Policy Name	Clinical Policy – Electrophysiological Testing
Policy Number	1334.00
Department	Clinical Strategy
Subcategory	Medical Management
Original Approval Date	12/13/2018
Current MPC/CCO Approval Date	07/09/2025
Current Effective Date	10/01/2025

Company Entities Supported (Select All that Apply)
X Superior Vision Benefit Management
X Superior Vision Services
X Superior Vision of New Jersey, Inc.
X Block Vision of Texas, Inc. d/b/a Superior Vision of Texas
X Davis Vision
(Collectively referred to as 'Versant Health' or 'the Company')

ACRONYMS	
ERG	Electroretinogram
EOG	Electro Oculogram
VEP	Visual Evoked Potential

PURPOSE

To provide the medical necessity criteria to support the indication(s) for electrophysiological testing. Applicable procedure and diagnosis codes are also defined.

POLICY

A. BACKGROUND

Electrophysiological testing employs the modalities of Visual Evoked Potential (VEP), Electroretinogram (ERG) and Electrooculogram (EOG) to evaluate the function of components of the visual pathways including the optic nerve, occipital cortex, retinal rods and cones, outer layer elements of the retina and the retinal pigment epithelium. The data derived from these tests provides information in the diagnosis and management of ocular disease not otherwise available from other testing technologies.

B. Medically Necessary

1. Electrophysiological testing may be considered medically necessary when:

    a. Investigating issues related to unexplained visual acuity or visual field loss.
    b. Assessing whether a patient is malingering or not when other testing methods are inconclusive.[1]
    c. Assessing the visual function of infants when there is a suspicion of abnormal vision or visual development.[2]
    d. Investigating optic neuropathies when other testing methods are inadequate.
    e. Assessing vision in eyes with media opacities where other test modalities are not useful.
    f. Assessing suspected neurological disease affecting the eyes, including to confirm the diagnosis of multiple sclerosis.[3]
    g. Investigating retinal and optic nerve function following trauma.
    h. Detection of the disease or carrier states of an inherited visual disorder.[4]
    i. Monitoring neurotoxicity or retinal toxicity associated with certain medications (e.g., hydroxychloroquine) is indicated with the primary diagnosis code Z79.899, long term (current) drug therapy.
    j. Detection of optic neuritis at an early, subclinical stage.
    k. Evaluate diseases of the optic nerve, such as ischemic optic neuropathy or pseudotumor cerebri.
    l. Toxic or nutritional amblyopia.[5]
    m. Neoplasm compression of the anterior visual pathways.
    n. Non-glaucomatous optic nerve injury or atrophy.

2. Repeat electrophysiological testing may be medically justified for disability assessment, progressive disease, evaluating effectiveness of therapy, psychological or psychiatric components of visual loss and poor patient cooperation during initial testing. The medical rationale for repeat testing is required.

C. Not Medically Necessary

Electrophysiological testing may not be medically necessary when:

    a. It is used as a screening test, (0333T).
    b. The test is administered subject to a standing order.
    c. Another diagnostic test(s) is more appropriate.
    d. Performed to confirm a diagnosis that has already been made.

---

[1] Hartlage, 2012.
[2] Daich, 2022.
[3] Chiang, 2022.
[4] Daich, 2022.
[5] Chiang, 2022.

e. The test does not provide additional information for evaluation and management of the condition.
f. To confirm the visual evoked potential, screening of visual acuity (CPT code 0464T) of any glaucoma-related diagnosis.
g. Electroretinography (ERG) of any type (CPT 0509T, 92273, and 92274) for a glaucoma-related diagnosis.

D. Documentation

Reimbursement must be supported by adequate and complete documentation in the patient's medical record that describes the procedure and the medical rationale. Retrospective reviews require the full operative report and medical care plan.

Documentation requires at a minimum all the following items. All items must be available upon request to initiate or sustain previous payments. Every page of the record must be legible and include appropriate patient identification information (e.g., complete name, date(s) of service). Services provided/ordered must be authenticated using either a handwritten or electronic signature. Stamped signatures are not acceptable.

The following documentation is required to support the medical necessity of electrophysiological testing:

1. Physician's order for the test(s) with medical rationale
2. Date(s) of testing
3. Interpretation and report to include:
   a. Test printouts showing proper performance and the test variables used during testing. The most recent standardized protocols by ISCEV should be used.
   b. Description of placement of electrodes and documentation of proper preparation (dilation indicated or not, full dark or light adaptation time noted, etc.).
   c. Reliability of the test. Do not submit tests of dubious value.
   d. Patient cooperation
   e. Test findings
   f. Comparison of results from previous tests
   g. Assessment, diagnosis
   h. Impact on treatment, prognosis
4. The medical record must contain copies of the digital images and be available upon request.

E. Procedural Detail

CPT Codes	
0333T	Visual evoked potential, screening of visual acuity, automated, with report
0509T	Electroretinography (ERG) with interpretation and report, pattern (pERG)
92265	Needle oculoelectromyography, 1 or more extraocular muscles, 1 or both eyes, with interpretation and report
92270	Electro-oculography with interpretation and report
92273	Electroretinography (ERG) with interpretation and report; full field (i.e., ffEG, flash ERG, Ganzfeld ERG)
92274	Electroretinography (ERG) with interpretation and report; multifocal (mfERG)
95930	Visual evoked potential (VEP) checkerboard or flash testing, central nervous system except glaucoma, with interpretation and report
Invalid Modifiers	
RT, LT and 50	Inherently bilateral procedures

RELATED POLICIES AND PROCEDURES	
n/a	

DOCUMENT HISTORY		
Approval Date	***Revisions***	***Effective Date***
12/13/2018	Initial policy	12/13/2018
12/18/2019	Annual review; deletion of experimental and investigational codes.	01/01/2020
10/28/2020	Added CPT codes 0333T and 99265 and indication for long term therapeutic drug monitoring.	03/01/2021
10/06/2021	Annual review; no criteria changes.	04/01/2022
07/06/2022	Annual review; no criteria changes.	08/01/2022
07/12/2023	Annual review; no criteria changes.	09/01/2023
07/10/2024	Annual review; no criteria changes.	10/01/2024
07/09/2025	Annual review; no criteria changes.	10/01/2025

REFERENCES AND SOURCES

1. Chiang TK, White KM, Kurup SK, et.al. Use of Visual Electrophysiology to Monitor Retinal and Optic Nerve Toxicity. Biomolecules. 2022 Sep 29;12(10):1390. doi: 10.3390/biom12101390. PMID: 36291599; PMCID: PMC9599231.
2. Daich Varela M, Georgiou M, Hashem SA, Weleber RG, Michaelides M. Functional evaluation in inherited retinal disease. Br J Ophthalmol. 2022 Nov;106(11):1479-1487. doi: 10.1136/bjophthalmol-2021-319994. Epub 2021 Nov 25. PMID: 34824084.

3. Hartlage, L.C. (2012). Clinical Detection of Malingering. In: Reynolds, C., Horton, Jr., A. (eds) Detection of Malingering during Head Injury Litigation. Springer, Boston, MA. https://doi.org/10.1007/978-1-4614-0442-2_12.
4. Hamilton R. Clinical electrophysiology of vision-commentary on current status and future prospects. Eye (Lond). 2021;35(9):2341-2343. doi:10.1038/s41433-021-01592-0. Mallery RM. Ocular Imaging and Electrophysiology. Continuum (Minneap Minn). 2025;31(2):356-380. doi:10.1212/CON.0000000000001543.
5. Qin X, Wang W, Hu L, et.al. Feature study of hysterical blindness EEG based on FastICA with combined-channel information. Technol Health Care. 2015;23 Suppl 2: S325-33. doi: 10.3233/THC-150969. PMID: 26410499.
6. Schoenfeld MA, Hassa T, Hopf JM, et.al. Neural correlates of hysterical blindness. Cereb Cortex. 2011 Oct;21(10):2394-8. doi: 10.1093/cercor/bhr026. Epub
7. Wang H, Li F, Li J et al. Electrophysiology as a prognostic indicator of visual recovery in diabetic patients undergoing cataract surgery. Graefes Arch Clin Exp Ophthalmol. 2021 Jul;259(7):1879-1887. doi: 10.1007/s00417-021-05100-8. Epub 2021 Apr 6. PMID: 33825028; PMCID: PMC8277643.

SOURCES

1. American Academy of Ophthalmology; Retina Summary Benchmarks – 2024. https://www.aao.org/education/summary-benchmark-detail/retina-summary-benchmarks-2020. Accessed 5/2025.
2. American Academy of Ophthalmology. Electrooculogram (EOG), 2024. https://eyewiki.org/Electrooculogram. Accessed 5/2025.
3. American Academy of Ophthalmology: Inherited Retinal Diseases. 2018.. https://www.aao.org/eyenet/article/inherited-retinal-diseases. Accessed 5/2025.
4. CMS article A57060, “Billing and Coding: Visual Electrophysiology Testing.” https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleId=57060&ver=7. Accessed 5/2025.
5. International Society for Clinical Electrophysiology of Vision (ISCEV). Standards, Guidelines, and Extended Protocols. https://iscev.wildapricot.org/standards. Accessed 4/2024.