

## **Clinical Policy: Alpha-1 Proteinase Inhibitors (Aralast NP, Glassia, Prolastin-C, Zemaira)**

Reference Number: PA.CP.PHAR.94

Effective Date: 01/2018

Last Review Date: 01/2023

[Coding Implications](#)  
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### **Description**

The following are alpha1-proteinase inhibitors requiring prior authorization: alpha1-proteinase inhibitor, human (Aralast<sup>TM</sup> NP, Glassia<sup>®</sup>, Prolastin<sup>®</sup>-C, Zemaira<sup>®</sup>).

### **FDA Approved Indication(s)**

Aralast NP, Glassia, Prolastin-C, and Zemaira are indicated for chronic augmentation and maintenance therapy in adults with clinical evidence of emphysema due to severe congenital deficiency of alpha1-PI (alpha1-antitrypsin [AAT] deficiency). Alpha1-PI products increase antigenic and functional (anti-neutrophil elastase capacity) serum levels and antigenic lung epithelial lining fluid levels of alpha1-PI.

Limitation(s) of use:

- The effect of augmentation therapy with alpha<sub>1</sub>-PI products on pulmonary exacerbations and on the progression of emphysema in alpha<sub>1</sub>-PI deficiency has not been conclusively demonstrated in randomized, controlled clinical trials.
- Clinical data demonstrating the long-term effects of chronic augmentation and maintenance therapy of individuals with alpha<sub>1</sub>-PI products are not available.
- Alpha<sub>1</sub>-PI products are not indicated as therapy for lung disease in patients in whom severe alpha<sub>1</sub>-PI deficiency has not been established.

### **Policy/Criteria**

It is the policy of PA Health & Wellness that Aralast NP, Glassia, Prolastin-C, and Zemaira are **medically necessary** when the following criteria are met:

#### **I. Initial Approval Criteria**

##### **A. Alpha<sub>1</sub>-Antitrypsin Deficiency (must meet all):**

1. Diagnosis of severe congenital AAT deficiency;
2. Prescribed by or in consultation with a pulmonologist;
3. Age  $\geq$  18 years;
4. Member meets one of the following (a or b):
  - a. Documentation of plasma AAT level  $< 11$  micromol/L (approximately 50 mg/dL using nephelometry or 80 mg/dL by radial immunodiffusion);
  - b. If AAT level  $> 11$  micromol/L, member has one of the high-risk phenotypes (i.e. PiZZ, PiZnull, Pi(null, null), or one of a few rare phenotypes [e.g. Pi(Malton, Malton)]).
5. Member demonstrates clinical evidence of emphysema (a or b):
  - a. Forced expiratory volume in one second (FEV<sub>1</sub>) from  $\geq 30\%$  to  $< 65\%$  of predicted, post-bronchodilator;
  - b. FEV<sub>1</sub> from  $\geq 65\%$  to  $< 80\%$  of predicted, post-bronchodilator, and a rapid decline in lung function showing a change in FEV<sub>1</sub>  $> 100$  mL/year;

6. Member is not an active smoker as evidenced by recent (within the last 30 days) negative nicotine metabolite (i.e., cotinine) test;
7. Dose does not exceed 60 mg/kg/week.

**Approval Duration: 6 months**

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

## **II. Continued Approval**

### **A. Alpha-1 Antitrypsin Deficiency (must meet all):**

1. Currently receiving medication via of PA Health & Wellness benefit or member has previously met all initial approval criteria or Continuity of Care policy applies;
2. Documentation supports positive response to therapy;
3. If request is for a dose increase, new dose does not exceed 60 mg/kg per week.

**Approval Duration: 12 months**

### **B. Other diagnoses/indications (must meet 1 or 2):**

1. Currently receiving medication via of PA Health & Wellness benefit and documentation supports positive response to therapy; or
2. Refer to 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;
- B.** Immunoglobulin A (IgA) deficiency (IgA level less than 15 mg/dL) with known antibody against IgA.

## **IV. Appendices/General Information**

### *Appendix A: Abbreviation/Acronym Key*

AAT: alpha1-antitrypsin

Alpha<sub>1</sub>-PI: alpha1-proteinase inhibitors

COPD: chronic obstructive pulmonary disease

FDA: Food and Drug Administration

FEV<sub>1</sub>: forced expiratory volume in one second

IgA: immunoglobulin A

### *Appendix B: Therapeutic Alternatives*

Not applicable

### *Appendix C: Contraindications/Boxed Warnings*

- Contraindication(s): use in IgA deficient patients with known antibodies against IgA and/or a history of anaphylaxis or other severe systemic reaction to alpha-1 PI, due to the risk of severe hypersensitivity, including anaphylaxis.
- Boxed warning(s): none reported

### *Appendix D: General Information*

- The American Thoracic Society (ATS) and the European Respiratory Society (ERS) state that alpha-1-proteinase inhibitor therapy does not confer benefit in, and is not recommended for, patients who have alpha-1-proteinase-associated liver disease.
- The 2016 COPD Foundation's clinical practice guidelines for AAT deficiency in the adult recommend intravenous augmentation therapy for individuals with FEV<sub>1</sub> less than 30% predicted with a weak recommendation with a low quality of evidence, and low value placed on the cost of this therapy. The 2003 ATS-ERS guidelines mirror the COPD Foundation in that evidence of benefit from augmentation therapy is weak in those with severe airflow obstruction.
- Aralast NP, Glassia, Prolastin-C, Zemaira: Safety and effectiveness in the pediatric population have not been established
- Smoking is an important risk factor for the development of emphysema in patients with AAT deficiency. Both the 2003 ATS and 2016 COPD Foundation AAT guidelines state that smoking cessation is important in this patient population.
- The goal of AAT augmentation is to slow the progression of emphysema/lung function decline. Lung function can be measured with FEV<sub>1</sub>, which is most important predictor of survival of patients with emphysema due to AAT deficiency per the 2003 ATS AAT guidelines. Improvement, maintenance, or stabilization in FEV<sub>1</sub> rate of decline is therefore an acceptable example of positive response to therapy.

## V. Dosage and Administration

Indication	Dosing Regimen	Maximum Dose
Emphysema due to AAT deficiency	60 mg/kg IV once weekly	60 mg/kg/week

## VI. Product Availability

Drug Name	Availability
Alpha <sub>1</sub> -proteinase inhibitor, human (Aralast NP)	Single-use vial: 500 mg, 1,000 mg
Alpha <sub>1</sub> -proteinase inhibitor, human (Glassia)	Single-use vial: 1,000 mg/50 mL
Alpha <sub>1</sub> -proteinase inhibitor, human (Prolastin-C)	Single-use vial: 1,000 mg (powder) Single-use vial: 500 mg/10 mL, 1,000 mg/20 mL, 4,000 mg/80 mL (liquid)
Alpha <sub>1</sub> -proteinase inhibitor, human (Zemaira)	Single-use vial: 1,000 mg, 4,000 mg, 5,000 mg

## VII. References

1. Aralast NP Prescribing Information. Westlake Village, CA: Baxter Healthcare Corporation; December 2018. Available at: [http://www.shirecontent.com/PI/PDFs/ARALASTNP\\_USA\\_ENG.pdf](http://www.shirecontent.com/PI/PDFs/ARALASTNP_USA_ENG.pdf). Accessed November 3, 2022.
2. Glassia Prescribing Information. Negev, Israel: Kamada, Ltd.; March 2022. Available at: <http://www.liquidglassia.com>. Accessed November 3, 2022.
3. Prolastin-C Powder Prescribing Information. Research Triangle Park, NC: Grifols Therapeutics, Inc.; January 2022. Available at:

<https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=91edab72-c889-470e-8315-1798b5548dca>. Accessed November 3, 2022.

4. Prolastin-C Liquid Prescribing Information. Research Triangle Park, NC: Grifols Therapeutics, Inc.; May 2020. Available at: <http://www.prolastin.com>. Accessed November 3, 2022.
5. Zemaira Prescribing Information. Kankakee, IL: CSL Behring LLC; September 2022. Available at: <http://www.zemaira.com>. Accessed November 3, 2022.
6. American Thoracic Society/European Respiratory Society statement: standards for the diagnosis and management of individuals with alpha-1 antitrypsin deficiency. *Am J Respir Crit Care Med*. 2003; 168(7): 818-900.
7. Sandhaus RA, Turino G, and Brantly ML, et al. The diagnosis and management of alpha-1 antitrypsin deficiency in the adult. *Journal of COPD Foundation*. 2016;3(3):668-682.
8. Cazzola M, MacNee W, Martinez FJ, et al.; American Thoracic Society; European Respiratory Society Task Force on outcomes of COPD. Outcomes for COPD pharmacological trials: from lung function to biomarkers. *Eur Respir J*. 2008;31:416-469.
9. Global Initiative for Chronic Obstructive Lung Disease (GOLD). Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease (2021 report). Available at: <http://www.goldcopd.org>. Accessed November 3, 2022.

### 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
J0256	Injection, alpha 1-proteinase inhibitor (human), not otherwise specified, 10 mg
J0257	Injection, alpha 1 proteinase inhibitor (human), (Glassia), 10 mg

Reviews, Revisions, and Approvals	Date	Approval Date
Removed requirement for supportive measures (avoidance of cigarette smoking and vaccinations) due to lack of actionability and objectivity. Protective threshold value per nephelometry changed from 57 mg/dL to 50 mg/dL per American Thoracic Society 2003 guidelines. Added “If the member has an AAT level >11 umol/L, then the member must have one of the high-risk phenotypes (i.e. PiZZ, PiZnull, Pi(null, null), or one of a few rare phenotypes [e.g. Pi(Malton, Malton)]” to allow treatment before clinical deterioration due to definite diagnosis. Added prescriber requirement due to the complexity of disease diagnosis and management; Changed minimally significant change in FEV from 120 mL to 100 mL per ATC guidelines and specialist feedback. References reviewed and updated.		

**CLINICAL POLICY**  
Alpha-1 Proteinase Inhibitors



Reviews, Revisions, and Approvals	Date	Approval Date
1Q 2019 annual review: per 2018 GOLD and 2003 ATS guidelines, corrected FEV <sub>1</sub> range to include 65% without requiring demonstration of rapid decline in lung function in FEV <sub>1</sub> of > 100 mL/year; references reviewed and updated.	01/2019	
1Q 2020 annual review: new 4g and 5g formulations for Zemaira added; references reviewed and updated.	01/2020	
1Q 2021 annual review: references reviewed and updated.	01/2021	
1Q 2022 annual review: Added requirement that member is not an active smoker as supported by both ATS and COPD Foundation AAT guidelines; added 500 mg/10 mL and 4,000 mg/80 mL Prolastin-C vials; references reviewed and updated.	01/2022	
1Q 2023 annual review: no significant changes; references reviewed and updated.	01/2023	