CARECONTINUUM™

UTILIZATION MANAGEMENT MEDICAL POLICY

POLICY: Oncology (Injectable) – Nipent Utilization Management Medical Policy
- Nipent™ (pentostatin intravenous infusion – Hospira)

REVIEW DATE: 09/11/2024

OVERVIEW

Nipent, an adenosine deaminase inhibitor, is indicated for the treatment of untreated and alpha-interferon refractory **hairy cell leukemia** in patients with active disease, defined by clinically significant anemia, neutropenia, thrombocytopenia, or disease-related symptoms, as a single-agent.[1]

Guidelines

Nipent is addressed in National Comprehensive Cancer Network guidelines:

- **Hairy Cell Leukemia:** Guidelines (version 2.2024 – April 22, 2024) recommend Nipent as preferred therapy as a single agent for initial therapy.[2] Nipent is also recommended as a single agent or in combination with a rituximab product (e.g., Rituxan, biosimilars) for less than a complete response to initial therapy or relapsed disease within 2 years of complete response following initial treatment with cladribine.[2,3] Nipent is also recommended with a rituximab product for retreatment for relapse ≥ 2 years following initial treatment and for relapse ≥ 2 years following initial treatment with cladribine.
- **Graft-Versus-Host Disease:** Guidelines for Hematopoietic Cell Transplantation (version 2.2024 – August 30, 2024) recommend Nipent, in combination with corticosteroids, for acute or chronic graft-versus-host disease following no response to first-line therapy options (steroid-refractory).[2,4] Nipent is also recommended as part of a conditioning regimen for hematopoietic cell transplant.
- **Primary Cutaneous Lymphoma:** Guidelines (version 3.2024 – August 22, 2024) recommend Nipent as a single agent for the subsequent treatment of disease refractory to multiple previous therapies.[2,5]
- **T-Cell Lymphomas:** Guidelines (version 4.2024 – May 28, 2024) recommend Nipent as second-line therapy, as a single agent, for T-cell large granular lymphocytic leukemia, and in combination with Campath® (alemtuzumab intravenous infusion and subcutaneous injection) or as a single agent for T-cell prolymphocytic leukemia and hepatosplenic T-cell lymphoma.[2,6]

Safety

Nipent has a Boxed Warning for dose-limiting severe renal, liver, pulmonary, and central nervous system toxicities when used at higher than recommended doses.[1] The use of Nipent in combination with fludarabine is not recommended due to severe or fatal pulmonary toxicity.

POLICY STATEMENT

Prior Authorization is recommended for medical benefit coverage of Nipent. Approval is recommended for those who meet the **Criteria** and **Dosing** for the listed indications. Extended approvals are allowed if the patient continues to meet the Criteria and Dosing. Requests for doses outside of the established dosing documented in this policy will be considered on a case-by-case basis by a clinician (i.e., Medical Director or Pharmacist). All approvals are provided for the duration noted below. In cases where the approval is authorized in months, 1 month is equal to 30 days. Because of the specialized skills required for evaluation and diagnosis of patients treated with Nipent as well as the monitoring required for adverse events and long-

term efficacy, approval requires Nipent to be prescribed by or in consultation with a physician who specializes in the condition being treated.

Automation: None.

RECOMMENDED AUTHORIZATION CRITERIA

Coverage of Nipent is recommended in those who meet one of the following criteria:

FDA-Approved Indication

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1. **Hairy Cell Leukemia.** Approve for 6 months if the patient meets ALL of the following (A, B, and C):
   - **A)** Patient is ≥ 18 years of age; AND
   - **B)** Patient meets ONE of the following (i or ii):
     - **i.** Medication is used as a single agent; OR
     - **ii.** Medication is used in combination with rituximab; AND
       Note: Rituximab products include Rituxan and biosimilars.
   - **C)** Medication is prescribed by or in consultation with an oncologist.

   Dosing. Approve up to 4 mg/m^2 administered intravenously no more frequently than once every 2 weeks.

Other Uses with Supportive Evidence

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2. **Graft-Versus-Host Disease.** Approve for 6 months if the patient meets ALL of the following (A, B, and C):
   - **A)** Patient has steroid-refractory disease; AND
   - **B)** Medication will be used in conjunction with systemic corticosteroids; AND
     Note: Examples of corticosteroids include prednisone and methylprednisolone.
   - **C)** Medication is prescribed by or in consultation with an oncologist.

   Dosing. Approve up to 1.5 mg/m^2 administered intravenously no more frequently than three times in each 14-day cycle.

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3. **Hematopoietic Cell Transplantation.** Approve for 1 month if the patient meets ALL of the following (A, B, C, and D):
   - **A)** Patient is ≥ 4 years of age; AND
   - **B)** Medication is used for reduced intensity conditioning; AND
   - **C)** Medication is used in combination with ONE of the following (i, ii, or iii):
     - **i.** Busulfan; OR
     - **ii.** Busulfan plus cyclophosphamide; OR
     - **iii.** Cyclophosphamide plus total body irradiation; AND
   - **D)** Medication is prescribed by or in consultation with an oncologist or a physician that specializes in hematopoietic cell transplantation.

   Dosing. Approve up to 4 mg/m^2 administered intravenously twice prior to hematopoietic cell transplantation.

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4. Hepatosplenic T-Cell Lymphoma. Approve for 6 months if the patient meets ALL of the following (A, B, and C):
- **A)** Patient is ≥ 18 years of age; AND
- **B)** Patient meets ONE of the following (i or ii):
  - **i.** Medication is used as a single agent; OR
  - **ii.** Medication is used in combination with Campath (alemtuzumab intravenous infusion and subcutaneous injection); AND
- **C)** Medication is prescribed by or in consultation with an oncologist.

Dosing. Approve up to 4 mg/m^2 administered intravenously no more frequently than once weekly.

5. Mycosis Fungoides/Sezary Syndrome. Approve for 6 months if the patient meets ALL of the following (A, B, C, and D):
- **A)** Patient is ≥ 18 years of age; AND
- **B)** Patient has relapsed or refractory disease; AND
- **C)** Medication will be used as a single agent; AND
- **D)** Medication is prescribed by or in consultation with an oncologist or dermatologist.

Dosing. Approve up to 5 mg/m^2 administered intravenously no more frequently than three times in each 21-day cycle.

6. T-Cell Large Granular Lymphocytic Leukemia. Approve for 6 months if the patient meets ALL of the following (A, B, C, and D):
- **A)** Patient is ≥ 18 years of age; AND
- **B)** Patient has progressive or refractory disease; AND
- **C)** Medication will be used as a single agent; AND
- **D)** Medication is prescribed by or in consultation with an oncologist.

Dosing. Approve up to 4 mg/m^2 administered intravenously no more frequently than once weekly.

7. T-Cell Prolymphocytic Leukemia. Approve for 6 months if the patient meets ALL of the following (A, B, and C):
- **A)** Patient is ≥ 18 years of age; AND
- **B)** Patient meets one of the following (i or ii):
  - **i.** Medication is used as a single agent; OR
  - **ii.** Medication will be used in combination with Campath (alemtuzumab intravenous infusion and subcutaneous injection); AND
- **C)** Medication is prescribed by or in consultation with an oncologist.

Dosing. Approve up to 4 mg/m^2 administered intravenously no more frequently than once weekly.

CONDITIONS NOT RECOMMENDED FOR APPROVAL

Coverage of Nipent 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. Nipent intravenous infusion [prescribing information]. Lake Forest, IL: Hospira; October 2019.
2. The NCCN Drugs and Biologics Compendium. © 2024 National Comprehensive Cancer Network. Available at: http://www.nccn.org. Accessed on September 3, 2024. Search term: pentostatin.
3. The NCCN Hairy Cell Leukemia Clinical Practice Guidelines in Oncology (version 2.2024 – April 22, 2024). © 2024 National Comprehensive Cancer Network. Available at: http://www.nccn.org. Accessed on September 3, 2024.
4. The NCCN Hematopoietic Cell Transplantation Clinical Practice Guidelines in Oncology (version 2.2024 – August 30, 2024). © 2024 National Comprehensive Cancer Network. Available at: http://www.nccn.org. Accessed on September 4, 2024.
5. The NCCN Primary Cutaneous Lymphomas Clinical Practice Guidelines in Oncology (version 3.2024 – August 22, 2024). © 2024 National Comprehensive Cancer Network. Available at: http://www.nccn.org. Accessed on September 4, 2024.
6. The NCCN T-Cell Lymphomas Clinical Practice Guidelines in Oncology (version 4.2024 – May 28, 2024). © 2024 National Comprehensive Cancer Network. Available at: http://www.nccn.org. Accessed on September 4, 2024.
7. Ragon BK, Mehta RS, Gulbis AM, et al. Pentostatin therapy for steroid-refractory acute graft versus host disease: Identifying those who may benefit. *Bone Marrow Transplant*. 2018;53:315-325.
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9. Ravandi F, Aribi A, O'Brien S, et al. Phase II study of alemtuzumab in combination with pentostatin in patients with T-cell neoplasms. *J Clin Oncol*. 2009;27:5425-5430.
10. Dimitrova D, Kanakry JA. Beyond fludarabine: Pentostatin plus cyclophosphamide are well-tolerated alternative in reduced intensity conditioning. *Bone Marrow Transplant*. 2020;57:1837-1838.
11. Dimitrova D, Gea-Banacloche J, Steinberg SM, et al. Prospective study of a novel, radiation-free, reduced-intensity bone marrow transplantation platform for primary immunodeficiency diseases. *Biol Blood Marrow Transplant*. 2020;26:94-106.

HISTORY

Type of Revision	Summary of Changes	Review Date
Annual Revision	**Hematopoietic Cell Transplantation:** Added new condition of approval. **T-Cell Prolymphocytic Leukemia:** Medication used as a single agent added as new option for approval.	09/20/2023
Annual Revision	No criteria changes.	09/11/2024