

Niemann-Pick Disease Type C (NPC)

Aqneursa (levacetylleucine) for oral suspension Miplyffa (arimoclomol) oral capsules

POLICY

I. INDICATIONS

The indications below including FDA-approved indications and compendial uses are considered a covered benefit provided that all the approval criteria are met, and the member has no exclusions to the prescribed therapy.

FDA-Approved Indications

Miplyffa is indicated for use in combination with miglustat for the treatment of neurological manifestations of Niemann-Pick disease type C (NPC) in adult and pediatric patients 2 years of age and older.

Aqneursa is indicated for the treatment of neurological manifestations of Niemann-Pick disease type C (NPC) in adults and pediatric patients weighing ≥ 15 kg

All other indications are considered experimental/investigational and not medically necessary.

II. CRITERIA FOR INITIAL APPROVAL

Niemann-Pick disease type C (NPC)

Authorization of the requested drug for 6 months may be granted for treatment of Niemann-Pick disease, type C when all of the following criteria are met:

- A. Documentation (e.g., chart notes) of 5-domain NPC clinical severity scale (NPCCSS) assessment to establish baseline score.
- B. Documentation that the diagnosis is confirmed by one of the following:
 - a. Genetically confirmed variant in both alleles of NPC1 or NPC2.
 - b. Mutation in only one allele of NPC1 or NPC2 plus either positive filipin staining or elevated cholestane-triol level (>2 times the upper limit of normal).
- C. Medical records (e.g., chart notes) documenting that member has neurological manifestations of disease (e.g., loss of fine motor skills, swallowing, speech, ambulation).
- D. Stable on miglustat (e.g., Opfolda) for 6 months except if not recommended (i.e., if patient has advanced neurological disease and/or dementia, early-infantile NPC, or has spleen/liver enlargement only).
- E. Member has the ability to walk either independently or with assistance.
- F. This medication must be prescribed by or in consultation with an endocrinologist, geneticist, neurologist or physician who specializes in the treatment of metabolic disease and/or lysosomal storage disorders.
- G. If request is for Aqneursa:
 - a. Member is 4 years of age to 64 years of age.
 - b. Documentation that member weighs ≥ 15 kg and prescribed dose is in accordance with FDA-approved labeling based on current weight.

- c. The requested medication will not be used in combination with Miplyffa (arimoclol) for the treatment of neurological manifestations of Niemann-Pick disease type C.
- H. If request is for Miplyffa:
- a. Member is 2 to 19 years of age.
 - b. Member does NOT have adult-onset Niemann-Pick disease type C
Note: Adult-onset NPC is defined as the age of the first neurological symptom occurring > 15 years of age
 - c. Documentation of current weight and prescribed dose is in accordance with FDA-approved labeling.
 - d. The requested medication will be used in combination with miglustat (e.g., Opfolda)
 - e. The requested medication will not be used in combination with Aqneursa (levacetylleucine) for the treatment of neurological manifestations of Niemann-Pick disease type C.

III. CONTINUATION OF THERAPY

Authorization of 6 months may be granted for continued treatment in members requesting reauthorization for the treatment of Niemann-Pick disease type C when all of the following criteria are met:

- A. Member meets the criteria for initial approval.
- B. Documentation that member is experiencing benefit from therapy (e.g., stabilization or improvement in 5-domain NPCCSS score, fine motor skills, swallowing, speech, ambulation).

IV. QUANTITY LIMIT

Miplyffa 47 mg, 62 mg, 93 mg, 124 mg capsules have a quantity limit of 3 capsules per day.

Aqneursa 1 g unit dose packets have a quantity limit of 4 packets per day.

Drug	Recommended Dosage
Miplyffa	Based on actual body weight*: <ul style="list-style-type: none"> • 8 kg to 15 kg - 47 mg three times a day • > 15 kg to 30 kg - 62 mg three times a day • > 30 kg to 55 kg - 93 mg three times a day • > 55 kg - 124 mg three times a day <i>Note: For patients with an eGFR ≥ 15 to < 50 mL/minute, reduce the frequency to two times daily</i>
Aqneursa	Based on actual body weight: <ul style="list-style-type: none"> • 15 kg to <25 kg - 1 g twice daily • 25 kg to <35 kg - 1 g three times daily • 35 kg or more - 2 g in the morning, 1 g in the afternoon, and 1 g in the evening

*refer to prescribing information for oral or G-Tube administration instructions for patients who have difficulty swallowing capsules

V. REFERENCES

1. Miplyffa [package insert]. Celebration, FL: Zevra Therapeutics, Inc.; September 2024.
2. Aqneursa [package insert]. Austin, TX: IntraBio, Inc.; September 2024.
3. Patterson, M. C., Lloyd-Price, L., Guldborg, C., Doll, H., Burbridge, C., Chladek, M., iDali, C., Mengel, E., & Symonds, T. (2021). Validation of the 5-domain Niemann-Pick Type C Clinical Severity Scale. *Orphanet Journal of Rare Diseases*, 16(1). <https://doi.org/10.1186/s13023-021-01719-2>
4. Geberhiwot, T., Moro, A., Dardis, A. *et al.* Consensus clinical management guidelines for Niemann-Pick disease type C. *Orphanet J Rare Dis* 13, 50 (2018). <https://doi.org/10.1186/s13023-018-0785-7>
5. Freiheber, C., Dahmani-Rabehi, B., Brassier, A. *et al.* Effects of miglustat therapy on neurological disorder and survival in early-infantile Niemann-Pick disease type C: a national French retrospective study. *Orphanet J Rare Dis* 18, 204 (2023). <https://doi.org/10.1186/s13023-023-02804-4>

VI. APPENDIX

5- domain NPC clinical severity scale (NPCCSS) assessment

Table 1 5-domain NPCCSS

Domain	Scoring	Minimum-Maximum Score
Ambulation	0 – Normal 1 – Clumsy 2 – Ataxic unassisted gait or not walking by 18 months 4 – Assisted ambulation or not walking by 24 months 5 – Wheelchair dependent	0-5
Fine Motor Skills	0 – Normal 1 – Slight dysmetria/dystonia (Independent manipulation) 2 – Mild dysmetria/Dystonia (requires little to no assistance, able to feed self without difficulty) 4 – Moderate dysmetria/dystonia (limited fine motor skills, difficulty feeding self) 5 – Severe dysmetria/Dystonia (gross motor limitation, requires assistance for selfcare activities)	0-5
Swallow	0 – Normal, no dysphagia 1 – Cough while eating Intermittent dysphagia* + 1 – w/Liquids + 1 – w/Solids Dysphagia* + 2 – w/Liquids + 2 – w/Solids 4 – Nasogastric tube or gastric tube for supplemental feeding 5 – Nasogastric tube or gastric tube feeding only	0-5
Cognition	0 – Normal 1 – Mild learning delay, grade appropriate for age 3 – Moderate learning delay, individualized curriculum or modified work setting 4 – Severe delay/plateau, no longer in school or no longer able to work, some loss of cognitive function* 5 – Minimal cognitive function	0-5
Speech	0 – Normal 1 – Mild dysarthria (easily Understood) 2 – Severe dysarthria (difficult to understand) 3 – Non-verbal/functional communication skills for needs 5 – Minimal communication	0-5
5-domain NPCCSS score	Sum of all scores from the 5 domains above	0-25 (higher score = more severe clinical impairment)

* Score is additive (to the "cough while eating" score of 1) within the two subsections of intermittent dysphagia and dysphagia (example: for intermittent dysphagia with solids and dysphagia with liquids a score of 4 applies (1 + 1 + 2))

Adapted from Patterson et al.