## Clinical Policy: Elapegademase-lvlr (Revcovi)

Reference Number: PA.CP.PHAR.419
Effective Date: 01/2020
Last Review Date: 04/2025

**Description**
Elapegademase-lvlr (Revcovi®) is a recombinant adenosine deaminase.

**FDA Approved Indication(s)**
Revcovi is indicated for the treatment of adenosine deaminase severe combined immune deficiency disease (ADA-SCID) in pediatric and adult patients.

**Policy/Criteria**
*Provider must submit documentation (such as office chart notes, lab results or other clinical information) supporting that member has met all approval criteria.*

It is the policy of PA Health & Wellness® that Revcovi is **medically necessary** when the following criteria are met:

**I. Initial Approval Criteria**

**A. Adenosine Deaminase Severe Combined Immune Deficiency Disease** (must meet all)**:**

1. Diagnosis of ADA-SCID confirmed by one of the following (a or b):
   a. Genetic testing;
   b. Both of the following (i and ii):
      i. Deficient ADA catalytic activity (< 1% of normal);
      ii. Increase of adenosine or deoxyadenosine nucleotide (dATP/dAXP) levels;
2. Prescribed by or in consultation with an immunologist or hematologist;
3. Member has failed bone marrow transplantation, is not a candidate for bone marrow transplantation, or intent is to treat with Revcovi as bridge/stabilization therapy prior to definitive therapy;
4. Dose does not exceed 0.4 mg/kg per week.

**Approval duration: 6 months**

**B. Other diagnoses/indications**

1. Refer to the off-label use policy if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): PA.CP.PMN.53

**II. Continued Therapy**

**A. Adenosine Deaminase Severe Combined Immunodeficiency Disease** (must meet all)**:**

1. Currently receiving medication via PA Health & Wellness benefit and documentation supports positive response to therapy or the Continuity of Care policy (PA.PHARM.01) applies;
2. Member is responding positively to therapy *(see Appendix D for examples)*;
3. If request is for a dose increase, new dose does not exceed 0.4 mg/kg per week.

**Approval duration: 12 months**

**B. Other diagnoses/indications** (must meet 1 or 2)**:**
1. Currently receiving medication via PA Health & Wellness benefit and documentation supports positive response to therapy or the Continuity of Care policy (PA.PHARM.01) applies.
   **Approval duration: Duration of request or 6 months (whichever is less)**; or
2. Refer to the off-label use policy if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): PA.CP.PMN.53

## III. Diagnoses/Indications for which coverage is NOT authorized:

**A.** Non-FDA approved indications, which are not addressed in this policy, unless there is sufficient documentation of efficacy and safety according to the off label use policies – PA.CP.PMN.53

## IV. Appendices/General Information

*Appendix A: Abbreviation/Acronym Key*
ADA-SCID: adenosine deaminase severe combined immune deficiency disease
dATP: deoxyadenosine triphosphate
dAXP: deoxyadenosine nucleotides
FDA: Food and Drug Administration

*Appendix B: Therapeutic Alternatives*
Not applicable

*Appendix C: Contraindications/Boxed Warnings*
None reported

*Appendix D: General Information*
- Examples of positive response to therapy include improvement in immune function (T cell, B cell, and natural killer lymphocytes), reduction in frequency/severity of opportunistic infections, and decrease from baseline or maintenance of normal red cell dATP levels.
- Once treatment with Revcovi has been initiated, a target trough plasma ADA activity should be at least 30 mmol/hr/L. In order to determine an effective dose of Revcovi, trough plasma ADA activity (pre-injection) should be determined every 2 weeks for Adagen-naïve patients and every 4 weeks for patients previously receiving Adagen therapy, during the first 8 - 12 weeks of treatment, and every 3 - 6 months thereafter. A decrease of ADA activity below this level suggests noncompliance to treatment or a development of antibodies (anti-drug, anti-PEG, and neutralizing antibodies). Antibodies to Revcovi should be suspected if a persistent fall in pre-injection levels of trough plasma ADA activity below 15 mmol/hr/L occurs. In such patients, testing for antibodies to Revcovi should be performed. If a persistent decline in trough plasma ADA activity occurs, immune function and clinical status should be monitored closely and precautions should be taken to minimize the risk of infection. If antibodies to Revcovi are found to be the cause of a persistent fall in trough plasma ADA activity, then adjustment in the dosage of Revcovi and other measures may be taken to induce tolerance and restore adequate ADA activity.

- Two months after starting Revcovi treatment, trough erythrocyte deoxyadenosine nucleotide (dAXP) levels should be maintained below 0.02 mmol/L, and monitored at least twice a year.
- The degree of immune function may vary from patient to patient. Each patient will require appropriate monitoring consistent with immunologic status. Total and subset lymphocytes should be monitored periodically as follows:
  - Adagen-naïve patients: every 4 - 8 weeks for up to 1 year, and every 3 - 6 months thereafter
  - Other patients: every 3 - 6 months
- Immune function, including the ability to produce antibodies, generally improves after 2 - 6 months of therapy, and matures over a longer period. In general, there is a lag between the correction of the metabolic abnormalities and improved immune function. Improvement in the general clinical status of the patient may be gradual (as evidenced by improvement in various clinical parameters) but should be apparent by the end of the first year of therapy.

## V. Dosage and Administration

| Indication | Dosing Regimen | Maximum Dose |
|---|---|---|
| ADA-SCID | Patients transitioning from Adagen® to Revcovi:<br>If the weekly Adagen dose is unknown, or if the weekly Adagen dose is at or lower than 30 U/kg, use Revcovi 0.2 mg/kg IM weekly. If the weekly Adagen dose is > 30 U/kg, an equivalent weekly Revcovi dose (mg/kg) should be calculated by dividing the Adagen dose in U/kg by 150. Subsequent doses may be increased by increments of 0.033 mg/kg weekly if trough ADA activity is under 30 mmol/hr/L, trough dAXPs are above 0.02 mmol/L, and/or the immune reconstitution is inadequate based on the clinical assessment of the patient. The total weekly dose may be divided into multiple IM administrations during a week.<br><br>Adagen-naïve patients:<br>0.2 mg/kg IM twice a week based on ideal body weight or actual weight whichever is greater for at least 12-24 weeks until immune reconstitution is achieved. Dose may be gradually adjusted down to maintain trough ADA activity over 30 mmol/hr/L, trough dAXP level under 0.02 mmol/L, and/or to maintain adequate immune reconstitution based on clinical assessment of the patient. | 0.4 mg/kg/week |

## VI. Product Availability

Single-dose vial: 2.4 mg/1.5 mL (1.6 mg/mL)

## VII. References

1. Revcovi Prescribing Information. Gaithersburg, MD: Leadiant Biosciences Inc.; December 2020. Available at: www.revcovi.com. Accessed January 15, 2025.
2. Kohn DB, Hershfield MS, Puck JM, et al. Consensus approach for the management of severe combined immune deficiency caused by adenosine deaminase deficiency. J Allergy Clin Immunol 2019;143:852-63.
3. Grunebaum E, Booth C, Cuvelier GDE, Loves R, Aiuti A, Kohn DB. Updated Management Guidelines for Adenosine Deaminase Deficiency. J Allergy Clin Immunol Pract. 2023;11(6):1665-1675.

## Coding Implications

Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

| HCPCS Codes | Description |
|---|---|
| J3590 | Unclassified biologics |
| C9399 | Unclassified drugs or biologicals |

| Reviews, Revisions, and Approvals | Date |
|---|---|
| Policy created | 01/2020 |
| 1Q 2020 annual review: clarified diagnosis is confirmed by genetic testing; references reviewed and updated. | 01/2021 |
| 2Q 2021 annual review: added a requirement for a prior failure or non-candidacy for BMT; references reviewed and updated. | 04/2021 |
| 2Q 2022 annual review: references reviewed and updated. | 04/2022 |
| 2Q 2023 annual review: added hematologist specialty option to criteria; references reviewed and updated. | 04/2023 |
| 2Q 2024 annual review: no significant changes; references reviewed and updated. | 04/2024 |
| 2Q 2025 annual review: added an additional diagnostic option to genetic testing of both deficient ADA catalytic activity and increase in adenosine or deoxyadenosine nucleotide levels; added HCPCS code section; references reviewed and updated. | 04/2025 |