

PHARMACY POLICY STATEMENT

North Carolina Marketplace

DRUG NAME	Luxturna (voretigene neparvovec-rzyl)
BILLING CODE	J3398
BENEFIT TYPE	Medical
SITE OF SERVICE ALLOWED	Outpatient hospital
STATUS	Prior Authorization Required

Luxturna, approved by the FDA in 2017, is an adeno-associated virus vector-based gene therapy indicated for the treatment of patients with confirmed biallelic RPE65 mutation-associated retinal dystrophy. Mutations in the RPE65 gene lead to reduced or absent levels of RPE65 isomerohydrolase activity, blocking the visual cycle and resulting in impairment of vision. Luxturna is designed to deliver a normal copy of the gene encoding RPE65 to persons with reduced or absent levels of biologically active RPE65 so that functional RPE65 protein can be produced to help restore the visual cycle and potentially improve vision. It is estimated that between 1,000 and 2,000 people in the United States are affected. With time, untreated patients lose the ability to detect any intensity of light.

In clinical trials, the efficacy of Luxturna was established based on multi-luminance mobility testing (MLMT) score change from Baseline to Year 1. The MLMT was designed to measure changes in functional vision, as assessed by the ability of a subject to navigate a course accurately and at a reasonable pace at different levels of environmental illumination. Response was rapid and sustained, with improvement noted by day 30, durable overall for at least 4 years. Some degree of numerical improvement in visual acuity was shown, but it was not statistically significant.

Luxturna (voretigene neparvovec-rzyl) will be considered for coverage when the following criteria are met:

Biallelic RPE65 Mutation-Associated Retinal Dystrophy

For initial authorization:

1. Member is 12 months of age or older; AND
2. Medication must be prescribed by an ophthalmologist or retinal surgeon; AND
3. Member has a diagnosis of biallelic RPE65 mutation-associated retinal dystrophy confirmed by genetic testing; AND
4. Member has sufficient viable retinal cells as determined by optical coherence tomography (OCT) showing an area of the retina within the posterior pole of >100 µm thickness; AND
5. Member has significant vision impairment as evidenced by at least one of the following:
 - a) Visual acuity is 20/60 or worse (both eyes)
 - b) Visual field less than 20 degrees in any meridian as measured by a III4e isopter or equivalent (both eyes); AND
6. Member was not previously treated with RPE65 gene therapy.
7. **Dosage allowed/Quantity limit:** 1.5 x 10¹¹ vector genomes (vg), administered by subretinal injection in a total volume of 0.3 mL for each eye. Administration of Luxturna to each eye must be performed on separate days within a close interval, but no fewer than 6 days apart.

If all the above requirements are met, the medication will be approved for 3 months.

For **reauthorization**:

1. Luxturna will not be re-authorized.

CareSource considers Luxturna (voretigene neparvovec-rzyl) not medically necessary for the treatment of conditions that are not listed in this document. For any other indication, please refer to the Off-Label policy.

DATE	ACTION/DESCRIPTION
08/27/2018	New policy for Luxturna created.
12/22/2021	Transferred to new template. Added references. Changed age limit from 3 years to 12 months and removed baseline MLMT test. Clarified the wording of some of the other criteria without changing the actual requirements.

References:

1. Luxturna [package insert]. Philadelphia, PA; Spark Therapeutics, Inc.: 2017.
2. Maguire AM, Simonelli F, Pierce EA, et al. Safety and efficacy of gene transfer for Leber's congenital amaurosis. *N Engl J Med*. 2008 May 22;358(21):2240-8. doi: 10.1056/NEJMoa0802315. Epub 2008 Apr 27.
3. Ameri H. Prospect of retinal gene therapy following commercialization of voretigene neparvovec-rzyl for retinal dystrophy mediated by RPE65 mutation. *J Curr Ophthalmol*. 2018 Feb 16;30(1):1-2.
4. Bennett J, Wellman J, Marshall KA, et al. Safety and durability of effect of contralateral-eye administration of AAV2 gene therapy in patients with childhood-onset blindness caused by RPE65 mutations: a follow-on phase 1 trial. *Lancet*. 2016 Aug 13;388(10045):661-72. doi: 10.1016/S0140-6736(16)30371-3. Epub 2016 Jun 30.
5. Russell S, Bennett J, Wellman JA, et al. Efficacy and safety of voretigene neparvovec (AAV2-hRPE65v2) in patients with RPE65-mediated inherited retinal dystrophy: a randomised, controlled, open-label, phase 3 trial. *Lancet*. 2017 Aug 26;390(10097):849-860. doi: 10.1016/S0140-6736(17)31868-8. Epub 2017 Jul 14.
6. Maguire AM, Russell S, Wellman JA, et al. Efficacy, Safety, and Durability of Voretigene Neparvovec-rzyl in RPE65 Mutation-Associated Inherited Retinal Dystrophy: Results of Phase 1 and 3 Trials. *Ophthalmology*. 2019;126(9):1273-1285. doi:10.1016/j.ophtha.2019.06.017
7. Sodi A, Banfi S, Testa F, et al. RPE65-associated inherited retinal diseases: consensus recommendations for eligibility to gene therapy. *Orphanet J Rare Dis*. 2021;16(1):257. Published 2021 Jun 4. doi:10.1186/s13023-021-01868-4
8. Aoun M, Passerini I, Chiurazzi P, et al. Inherited Retinal Diseases Due to RPE65 Variants: From Genetic Diagnostic Management to Therapy. *Int J Mol Sci*. 2021;22(13):7207. Published 2021 Jul 5. doi:10.3390/ijms22137207
9. Maguire AM, Russell S, Chung DC, et al. Durability of Voretigene Neparvovec for Biallelic RPE65-Mediated Inherited Retinal Disease: Phase 3 Results at 3 and 4 Years. *Ophthalmology*. 2021;128(10):1460-1468. doi:10.1016/j.ophtha.2021.03.031

Effective date: 01/01/2023

Revised date: 12/22/2021

