

Givlaari® (givosiran) (Subcutaneous)

Document Number: IC-0514

Last Review Date: 01/04/2024

Date of Origin: 12/13/2019

Dates Reviewed: 12/2019, 01/2021, 01/2022, 01/2023, 01/2024

I. Length of Authorization

Coverage will be provided for 6 months initially and may be renewed annually thereafter.

II. Dosing Limits

A. Quantity Limit (max daily dose) [NDC Unit]:

- Givlaari 189 mg/mL in a single-dose vial for injection: 2 vials every month

B. Max Units (per dose and over time) [HCPS Unit]:

- 756 billable units every month

III. Initial Approval Criteria¹

Coverage is provided in the following conditions:

- Patient is at least 18 years of age; **AND**

Universal Criteria^{1,3-6}

- Patient will avoid known triggers of porphyria attacks (i.e., alcohol, smoking, exogenous hormones, hypocaloric diet/fasting, certain medications such as barbiturates, hydantoins, sulfa-antibiotics, anti-epileptics, etc.); **AND**
- Patient has not had or is not anticipating a liver transplant; **AND**

Acute Hepatic Porphyria (AHP) † ⊕^{1,3-5}

- Patient has a definitive diagnosis of acute hepatic porphyria* (including acute intermittent porphyria, variegate porphyria, hereditary coproporphryria, or ALA dehydratase deficient porphyria) as evidenced by one of the following:
 - Patient has had elevated urinary or plasma PBG (porphobilinogen) and ALA (delta-aminolevulinic acid) levels within the previous year; **OR**
 - Patient has a mutation in an affected gene as identified on molecular genetic testing; **AND**

- Patient has a history of at least two documented porphyria attacks (i.e., requirement of hospitalization, urgent healthcare visit or intravenous administration of hemin) OR one severe attack with CNS involvement (e.g., hallucinations, seizures, etc.) during the previous six months; **AND**
- Patients currently receiving prophylactic intravenous hemin therapy will discontinue hemin within 3 to 6 months following initiation of givosiran

| *Acute Hepatic Porphyria | Urine delta-aminolevulinic acid (ALA) | Urine porphobilinogen (PBG) | Urine porphyrins | Gene |
|--------------------------------------------|---------------------------------------|-----------------------------|--------------------------|-------------|
| Acute Intermittent Porphyria (AIP) | Elevated | Elevated | Increased uroporphyrin | <i>HMBS</i> |
| Hereditary Coproporphyria (HCP) | Elevated | Elevated | Increased coproporphyrin | <i>CPOX</i> |
| Variegate Porphyria (VP) | Elevated | Elevated | Increased coproporphyrin | <i>PPOX</i> |
| ALA Dehydratase-Deficiency Porphyria (ADP) | Elevated | Normal | Increased coproporphyrin | <i>ALAD</i> |

† FDA Approved Indication(s); ‡ Compendium Recommended Indication(s); Ⓢ Orphan Drug

IV. Renewal Criteria ¹

Coverage can be renewed based upon the following criteria:

- Patient 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: anaphylactic reactions, severe hepatic toxicity, severe renal toxicity, severe injection site reactions, increase in blood homocysteine levels, etc.; **AND**
- Disease response as evidenced by a decrease in the frequency of acute porphyria attacks, and/or hospitalizations/urgent care visits, and/or a decrease requirement of hemin intravenous infusions for acute attacks; **AND**
- Patient has a reduction/normalization of biochemical markers (i.e., ALA, PBG) compared to baseline; **AND**
- Patient will not use in combination with prophylactic intravenous hemin therapy

V. Dosage/Administration ¹

| Indication | Dose |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Acute Hepatic Porphyria (AHP) | <p>For administration by a healthcare professional as a subcutaneous injection only.</p> <ul style="list-style-type: none"> • Administer 2.5 mg/kg via subcutaneous injection once monthly. Dosing is based on actual body weight. |

VI. Billing Code/Availability Information

HCPCS Code:

- J0223 – Injection, givosiran, 0.5 mg: 1 billable unit = 0.5 mg

NDC:

- Givlaari 189 mg/mL in a single-dose vial for injection: 71336-1001-xx

VII. References

1. Givlaari [package insert]. Cambridge, MA; Alnylam Pharm., Inc., February 2023. Accessed December 2023.
2. Whatley SD, Badminton MN. Acute Intermittent Porphyria. 2005 Sep 27 [Updated 2019 Dec 5]. In: Adam MP, Everman DB, Mirzaa GM, et al., editors. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993-2022. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK1193/>.
3. Anderson KE. Porphyrias: An overview. In Means RT, Tirnauer JS (Eds), *UpToDate*. Last updated: March 11, 2022. Accessed on December 11, 2023. https://www.uptodate.com/contents/porphyrias-an-overview?search=Porphyrias:%20An%20overview&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1.
4. Balwani M, Gouya L, Rees D, et al. GS-14-ENVISION, a phase 3 study to evaluate efficacy and safety of givosiran, an investigational RNAi therapeutic targeting aminolevulinic acid synthase 1, in acute hepatic porphyria patients. *J Hepatology*:Apr 2019; Vol 70; Iss. 1, Suppl;pps e81–e82
5. Balwani M, Sardh E, Ventura P, et al.; ENVISION Investigators. Phase 3 Trial of RNAi Therapeutic Givosiran for Acute Intermittent Porphyria. *N Engl J Med*. 2020 Jun 11;382(24):2289-2301.
6. Balwani M, Wang B, Anderson KE. Acute hepatic porphyrias: Recommendations for evaluation and long-term management. *Hepatology*. Volume66, Issue4 October 2017. Pages 1314-1322. <https://doi.org/10.1002/hep.29313>

Appendix 1 – Covered Diagnosis Codes

| ICD-10 | ICD-10 Description |
|--------|----------------------------------------|
| E80.20 | Unspecified porphyria |
| E80.21 | Acute intermittent (hepatic) porphyria |
| E80.29 | Other porphyria |

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, LLC |
| M (11) | NC, SC, WV, VA (excluding below) | Palmetto GBA, LLC |
| 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 |