - B) Patient is Currently Receiving Nplate.** Approve for 6 months if the patient meets ALL of the following (i, ii, and iii):
 - i. Patient is ≥ 18 years of age; AND
 - ii. Patient continues to receive treatment with chemotherapy; AND
 - iii. Patient demonstrates a beneficial clinical response according to the prescriber.
Note: A beneficial response can include increased platelet counts, maintenance of platelet counts, and/or decreased frequency of bleeding episodes.
- 4. Thrombocytopenia in Myelodysplastic Syndrome.** Approve if the patient meets ONE the following (A or B):
- A) Initial Therapy.** Approve for 3 months if the patient meets ALL of the following (i, ii, and iii):
 - i. Patient has low- to intermediate-risk myelodysplastic syndrome; AND
 - ii. Patient meets ONE of the following (a or b):
 - a) Patient has a platelet count $< 30 \times 10^9/L$ ($< 30,000/mcL$); OR
 - b) Patient meets BOTH of the following [(1) and (2)]:
 - (1) Patient has a platelet count $< 50 \times 10^9/L$ ($< 50,000/mcL$); AND
 - (2) According to the prescriber the patient is at an increased risk for bleeding; AND
 - iii. Medication is prescribed by or in consultation with a hematologist or an oncologist; OR
 - B) Patient is Currently Receiving Nplate.** Approve for 1 year if the patient meets BOTH of the following (i and ii):
 - i. According to the prescriber the patient demonstrates a beneficial clinical response; AND
Note: A beneficial response can include increased platelet counts, maintenance of platelet counts, and/or decreased frequency of bleeding episodes.
 - ii. Patient remains at risk for bleeding complications.

CONDITIONS NOT RECOMMENDED FOR APPROVAL

Coverage of Nplate is not recommended in the following situations:

1. Coverage is not recommended for circumstances not listed in the Recommended Authorization Criteria. Criteria will be updated as new published data are available.

REFERENCES

1. Nplate® subcutaneous injection [prescribing information]. Thousand Oaks, CA: Amgen; February 2022.
2. Neunert C, Terrell DR, Arnold DM, et al. American Society of Hematology 2019 guidelines for immune thrombocytopenia. *Blood Adv.* 2019;3(23):3829-3866.
3. The NCCN Myelodysplastic Syndromes Clinical Practice Guidelines in Oncology (Version 1.2024 – February 12, 2024). © 2024 National Comprehensive Cancer Network. Available at: <http://www.nccn.org>. Accessed on April 18, 2024.
4. Giagounidis A, Mufti GJ, Fenaux P, et al. Results of a randomized, double-blind study of romiplostim versus placebo in patients with low/intermediate-1-risk myelodysplastic syndrome and thrombocytopenia. *Cancer.* 2014;120:1838-1846.
5. Kantarjian HM, Giles FJ, Greenberg PL, et al. Phase 2 study of romiplostim in patients with low- or intermediate-risk myelodysplastic syndrome receiving azacitidine therapy. *Blood.* 2010;116(17):3163-3170.
6. Sekeres MA, Kantarjian H, Fenaux P, et al. Subcutaneous or intravenous administration of romiplostim in thrombocytopenic patients with lower risk myelodysplastic syndromes. *Cancer.* 2011;117:992-1000.
7. Fenaux P, Muus P, Kantarjian H, et al. Romiplostim monotherapy in thrombocytopenia patients with myelodysplastic syndromes: long-term safety and efficacy. *Br J Haematol.* 2017;178:906-913.
8. Greenberg PL, Garcia-Manero G, Moore M, et al. A randomized controlled trial of romiplostim in patients with low- or intermediate-risk myelodysplastic syndrome receiving decitabine. *Leuk Lymphoma.* 2013;54(2):321-328.

9. Kantarjian H, Fenaux P, Sekeres MA, et al. Safety and efficacy of romiplostim in patients with lower-risk myelodysplastic syndrome and thrombocytopenia. *J Clin Oncol*. 2010;28(3):437-444.
10. Wang ES, Lyons RM, Larson RA, et al. A randomized, double-blind, placebo-controlled phase 2 study evaluating the efficacy and safety of romiplostim treatment of patients with low or intermediate-1 risk myelodysplastic syndrome receiving lenalidomide. *J Hematol Oncol*. 2012;5:71.
11. Kantarjian HM, Fenaux P, Sekeres MA, et al. Long-term follow-up for up to 5 years on the risk of leukaemic progression in thrombocytopenic patients with lower-risk myelodysplastic syndromes treated with romiplostim or placebo in a randomized double-blind trial. *Lancet Haematol*. 2018;5(3):e117-e126.
12. Brierley CK, Steensma DP. Thrombopoiesis-stimulating agents and myelodysplastic syndromes. *Br J Haematol*. 2015;169:309-323.
13. Prica A, Sholzberg M, Buckstein R. Safety and efficacy of thrombopoietin-receptor agonists in myelodysplastic syndromes: a systematic review and meta-analysis of randomized controlled trials. *Br J Haematol*. 2014;167:626-638.
14. The NCCN Hematopoietic Growth Factors Clinical Practice Guidelines in Oncology (Version 3.2024 – January 30, 2024). © 2024 National Comprehensive Cancer Network. Available at: <http://www.nccn.org>. Accessed on April 18, 2024.