



**Blue Cross
Blue Shield
Blue Care Network**
of Michigan

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of the Blue Cross and Blue Shield Association

Medical benefit drug policies are a source for BCBSM and BCN medical policy information only. These documents are not to be used to determine benefits or reimbursement. Please reference the appropriate certificate or contract for benefit information. This policy may be updated and therefore subject to change.

Effective Date: 10/08/2020

Brineura™ (cerliponase alfa)

FDA approval: April 27, 2017

HCPCS: J0567

Benefit: Medical

Policy:

Requests must be supported by submission of chart notes and patient specific documentation.

- A. Coverage of the requested drug is provided when all the following are met:
 - a. FDA approved indication
 - b. FDA approved age
 - c. Prescribed by or in consultation with a neurologist, geneticist, or metabolic specialist
 - d. Confirmation of diagnosis by serum assay showing a deficiency in tripeptidyl peptidase 1 (TPP1) enzyme activity and genetic testing showing a mutation in the CLN2 gene
 - e. Patient must be ambulatory at the time of treatment initiation
 - f. Documentation patient will be on standard of care regimen for CLN2 (e.g. seizure management, nutritional support, physical therapy)
 - g. Trial and failure, contraindication, OR intolerance to the preferred drugs as listed in BCBSM/BCN's utilization management medical drug list.
- B. Quantity Limitations, Authorization Period and Renewal Criteria
 - a. Quantity Limits: Align with FDA recommended dosing
 - b. Authorization Period: 1 year at a time
 - c. Renewal Criteria: Clinical documentation must be provided to confirm that current criteria are met and that the medication is providing clinical benefit

***Note: Coverage may differ for Medicare Part B members based on any applicable criteria outlined in Local Coverage Determinations (LCD) or National Coverage Determinations (NCD) as determined by Center for Medicare and Medicaid Services (CMS). See the CMS website at <http://www.cms.hhs.gov/>. Determination of coverage of Part B drugs is based on medically accepted indications which have supported citations included or approved for inclusion determined by CMS approved compendia.

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Therapeutic considerations:

A. FDA approved indication / Diagnosis

**Please refer to most recent prescribing information.*

B. Background Information

- a. Late infantile neuronal ceroid lipofuscinosis type 2 (CLN2) is an autosomal recessive lysosomal storage disorder caused by a mutation on the CLN2 gene. It is characterized by a deficiency or insufficient activity of the enzyme tripeptidyl peptidase 1 (TPP1). Deficient TPP1 activity leads to intralysosomal accumulation of autofluorescent storage material and is associated with neuronal and retinal cell loss, but the pathophysiology remains poorly understood. The disease has a predictable clinical course marked by epilepsy and rapid psychomotor decline. The most common initial symptoms are language delay and seizures, which typically begin to manifest between the ages of two to four years; often, language delay precedes the onset of seizures. Other initial symptoms include prominent truncal and peripheral ataxia, behavioral disturbances, and other developmental delays. In its final stages, children lose the ability to speak, swallow, and see. Death occurs by midadolescence.
- b. Once clinical suspicion of CLN2 disease has been established, the patient should undergo biochemical testing. The recommended gold standard for definitive diagnosis of late infantile neuronal ceroid lipofuscinosis type 2 is the demonstration of deficient TPP1 enzyme activity together with the detection of pathogenic mutations in each allele of the CLN2 gene. However, when it is not feasible to perform both analyses, either deficient TPP1 enzyme activity or the detection of two pathogenic mutations alone can be diagnostic for the disorder.
- c. During the early stage when children begin to manifest symptoms, effective management relies on early diagnosis and disease-specific care. Standard of care includes antiepileptics to treat seizures; albuterol for breathing difficulties; treatments for spasticity and dystonia, such as baclofen; atropine, intraglandular botulinum toxin, and glycopyrrolate can help with secretions; and analgesics, such as, non-steroidal anti-inflammatories, gabapentin, and morphine, are given for pain.
- d. As the disease evolves beyond the initial presentation and the symptom burden increases, maintenance of function, particularly ambulation and communication, for as long as possible is the main goal of management. Physical and occupational therapy have been the standard of care to help with ambulation prior to the approval of Brineura, an enzyme replacement therapy indicated to slow the loss of ambulation in symptomatic pediatric patients 3 years of age and older with late infantile neuronal ceroid lipofuscinosis type 2. The drug was studied in ambulatory patients with CLN2 and resulted in less decline in motor and language function than that in historical controls.

C. Efficacy

**Please refer to most recent prescribing information.*

D. Medication Safety Considerations

**Please refer to most recent prescribing information.*

E. Dosing and administration

**Please refer to most recent prescribing information.*

F. How supplied

**Please refer to most recent prescribing information.*

References:

1. Brineura [prescribing information]. Novato, CA: BioMarin Pharmaceutical, Inc.; March 2020.
2. National Institute of Health. Neuronal ceroid lipofuscinosis 2. 2020 July 1. Available at: <https://rarediseases.info.nih.gov/diseases/3045/neuronal-ceroid-lipofuscinosis-2>. Accessed on July 7, 2020.
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4. Williams RE, Adams HR, Blohm M, et al. Management strategies for CLN2 disease. Pediatr Neurol. 2017; 69: 102 – 12.
5. Steinfeld R, Heim P, von Gregory H, et al. Late infantile neuronal ceroid lipofuscinosis: quantitative description of the clinical course in patients with CLN2 mutations. Am J Med Genet. 2002 Nov 1; 112 (4): 347 - 54.
6. Nickel M, Simonati A, Jacoby D, et al. Disease characteristics and progression in patients with late-infantile neuronal ceroid lipofuscinosis type 2 (CLN2) disease: an observational cohort study. 2018 Aug 1; 2 (8): 582 – 90.
7. Dy ME, Sims KB, & Friedman J. TPP1 deficiency: rare cause of isolated childhood-onset progressive ataxia. 2015 Oct 6, 85 (14): 1259 – 61.
8. Fietz M, AlSayed M, Burke D, et al. Diagnosis of neuronal ceroid lipofuscinosis type 2 (CLN2 disease): expert recommendations for early detection and laboratory diagnosis. Molecular Gen Metabolism. 2016 Sept – Oct; 119 (1 – 2): 160 – 7.
9. Lewis G, Morrill AM, Conway-Allen SL, et al. Review of cerliponase alfa: recombinant human enzyme replacement therapy for late-infantile neuronal ceroid lipofuscinosis type 2. J Child Neuro. 2020 April 1; 35 (5): 348 – 53.
10. Schulz A, Ajayi T, Specchio N et al. Study of intraventricular cerliponase alfa for CLN2 disease. NEJM. 2018 May 17; 378: 1898 – 1907.

Policy History												
#	Date	Change Description										
1.3	Effective Date: 10/08/2020	New policy created for this disease state and drug The Enzyme Replacement Therapy policy will be retired										
1.2	Effective Date: 02/01/2019	PA added to MAPPO <table border="1" data-bbox="486 1326 1367 1516"> <thead> <tr> <th>Line of Business</th><th>PA Required (Yes/No)</th></tr> </thead> <tbody> <tr> <td>BCBS</td><td>Yes</td></tr> <tr> <td>BCN</td><td>Yes</td></tr> <tr> <td>MAPPO</td><td>Yes</td></tr> <tr> <td>BCNA</td><td>No</td></tr> </tbody> </table>	Line of Business	PA Required (Yes/No)	BCBS	Yes	BCN	Yes	MAPPO	Yes	BCNA	No
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1.0	Effective Date: 09/01/2017	PA added to BCBS <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: center; padding: 2px;">Line of Business</th><th style="text-align: center; padding: 2px;">PA Required (Yes/No)</th></tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 2px;">BCBS</td><td style="text-align: center; padding: 2px;">Yes</td></tr> <tr> <td style="text-align: center; padding: 2px;">BCN</td><td style="text-align: center; padding: 2px;">No</td></tr> <tr> <td style="text-align: center; padding: 2px;">MAPPO</td><td style="text-align: center; padding: 2px;">No</td></tr> <tr> <td style="text-align: center; padding: 2px;">BCNA</td><td style="text-align: center; padding: 2px;">No</td></tr> </tbody> </table>	Line of Business	PA Required (Yes/No)	BCBS	Yes	BCN	No	MAPPO	No	BCNA	No
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* The prescribing information for a drug is subject to change. To ensure you are reading the most current information it is advised that you reference the most updated prescribing information by visiting the drug or manufacturer website or <http://dailymed.nlm.nih.gov/dailymed/index.cfm>.