# Clinical Policy: Asfotase Alfa (Strensiq)

Reference Number: PA.CP.PHAR.328
Effective Date: 01/2018
Last Review Date: 10/2023

Coding Implications

**Description**
Asfotase alfa (Strensiq®) is a tissue nonspecific alkaline phosphatase.

**FDA Approved Indication(s)**
Strensiq is indicated for the treatment of patients with perinatal/infantile- and juvenile-onset hypophosphatasia (HPP).

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

**I. Initial Approval Criteria**

**A. Perinatal/Infantile- and Juvenile-Onset Hypophosphatasia** (must meet all):

1. Diagnosis of perinatal/infantile- or juvenile-onset hypophosphatasia (HPP) as evidenced by all of the following (a, b and c):
   a. Age of onset is < 18 years;
   b. Presence of one of the following laboratory indices (i or ii):
      i. Mutation in the ALPL gene encoding for tissue non-specific alkaline phosphatase (TNSALP)*;
      ii. Serum alkaline phosphatase (ALP) below the age-adjusted normal range and either of the following (a or b):
         a) Plasma pyridoxal 5'-phosphate (PLP; main circulating form of vitamin B6) above the upper limit of normal (ULN);
         b) Urinary phosphoethanoloamine (PEA) above the ULN;
   c. History of one of the following HPP clinical manifestations:
      i. Vitamin B6-dependent seizures;
      ii. Failure to thrive or growth failure/short stature;
      iii. Nephrocalcinosis with hypercalcemia/hypercalcuria;
      iv. Skeletal abnormalities and associated impairments (any of the following):
         a) Craniosynostosis (premature fusion of one or more cranial sutures) with increased intracranial pressure;
         b) Rachitic chest deformity (costochondral junction enlargement seen in advanced rickets) with associated respiratory compromise;
         c) Limb deformity with delayed walking or gait abnormality;
         d) Compromised exercise capacity due to rickets and muscle weakness;
         e) Low bone mineral density for age with unexplained fractures;
         f) Alveolar bone loss with premature loss of deciduous (primary) teeth;
2. Prescribed by or in consultation with an endocrinologist;
3. Prescribed dose does not exceed the following (a or b):
   a. Perinatal/infantile-onset HPP: 9 mg/kg in split doses per week;
   b. Juvenile-onset HPP: 6 mg/kg in split doses per week.

**Approval duration: 6 months**

**TNSALP is an ALP isoenzyme; a functional mutation in the gene (ALPL) encoding for TNSALP results in low TNSALP activity (as evidenced by a low serum ALP level) and increased levels of TNSALP substrates (PLP and PEA).*

**B. Other diagnoses/indications:** Refer to PA.CP.PMN.53

## II. Continued Approval

**A. Perinatal/Infantile- and Juvenile-Onset Hypophosphatasia** (must meet all):

1. Currently receiving medication via PA Health & Wellness benefit or member has previously met all initial approval criteria or the Continuity of Care policy (PA.LTSS.PHAR.01) applies;;
2. Member is responding positively to therapy, as evidenced by improvement in any of the following on initial re-authorization request:
   a. Height velocity;
   b. Respiratory function;
   c. Skeletal manifestations (e.g., bone mineralization, bone formation and remodeling, fractures, deformities);
   d. Motor function, mobility, or gait;
3. If request is for a dose increase, new dose does not exceed the following (a or b):
   a. Perinatal/infantile-onset HPP: 9 mg/kg per week;
   b. Juvenile-onset HPP: 6 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 or member has met all initial approval criteria or the Continuity of Care Policy (PA.LTSS.PHAR.01) applies;
   **Approval duration: Duration of request or 6 months (whichever is less)**; or
2. Refer to PA.CP.PHAR.53 if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized).

## 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 policy – PA.CP.PHAR.53 or evidence of coverage documents.

## IV. Appendices/General Information

*Appendix A: Abbreviation/Acronym Key*

ALP: alkaline phosphatase
FDA: Food and Drug Administration
HPP: hypophosphatasia
PEA: phosphoethanolamine
PLP: pyridoxal 5'-phosphate
TNSALP: tissue non-specific alkaline phosphatase
ULN: upper limit of normal

*Appendix B: Therapeutic Alternatives*

Not applicable

*Appendix C: Contraindications/Boxed Warnings*
None reported

## V. Dosage and Administration

| Indication | Dosing Regimen | Maximum Dose |
|---|---|---|
| Perinatal/infantile-onset HPP | 6 mg/kg SC per week as either:<br>• 2 mg/kg three times per week, or<br>• 1 mg/kg six times per week<br><br>The dose may be increased for lack of efficacy (e.g., no improvement in respiratory status, growth, or radiographic findings) up to 9 mg/kg per week, administered as 3 mg/kg SC three times per week. | 9 mg/kg/week |
| Juvenile-onset HPP | 6 mg/kg SC per week as either:<br>• 2 mg/kg three times per week, or<br>• 1 mg/kg six times per week | 6 mg/kg/week |

## VI. Product Availability

Single-use vials: 18 mg/0.45 mL, 28 mg/0.7 mL, 40 mg/mL, 80 mg/0.8 mL

## VII. References

1. Strensiq Prescribing Information. New Haven, CT: Alexion Pharmaceuticals, Inc.; June 2020. Available at http://strensiq.com/images/Strensiq_PRESCRIBING_INFORMATION.pdf. Accessed June 30, 2023.
2. Beck C, Morback H, Stenzel M. Hypophosphatasia: Recent advances in diagnosis and treatment. Open Bone J. 2009; 1:8-15.
3. Scott LJ. Asfotase alfa in perinatal/infantile-onset and juvenile-onset hypophosphatasia: A guide to its use in the USA. Bio Drugs. 2016; 30:41-48. DOI 10.1007/s40259-016-0161-x.
4. Whyte MP, Rockman-Greenberg C, Ozono K, et al. Asfotase alfa treatment improves survival for perinatal and infantile hypophosphatasia. J Clin Endocrinol Metab. January 2016; 101(1):334-42. Doi: 10.1210/jc.2015-3462. Epub 2015 Nov 3.
5. Orimo H. Pathophysiology of hypophosphatasia and the potential role of asfotase alfa. Ther Clin Risk Manag. May 17, 2016; 12:777-86. Doi: 10.2147/TCRM.S87956. eCollection 2016.
6. Mornet E, Nunes ME. Hypophosphatasia. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993-2016. 2007 Nov 20 [updated 2016 Feb 4]. Available at https://www.ncbi.nlm.nih.gov/books/NBK1150/. Accessed August 30, 2017.
7. Bishop N. Clinical management of hypophosphatasia. Clin Cases miner Bone Metab. 2015; 12(2): 170-173.
8. Choida V, Bubbear JS. Update on the management of hypophosphatasia. Ther Adv Musculoskel Dis. 2019;11:1-8.
9. Kishnani PS, et al. Monitoring guidance for patients with hypophosphatasia treated with asfotase alfa. Mol Genetics and Metab. 2017;122:4-17.

**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 |
|---|---|
| J3490 | Unclassified drugs |

| Reviews, Revisions, and Approvals | Date | Approval Date |
|---|---|---|
| 4Q 2018 annual review: no significant changes; added diagnosis confirmation and specialist requirements along with specific criteria for confirmation of positive response to therapy for renewals; references reviewed and updated. | 07/2018 | |
| 4Q 2019 annual review: No changes per Statewide PDL implementation 01-01-2020 | 10/2019 | |
| 4Q 2020 annual review: Updated appendices and referenced reviewed and updated. | 07/2020 | |
| 4Q 2021 annual review: no significant changes; references reviewed and updated. | 10/2021 | |
| 4Q 2022 annual review: no significant changes; references reviewed and updated. | 10/2022 | |
| 4Q 2023 annual review: no significant changes; references reviewed and updated. | 10/2023 | |