Loargys® (pegzilarginase-nbln)
(Intravenous/Subcutaneous)

Document Number: IC-0845

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Dates Reviewed: 04/2026

I. Length of Authorization

- Initial: Prior authorization validity will be provided initially for 12 months (365 days).
- Renewal: Prior authorization validity may be renewed for 12 months (365 days).

II. Dosing Limits

Max Units (per dose and over time) [HCPCS Unit]:

- 23 mg once weekly

III. Initial Approval Criteria

Prior authorization validity is provided in the following conditions:

Universal Criteria [1]

- Member plasma arginine concentration will be obtained at baseline and will be monitored as clinically indicated thereafter *[Note: Monitor plasma arginine levels (prior to Loargys dosing) weekly for 2 weeks after any dosage adjustments and as clinically indicated]*; **AND**
- Member has not previously received a liver transplant procedure; **AND**

Arginase-1 Deficiency (ARG1-D) – Hyperargininemia † Φ [1-4]

- Member has a confirmed diagnosis of Arginase-1 Deficiency (ARG1-D), as evidenced by at least one (1) of the following features of disease:
  - Identification of biallelic pathogenic (or likely pathogenic) variants in *ARG1* on molecular genetic testing; **OR**
  - Reduced RBC arginase enzyme activity (i.e., <1% of normal in red blood cell extracts); **AND**
- Member will maintain a protein-restricted diet (i.e., will maintain the current level of protein consumption, including natural protein and essential amino acid (EAA) supplementation); **AND**
- Member has a history of hyperargininemia (e.g., two to three times the upper limit of normal); **AND**
- Member has not experienced a hyperammonemic episode within the six weeks prior to the start of therapy (defined as an event in which the member has an ammonia level ≥100 µM with one

or more symptoms related to hyperammonemia requiring hospitalization or emergency room management)

† FDA Approved Indication(s); ‡ Compendia Recommended Indication(s); Φ Orphan Drug

IV. Renewal Criteria [1-4]

Prior authorization validity is provided in the following conditions:

- Member continues to meet the universal and other indication-specific relevant criteria such as concomitant therapy requirements (not including prerequisite therapy), performance status, etc. identified in section III; **AND**
- Absence of unacceptable toxicity from the drug. Examples of unacceptable toxicity include: severe hypersensitivity reactions, including anaphylaxis, etc.; **AND**
- Member has demonstrated a beneficial response to therapy compared to pretreatment baseline as evidence by stabilization or improvement in plasma arginine levels and/or complications of disease manifestations

V. Dosage/Administration [1]

Indication	Dose
Arginase 1 Deficiency (ARG1-D)	The recommended starting dosage of Loargys is 0.1 mg/kg administered via intravenous infusion once weekly ***NOTE:*** *For the recommended dosage use actual body weight.*
Recommendations Prior to Loargys Treatment ➢ *Administer Loargys under the supervision of a healthcare provider knowledgeable in the management of hypersensitivity reactions including anaphylaxis.* ➢ *Initiate Loargys in a healthcare setting with appropriate medical monitoring and support measures, including access to cardiopulmonary resuscitation equipment.* ➢ *Obtain a baseline plasma arginine concentration.* ➢ *Consider pre-medication with antihistamines.* *Note: After eight weeks of once weekly intravenous therapy, members may be switched to once weekly subcutaneous therapy at the same dosage of the intravenous dose. If members tolerate maintenance subcutaneous administration of Loargys, they may receive subcutaneous administration at home under the supervision of a healthcare provider. When switching members from subcutaneous administration in a supervised clinical setting to the home, initially use the same dose. Do not change the dose without supervision of a healthcare provider.*	
Recommended Adjustment, Maximum Dosage, and Monitoring *To maximize the time within the normal range of 40 to 115 micromolar, dose adjustments should be aimed at achieving a pre-dose level of plasma arginine near the upper limit of normal (ULN). After four weeks of Loargys administration, measure pre-dose plasma arginine (168 hours after prior dose) to determine the need for dosage adjustment. If two consecutive weekly pre-dose plasma arginine measurements are not in the desired therapeutic range, increase or decrease the weekly Loargys dosage as follows:* • *Below 50 micromolar, reduce the weekly Loargys dosage by 0.05 mg/kg.* • *Above 150 micromolar, increase the weekly Loargys dosage by 0.05 mg/kg.* *The maximum recommended Loargys dosage is 0.2 mg/kg once weekly.*	

Monitor plasma arginine levels (prior to Loargys dosing) weekly for 2 weeks after any Loargys dosage adjustment and as clinically indicated. Members may be switched from intravenous administration of Loargys to subcutaneous administration.
Collect Plasma Arginine Using Specific Collection Tubes and Measure Arginine Concentration Using a Specific Assay *Collect samples into Immedica Pharma's Nor-NOHA Blood Collection Tubes, which contain Nω-hydroxy-nor-Arginine (nor-NOHA), an enzyme inhibitor used to inhibit post-sampling degradation of arginine by Loargys, and measure arginine concentration using Immedica Pharma's LOARGYS Arginine Assay.* *Loargys is only available to a member if the member is enrolled in Study IMM-PEG-005 to obtain Immedica Pharma's Nor-NOHA Blood Collection Tubes and LOARGYS Arginine Assay. Further information is available by contacting Immedica Pharma at 1-844-627-4687.*

VI. Billing Code/Availability Information

HCPCS Code(s):

- J3590 – Unclassified biologics
- C9399 – Unclassified drugs or biologicals *(Hospital outpatient use ONLY)*

NDC(s):

- Loargys 2 mg/0.4 mL single-dose vial: 81583-0102-xx
- Loargys 5 mg/mL single-dose vial: 81583-0105-xx

VII. References

1. Loargys [package insert]. Stockholm, Sweden; Immedica Pharma AB; February 2026. Accessed March 2026.
2. Sun A, Combez EA, Wong D. Arginase Deficiency. GeneReviews. Arginase Deficiency - GeneReviews® - NCBI Bookshelf. Initial Posting: October 21, 2004; Last Update: May 28, 2020. Accessed March 2026.
3. ClinicalTrials.gov. NCT03921541. PEACE (Pegzilarginase Effect on Arginase 1 Deficiency Clinical Endpoints): A Randomized, Double-blind, Placebo-controlled Phase 3 Study of the Efficacy and Safety of Pegzilarginase in Children and Adults With Arginase 1 Deficiency. | ClinicalTrials.gov.
4. Russo RS, Gasperini S, Bubb G, et al. Efficacy and safety of pegzilarginase in arginase 1 deficiency (PEACE): a phase 3, randomized, double-blind, placebo-controlled, multi-centre trial. eClinicalMedicine, Volume 68, 102405.
5. Catsburg C, et al. Arginase 1 deficiency: using genetic databases as a tool to establish global prevalence. Orphanet J Rare Dis. 2022;17(1):94.

Appendix A – Non-Quantitative Treatment Limitations (NQTL) Factor Checklist

Non-quantitative treatment limitations (NQTLs) refer to the methods, guidelines, standards of evidence, or other conditions that can restrict how long or to what extent benefits are provided under a health plan. These may include things like utilization review or prior authorization. The utilization management

NQTL applies comparably, and not more stringently, to mental health/substance use disorder (MH/SUD) Medical Benefit Prescription Drugs and medical/surgical (M/S) Medical Benefit Prescription Drugs. The table below lists the factors that were considered in designing and applying prior authorization to this drug/drug group, and a summary of the conclusions that Prime's assessment led to for each.

Factor	Conclusion
Indication	Yes: Consider for PA
Safety and efficacy	Yes: Consider for PA
Potential for misuse/abuse	No: PA not a priority
Cost of drug	Yes: Consider for PA

Appendix 1 – Covered Diagnosis Codes

ICD-10	ICD-10 Description
E72.21	Argininemia/ARG

Appendix 2 – Centers for Medicare and Medicaid Services (CMS)

The preceding information is intended for non-Medicare coverage determinations. Medicare coverage for outpatient (Part B) drugs is outlined in the Medicare Benefit Policy Manual (Pub. 100-2), Chapter 15, §50 Drugs and Biologicals. In addition, National Coverage Determinations (NCDs) and/or Local Coverage Determinations (LCDs) may exist and compliance with these policies is required where applicable. Local Coverage Articles (LCAs) may also exist for claims payment purposes or to clarify benefit eligibility under Part B for drugs which may be self-administered. The following link may be used to search for NCD, LCD, or LCA documents: https://www.cms.gov/medicare-coverage-database/search.aspx. Additional indications, including any preceding information, may be applied at the discretion of the health plan.

Medicare Part B Covered Diagnosis Codes (applicable to existing NCD/LCD/LCA): N/A

Medicare Part B Administrative Contractor (MAC) Jurisdictions		
Jurisdiction	**Applicable State/US Territory**	**Contractor**
E (1)	CA, HI, NV, AS, GU, CNMI	Noridian Healthcare Solutions, LLC
F (2 & 3)	AK, WA, OR, ID, ND, SD, MT, WY, UT, AZ	Noridian Healthcare Solutions, LLC
5	KS, NE, IA, MO	Wisconsin Physicians Service Insurance Corp (WPS)
6	MN, WI, IL	National Government Services, Inc. (NGS)
H (4 & 7)	LA, AR, MS, TX, OK, CO, NM	Novitas Solutions, Inc.
8	MI, IN	Wisconsin Physicians Service Insurance Corp (WPS)
N (9)	FL, PR, VI	First Coast Service Options, Inc.
J (10)	TN, GA, AL	Palmetto GBA
M (11)	NC, SC, WV, VA (excluding below)	Palmetto GBA

Medicare Part B Administrative Contractor (MAC) Jurisdictions		
Jurisdiction	**Applicable State/US Territory**	**Contractor**
L (12)	DE, MD, PA, NJ, DC (includes Arlington & Fairfax counties and the city of Alexandria in VA)	Novitas Solutions, Inc.
K (13 & 14)	NY, CT, MA, RI, VT, ME, NH	National Government Services, Inc. (NGS)
15	KY, OH	CGS Administrators, LLC