Washington State Health Care Authority

Ophthalmic Agents: Gene Therapy – Voretigene neparvovec-rzyl (Luxturna®)

Medical policy no. 86.37.00-1 Effective Date: December 1, 2020

Note: *New-to-market drugs included in this class based on the Apple Health Preferred Drug List are non-preferred and subject to this prior authorization (PA) criteria. Non-preferred agents in this class require an inadequate response or documented intolerance due to severe adverse reaction or contraindication to at least TWO preferred agents. If there is only one preferred agent in the class documentation of inadequate response to ONE preferred agent is needed. If a drug within this policy receives a new indication approved by the Food and Drug Administration (FDA), medical necessity for the new indication will be determined on a case-by-case basis following FDA labeling.*

Background:

Retinitis pigmentosa (RP) are a complex group of inherited retinal dystrophies characterized by progressive dysfunction and degeneration of the retina affecting photoreceptor and pigment epithelial function. One of the causes of these retinal dystrophies is due to a mutation in the gene encoding retinal pigment epithelium-specific protein 65 kDa (RPE65). Symptoms of RP often begin in childhood and include decreased vision at night or in low light and loss of side vision. Current investigational therapies include gene therapy, cell therapy and retinal prostheses. Although there is no cure for these retinal dystrophies, the use of gene therapy is intended to negate the effects of mutations in the RPE65 gene. Voretigene neparvovec-rzyl (Luxturna) is an adeno-associated virus vector-based gene therapy used for the treatment of patients with confirmed biallelic RPE65 mutation-associated retinal dystrophy. Voretigene naparvovec-rzyl delivers a normal copy of the RPE65 protein to retinal cells augmenting reduced or absent levels of biologically active RPE65 leading to normal production of the protein that converts light to an electrical signal in the retina to restore patients' vision loss.

Medical necessity

Drug	Medical Necessity
Voretigene neparvovec-rzyl (Luxturna)	Voretigene neparvovec-rzyl may be considered medically necessary when used for the treatment of: • Confirmed biallelic RPE65 mutation-associated retinal dystrophy when patients have viable retinal cells as determined by optical coherence tomography (OCT) or ophthalmoscopy

Clinical policy:

Drug	Clinical Criteria (Initial Approval)
Voretigene neparvovec-rzyl (Luxturna)	Voretigene neparvovec-rzyl may be covered when **ALL** of the following criteria are met: 1. Patient is 1 to 64 years of age with a confirmed diagnosis of biallelic RPE65 mutation associated-retinal dystrophy via genetic testing; **AND** 2. Patient has visual acuity worse than 20/60 in both eyes or visual field less than 20 degrees in any meridian; **AND**

	3. Patient has viable retinal cells and verification must be documented by at least **ONE** of the following: a. An area of the retina within the posterior pole of >100 um thickness shown on optical coherence tomography; **OR** b. Three or more disc areas of retina without atrophy or pigmentary degeneration within the posterior pole; **OR** c. Remaining visual field within 30 degrees of fixation as measured by a III4e isopter or equivalent; AND 4. Patient has not previously received RPE65 gene therapy in the intended eye(s); **AND** 5. Patient has not had intraocular surgery within six months in the intended eye(s) ; **AND** 6. Systemic corticosteroids equivalent to prednisone at 1 mg/kg/day (Max: 40 mg/day) are administered for a total of seven days, starting three days before administration of voretigene neparvovec-rzyl to each eye and followed by a tapering dose during the next 10 days; **AND** ***If the taper for the first eye is not complete three days before administration to the second eye, the corticosteroid regimen for the second eye replaces the taper for the first eye* 7. Prescribed and administered by an ophthalmologist or retinal surgeon who specializes in performing intraocular surgery If **ALL** criteria are met, the request will be approved for one dose per eye, per lifetime. If both eyes are to be treated, injections must be administered at least six days apart.
	Criteria (Reauthorization) Repeat administration of voretigene neparvovec-rzyl has not been studied in clinical trials, and is therefore not considered medically necessary.

Dosage and quantity limits

Drug Name	Dose and Quantity Limits
Voretigene neparvovec-rzyl (Luxturna ®)	Dosing: • One injection per eye: 1.5 x 10^{11} vg (vector genomes) per eye administered by subretinal injection in a total volume of 0.3 mL Quantity Limit: • One dose per eye per lifetime

Coding:

HCPCS Code	Description
J3398	Injection, voretigene neparvovec-rzyl, 1 billion vector genomes

History:

Date	Action and summary of changes
02/04/2020	New policy
02/17/2020	General formatting updates
02/26/2020	Added HCPCS code, less than 65 years old age limit
03/09/2020	Formatting updates
06/17/2020	Approved by DUR Board with condition to add back simultaneous steroid use

References

1. Garg S. Retinitis pigmentosa: Treatment. In: Post T, ed. *UpToDate*. Waltham, MA.: UpToDate; 2018. www.uptodate.com. Accessed February 5, 2020.
2. Luxturna [package insert]. Philadelphia, PA; Spark Therapeutics, Inc., December 2017.Accessed February 2020.
3. 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
4. Spark Therapeutics. Phase 1 Follow-on Study of AAV2-hRPE65v2 Vector in Subjects With Leber Congenital Amaurosis (LCA) 2. ClinicalTrials.gov, U.S. National Library of Medicine, 24 Sept. 2010, Phase 1 Follow-on Study of AAV2-hRPE65v2 Vector in Subjects With Leber Congenital Amaurosis (LCA) 2
5. Voretigene neparvovec-rzyl. Micromedex Solutions. Truven Health Analytics, Inc. Ann Arbor, MI. Available at: http://www.micromedexsolutions.com. Accessed February 4, 2020
6. Weleber RG, Pennesi ME, Wilson DJ, et al. Results at 2 Years after Gene Therapy for RPE65- Deficient Leber Congenital Amaurosis and Severe Early-ChildhoodeOnset Retinal Dystrophy. AAO. 2016;123:1606-1620