

RETeval® Quick Start Guide

3 Most Common Protocols on the RETeval® Device

Protocol Number	Protocol Name	Type of Simulation	Measurement Time Per Eye	Cellular Layers of Retina Assessed
#1	ISCEV Photopic flash/flicker Td	White light flash & flicker	30 seconds	Cones and cone bipolar cells
#2	Flicker: 16 Td-s or Flicker: 32 Td-s for patients with cataract	White light flicker	15 seconds	Cone bipolar cells
#3	PhNR 3.4 Hz Long / Short Td	Red flash on blue background	60 sec/30 sec	Cones, cone bipolar cells, ganglion cells

Disease	Protocol			Symptoms	Sample ICD-10 Codes*
	#1	#2	#3		
Diabetic Retinopathy ¹⁰⁻¹⁵		✓		Blurred vision, dark spots, color vision impairment	E10.311-E10.359, E11.311-E11.359
Glaucomatous optic atrophy ^{1-4,8,9}			✓	Blurred vision, blind spots	H47.231-H47.233
Anti-VEGF injections ³²⁻³⁶ Timing, Monitoring, Toxicity	✓	✓	✓	Treatment in vascular eye disorders, repeated intravitreal injections, potential toxicity	H35.30-H35.383
Optic neuritis, atrophy ¹⁻⁹			✓	Blurred vision, blind spots	H47.011-H47.013, H46.00-H46.9
Retinal vein occlusion CRVO ³¹⁻³⁶ , BRVO ³⁷⁻³⁸		✓		Vision loss or blurry vision in part or all of one eye, floaters	H34.01-H34.9
Night vision problems Rod-Cone dystrophies RD ^{8,16-18} , LCA ¹⁹ , CSNB ^{8,20-21} , Usher ²² , Vitamin A deficiency ²³	✓	✓	✓	Poor night vision first, inheritable, progressive loss of peripheral vision	E50.5, E50.9, H35.50-H35.54, H53.6-H53.69
Day vision problems Cone-Rod dystrophies ²⁴⁻²⁵ Achromatopsia ²⁶ , Stargardt ^{8,27-28}	✓	✓	✓	Early loss of color vision and visual acuity, photophobia	H35.50-H35.54, H53.51-H53.52
Nystagmus ²⁹⁻³⁰		✓		Reduced or limited vision and depth perception	H55.00-H55.09
Acute zonal occult outer retinopathy (AZOOR) ^{8,39}	✓		✓	Sudden decreased vision in zones of peripheral retina, initially in one eye	H35.89
Retinal detachment Retinal trauma ⁴⁰ , Retinal defects	✓	✓	✓	Floaters, flashes of light, "a curtain" over part of the visual field, emergency	H33.001-H33.8
Autoimmune retinopathy (AIR) ^{8,41-42}	✓	✓	✓	Vision loss, scotomas, visual field deficits, antiretinal autoantibodies present	H35.89
Cancer associated retinopathy (CAR) ⁴³⁻⁴⁵	✓	✓	✓	Rapid, progressive central vision loss, flashing lights, color vision impairment and photosensitivity	H35.89
Retinal complications of drug toxicity ⁴⁶⁻⁵⁰	✓	✓	✓	Blurry vision, increased light sensitivity, loss of visual acuity and color vision, symptoms depend upon the type of drug	Z79.899
Chorioretinopathy ⁵¹		✓		Blurred or distorted vision, acute reduced visual acuity, mostly males, stress-related	H35.711-H35.713
Unspecified or Nonorganic visual loss (NOVL) ⁵²	✓	✓	✓	Visual acuity better than subjectively alleged, confirmed functional integrity	H53.10-H53.453, H54.60-H54.62, H54.7

Full Field ERG, CPT Code 92273

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Electrorretinograms (ERG's) assess the function of various cells within the retina and are an aid in the diagnosis of diseases of the retina and the optic nerve. Patients with various inherited and acquired retinal disorders, such as those in the table, can have abnormal ERG's which are highlighted in red by the RETeval device. However, an abnormal ERG result is not necessarily indicative of disease: About 1 in 20 visually normal subjects will produce an abnormal ERG result. Larger-than-normal amplitudes and faster-than-normal times, although outside of the normal range are usually not indicative of disease.

The CPT and ICD-10 codes are provided for reference purposes only. This is not an exhaustive list of all possible codes, and in no way is this a guarantee of reimbursement. Reimbursements are specific to provider and geographic location. Physicians should consult their reimbursement professionals for guidance of their practice.