MEDICAL POLICY

POLICY TITLE	OPHTHALMOLOGIC TECHNIQUES THAT EVALUATE THE POSTERIOR EYE SEGMENT
POLICY NUMBER	MP-2.056

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I. POLICY

Analysis of the optic nerve (retinal nerve fiber layer) in the diagnosis and evaluation of patients with glaucoma or glaucoma suspects, multiple sclerosis, increased intracranial pressure, optic neuritis or optic nerve disorders may be considered **medically necessary** when using scanning laser ophthalmoscopy, scanning laser polarimetry, and optical coherence tomography.

Analysis of the optic nerve (retinal nerve fiber layer) in the diagnosis and evaluation for all other indications is considered **investigational**. There is insufficient evidence to support a conclusion concerning the health outcomes or benefits associated with this procedure.

The measurement of ocular blood flow, pulsatile ocular blood flow or blood flow velocity is considered **investigational** for all indications. There is insufficient evidence to support a conclusion concerning the health outcomes or benefits associated with this procedure.

Cross-references:

MP-2.028 Eye Care
MP-2.085 Optical Coherence Tomography (OCT) of the Anterior Eye Segment
MP-2.086 Retinal Telescreening for Diabetic Retinopathy

II. PRODUCT VARIATIONS

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This policy is only applicable to certain programs and products administered by Capital BlueCross please see additional information below, and subject to benefit variations as discussed in Section VI below.

FEP PPO- Refer to FEP Medical Policy Manual MP-9.03.06, Ophthalmologic Techniques for Evaluating Glaucoma. The FEP Medical Policy Manual can be found at: https://www.fepblue.org/benefit-plans/medical-policies-and-utilization-management-guidelines/medical-policies.

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III. DESCRIPTION/BACKGROUND

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Several techniques have been developed to measure the thickness of the optic nerve/retinal nerve fiber layer (RNFL) as a method to diagnose and monitor glaucoma. Measurement of ocular blood flow is also being evaluated as a diagnostic and management tool for glaucoma.

GLAUCOMA

Glaucoma is characterized by degeneration of the optic nerve (optic disc). Elevated intraocular pressure (IOP) has long been thought to be the primary etiology, but the relation between IOP and optic nerve damage varies among patients, suggesting a multifactorial origin. For example, some patients with clearly elevated IOP will show no optic nerve damage, while others with marginal or no pressure elevation will show optic nerve damage. The association between glaucoma and other vascular disorders (e.g., diabetes, hypertension) suggests vascular factors may play a role in glaucoma. Specifically, it has been hypothesized that reductions in blood flow to the optic nerve may contribute to the visual field defects associated with glaucoma.

Diagnosis and Management

A comprehensive ophthalmologic exam is required for the diagnosis of glaucoma, but no single test is adequate to establish diagnosis. A comprehensive ophthalmologic examination includes assessment of the optic nerve, evaluation of visual fields, and measurement of ocular pressure. The presence of characteristic changes in the optic nerve or abnormalities in visual field, together with increased IOP, is sufficient for a definitive diagnosis. However, some patients will show ophthalmologic evidence of glaucoma with normal IOPs. These cases of normal tension glaucoma (NTG) are considered to be a type of primary open-angle glaucoma (POAG). Angle-closure glaucoma is another type of glaucoma associated with an increase in IOP. The increased IOP in angle-closure glaucoma arises from a reduction in aqueous outflow from the eye due to a closed angle in the anterior chamber. Diagnosis of angle-closure glaucoma is detailed in MP-2.085.

Conventional management of patients with glaucoma principally involves drug therapy to control elevated IOPs, and serial evaluation of the optic nerve, to follow disease progression. Standard methods of evaluation include careful direct examination of the optic nerve using ophthalmoscopy or stereophotography, or evaluation of visual fields. There is interest in developing more objective, reproducible techniques both to document optic nerve damage and to detect early changes in the optic nerve and retinal nerve fiber layer (RNFL) before the development of permanent visual field deficits. Specifically, evaluating changes in RNFL thickness has been investigated as a technique to diagnose and monitor glaucoma. However, IOP reduction is not effective in decreasing disease progression in a significant number of patients, and in patients with NTG, there is never an increase in IOP. It has been proposed that vascular dysregulation is a significant cause of damage to the RNFL, and there is interest in measuring ocular blood flow as both a diagnostic and a management tool for glaucoma. Changes in blood flow to the retina and choroid may be particularly relevant for diagnosis and treatment of NTG. A variety of techniques have been developed, as described below. (Note: This policy only addresses techniques related to the evaluation of the optic nerve, RNFL, or blood flow to the retina and choroid in patients with glaucoma.)

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MULTIPLE SCLEROSIS

This central nervous system disease involves an immune-mediated process, which directs an abnormal response from the body's immune system to the central nervous system (the brain, spinal cord and optic nerves). In up to 20% of multiple sclerosis (MS) patients optic neuropathy may be the first demyelinating event. The most common type of involvement of the visual pathways is optic neuritis, which can result in varying degrees of visual loss.

OPTIC NEURITIS

Inflammation of the optic nerve. Often associated with MS this demyelinating and inflammatory condition occurs in 50% of MS patients and is the presenting feature in 15 to 20 percent of patients. Typically, painful, monocular vision loss evolves over hours to a few days. OCT can detect RNFL thinning in 85% of patients with this condition.

PAPILLEDEMA

Papilledema is optic disc swelling due to raised intracranial pressure. It occurs when raised intracranial pressure is transmitted to the optic nerve sheath. Typically bilateral, it is often discovered when individuals are evaluated for other symptoms. Visual symptoms are common, although rarely the presenting symptom. Diagnostic testing may include optical coherence tomography both to monitor swelling and to determine changes surrounding the retina. Left untreated vision loss can occur.

Techniques to Evaluate the Optic Nerve and RNFL

Confocal Scanning Laser Ophthalmoscopy

Confocal scanning laser ophthalmoscopy (CSLO) is an image acquisition technique intended to improve the quality of the eye examination compared with standard ophthalmologic examination. A laser is scanned across the retina along with a detector system. Only a single spot on the retina is illuminated at any time, resulting in a high-contrast image of great reproducibility that can be used to estimate RNFL thickness. In addition, this technique does not require maximal mydriasis, which may be problematic in patients with glaucoma. The Heidelberg Retinal Tomograph is probably the most common example of this technology.

Scanning Laser Polarimetry

The RNFL is birefringent (or biorefractive), meaning that it causes a change in the state of polarization of a laser beam as it passes. A 780-nm diode laser is used to illuminate the optic nerve. The polarization state of the light emerging from the eye is then evaluated and correlated with RNFL thickness. Unlike CSLO, scanning laser polarimetry (SLP) can directly measure the thickness of the RNFL. GDx is a common SLP device. GDx contains a normative database and statistical software package that compare scan results with age-matched normal subjects of the same ethnic origin. The advantages of this system are that images can be obtained without pupil dilation and evaluation can be completed in 10 minutes. Current instruments have added enhanced and variable corneal compensation technology to account for corneal polarization.

Optical Coherence Tomography

Optical coherence tomography (OCT) uses near-infrared light to provide direct cross-sectional measurement of the RNFL. The principles employed are similar to those used in B-mode ultrasound except light, not sound, is used to produce the 2-dimensional images. The light source can be directed into the eye through a conventional slit-lamp biomicroscope and focused onto the retina through a typical 78-diopter lens. This system requires dilation of the patient's pupil. OCT analysis software is being developed to include optic nerve head parameters with spectral domain OCT, analysis of macular parameters, and hemodynamic parameters with Doppler OCT and OCT angiography.

Pulsatile Ocular Blood Flow

The pulsatile variation in ocular pressure results from the flow of blood into the eye during cardiac systole. Pulsatile ocular blood flow can thus be detected by the continuous monitoring of intraocular pressure. The detected pressure pulse can then be converted into a volume measurement using the known relation between ocular pressure and ocular volume. Pulsatile blood flow is primarily determined by the choroidal vessels, particularly relevant to patients with glaucoma, because the optic nerve is supplied in large part by choroidal circulation.

Techniques to Measure Ocular Blood Flow

A number of techniques have been developed to assess ocular blood flow. They include laser speckle flowgraphy, color Doppler imaging, Doppler Fourier domain OCT, laser Doppler velocimetry, confocal scanning laser Doppler flowmetry, and retinal functional imaging.

Laser Speckle Flowgraphy

Laser speckle is detected when a coherent light source such as laser light is dispersed from a diffusing surface such as retinal and choroidal vessels and the circulation of the optic nerve head. The varying patterns of light can be used to determine red blood cell velocity and retinal blood flow. However, due to differences in the tissue structure in different eyes, flux values cannot be used for comparisons between eyes. This limitation may be overcome by subtracting background choroidal blood flow results from the overall blood flow results in the region of interest.

Color Doppler Imaging

Color Doppler imaging has also been investigated as a technique to measure the blood flow velocity in the retinal and choroidal arteries. This technique delivers ultrasound in pulsed Doppler mode with a transducer set on closed eyelids. The examination takes 30 to 40 minutes, and is most effective for the mean velocity of large ophthalmic vessels such as the ophthalmic artery, the central retinal artery, and the short posterior ciliary arteries. However, total blood flow cannot be determined with this technique, and imaging is highly dependent on probe placement.

Doppler Fourier Domain OCT

Doppler Fourier domain OCT is a noncontact imaging technique that detects the intensity of the light scattered back from erythrocytes as they move in the vessels of the ocular tissue. This induces a frequency shift that represents the velocity of the blood in the ocular tissue.

Laser Doppler Velocimetry
Laser Doppler velocimetry compares the frequency of reflected laser light from a moving particle to stationary tissue.

Confocal Scanning Laser Doppler Flowmetry
Confocal scanning laser Doppler flowmetry combines laser Doppler flowmetry with confocal scanning laser tomography. Infrared laser light is used to scan the retina, and the frequency and amplitude of Doppler shifts are determined from the reflected light. Determinations of blood velocity and blood volume are used to compute the total blood flow and create a physical map of retinal flow values.

Regulatory Status
A number of confocal scanning laser ophthalmoscopy, scanning laser polarimetry, and optical coherence tomography (OCT) devices have been cleared by the U.S. Food and Drug Administration (FDA) through the 510(k) process for imaging the posterior eye segment. For example, the RTVue XR OCT Avanti™ (Optovue) is an OCT system indicated for the in vivo imaging and measurement of the retina, retinal nerve fiber layer, and optic disc as a tool and aid in the clinical diagnosis and management of retinal diseases. The RTVue XR OCT Avanti™ with Normative Database is a quantitative tool for comparing retina, retinal nerve fiber layer, and optic disk measurements in the human eye to a database of known normal subjects. It is intended as a diagnostic device to aid in the detection and management of ocular diseases. In 2016, the RTVue XR OCT with Avanti™ with AngioVue™ Software was cleared by FDA through the 510(k) process (K153080) as an aid in the visualization of vascular structures of the retina and choroid. FDA product code: HLI, OBO.

In 2012, the iExaminer™ (Welch Allyn) was cleared for marketing by FDA through the 510(k) process. The iExaminer™ consists of a hardware adapter and associated software (iPhone® App) to capture, store, send, and retrieve images from the PanOptic™ Ophthalmoscope (Welch Allyn) using an iPhone®. FDA product code: HKI.

IV. RATIONALE

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SUMMARY OF EVIDENCE
For individuals who have glaucoma or suspected glaucoma who receive imaging of the optic nerve and retinal nerve fiber layer, the evidence includes studies on diagnostic accuracy. Relevant outcomes are test accuracy, symptoms, morbid events, functional outcomes, and medication use. Confocal scanning laser ophthalmoscopy (CSLO), scanning laser polarimetry (SLP), and optical coherence tomography (OCT) can be used to evaluate the optic nerve and retinal nerve fiber layer in patients with glaucoma and suspected glaucoma. Numerous articles have described findings from patients with known and suspected glaucoma using CSLO, SLP, and OCT. These studies have reported that abnormalities may be detected on these examinations before functional changes are noted. The literature and specialty society guidelines have indicated that optic nerve analysis using CSLO, SLP, and OCT are established add-on tests that

may be used to diagnose and manage patients with glaucoma and suspected glaucoma. These results are often considered along with other findings to make diagnostic and therapeutic decisions about glaucoma care, including use of topical medication, monitoring, and surgery to lower intraocular pressure. Thus, accurate diagnosis of glaucoma would be expected to reduce the progression of glaucoma. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals who have glaucoma or suspected glaucoma who receive evaluation of ocular blood flow, the evidence includes association studies. Relevant outcomes are test accuracy, symptoms, morbid events, functional outcomes, and medication use. Techniques to measure ocular blood flow or ocular blood velocity are used to determine appropriate glaucoma treatment options. The data for these techniques remain limited. Literature reviews have not identified studies on the technical performance of these tests (e.g., test-retest reliability), whether these technologies improve diagnostic accuracy, or whether they improve health outcomes in patients with glaucoma. Some have suggested that these parameters may inform understanding of the variability in visual field changes in patients with glaucoma, i.e., they may help explain why patients with similar levels of intraocular pressure develop markedly different visual impairments. However, data on use of ocular blood flow, pulsatile ocular blood flow, and/or blood flow velocity are currently lacking. The evidence is insufficient to determine the effects of the technology on health outcomes.

V. DEFINITIONS

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CUP/DISC RATIO in ophthalmology is the mathematic relationship between the horizontal or vertical diameter of the physiologic cup and the diameter of the optic disc.

DIABETIC RETINOPATHY is a disorder of retinal blood vessels characterized by capillary microaneurysms, hemorrhage, exudates, and the formation of new vessels and connective tissue.

INTRAOCULAR PRESSURE refers to the internal pressure of the eye regulated by resistance to the flow of aqueous humor through the fine sieve of the trabecular meshwork.

VI. BENEFIT VARIATIONS

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The existence of this medical policy does not mean that this service is a covered benefit under the member's health benefit plan. Benefit determinations should be based in all cases on the applicable health benefit plan language. Medical policies do not constitute a description of benefits. A member’s health benefit plan governs which services are covered, which are excluded, which are subject to benefit limits and which require preauthorization. There are different benefit plan designs in each product administered by Capital BlueCross. Members and providers should consult the member’s health benefit plan for information or contact Capital BlueCross for benefit information.

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VII. DISCLAIMER

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Capital BlueCross's medical policies are developed to assist in administering a member's benefits, do not constitute medical advice and are subject to change. Treating providers are solely responsible for medical advice and treatment of members. Members should discuss any medical policy related to their coverage or condition with their provider and consult their benefit information to determine if the service is covered. If there is a discrepancy between this medical policy and a member's benefit information, the benefit information will govern. If a provider or a member has a question concerning the application of this medical policy to a specific member's plan of benefits, please contact Capital BlueCross' Provider Services or Member Services. Capital BlueCross considers the information contained in this medical policy to be proprietary and it may only be disseminated as permitted by law.

VIII. CODING INFORMATION

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Note: This list of codes may not be all-inclusive, and codes are subject to change at any time. The identification of a code in this section does not denote coverage as coverage is determined by the terms of member benefit information. In addition, not all covered services are eligible for separate reimbursement.

Investigational and therefore not covered:

CPT Codes®								
0198T								

Covered when medically necessary:

CPT Codes®								
92133								

ICD-10-CM Diagnosis Codes	Description
G35	Multiple sclerosis
G93.2	Benign intracranial hypertension
H40.001	Preglaucoma, unspecified, right eye
H40.002	Preglaucoma, unspecified, left eye
H40.003	Preglaucoma, unspecified, bilateral
H40.011	Open angle with borderline findings, low risk, right eye
H40.012	Open angle with borderline findings, low risk, left eye
H40.013	Open angle with borderline findings, low risk, bilateral
H40.021	Open angle with borderline findings, high risk, right eye
H40.022	Open angle with borderline findings, high risk, left eye
H40.023	Open angle with borderline findings, high risk, bilateral
H40.029	Open angle with borderline findings, high risk, unspecified eye

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ICD-10-CM Diagnosis Codes	Description
H40.031	Anatomical narrow angle, right eye
H40.032	Anatomical narrow angle, left eye
H40.033	Anatomical narrow angle, bilateral
H40.039	Anatomical narrow angle, unspecified eye
H40.041	Steroid responder, right eye
H40.042	Steroid responder, left eye
H40.043	Steroid responder, bilateral
H40.049	Steroid responder, unspecified eye
H40.051	Ocular hypertension, right eye
H40.052	Ocular hypertension, left eye
H40.053	Ocular hypertension, bilateral
H40.059	Ocular hypertension, unspecified eye
H40.061	Primary angle closure without glaucoma damage, right eye
H40.062	Primary angle closure without glaucoma damage, left eye
H40.063	Primary angle closure without glaucoma damage, bilateral
H40.069	Primary angle closure without glaucoma damage, unspecified eye
H40.1111	Primary open-angle glaucoma, right eye, mild stage
H40.1112	Primary open-angle glaucoma, right eye, moderate stage
H40.1113	Primary open-angle glaucoma, right eye, severe stage
H40.1114	Primary open-angle glaucoma, right eye, indeterminate stage
H40.1120	Primary open-angle glaucoma, left eye, stage unspecified
H40.1121	Primary open-angle glaucoma, left eye, mild stage
H40.1122	Primary open-angle glaucoma, left eye, moderate stage
H40.1123	Primary open-angle glaucoma, left eye, severe stage
H40.1124	Primary open-angle glaucoma, left eye, indeterminate stage
H40.1130	Primary open-angle glaucoma, bilateral, stage unspecified
H40.1131	Primary open-angle glaucoma, bilateral, mild stage
H40.1132	Primary open-angle glaucoma, bilateral, moderate stage
H40.1133	Primary open-angle glaucoma, bilateral, severe stage
H40.1134	Primary open-angle glaucoma, bilateral, indeterminate stage
H40.1190	Primary open-angle glaucoma, unspecified eye, stage unspecified
H40.1191	Primary open-angle glaucoma, unspecified eye, mild stage
H40.1192	Primary open-angle glaucoma, unspecified eye, moderate stage
H40.1193	Primary open-angle glaucoma, unspecified eye, severe stage
H40.1194	Primary open-angle glaucoma, unspecified eye, indeterminate stage
H40.1210	Low-tension glaucoma, right eye, stage unspecified
H40.1211	Low-tension glaucoma, right eye, mild stage

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ICD-10-CM Diagnosis Codes	Description
H40.1212	Low-tension glaucoma, right eye, moderate stage
H40.1213	Low-tension glaucoma, right eye, severe stage
H40.1214	Low-tension glaucoma, right eye, indeterminate stage
H40.1220	Low-tension glaucoma, left eye, stage unspecified
H40.1221	Low-tension glaucoma, left eye, mild stage
H40.1222	Low-tension glaucoma, left eye, moderate stage
H40.1223	Low-tension glaucoma, left eye, severe stage
H40.1224	Low-tension glaucoma, left eye, indeterminate stage
H40.1230	Low-tension glaucoma, bilateral, stage unspecified
H40.1231	Low-tension glaucoma, bilateral, mild stage
H40.1232	Low-tension glaucoma, bilateral, moderate stage
H40.1233	Low-tension glaucoma, bilateral, severe stage
H40.1234	Low-tension glaucoma, bilateral, indeterminate stage
H40.1290	Low-tension glaucoma, unspecified eye, stage unspecified
H40.1291	Low-tension glaucoma, unspecified eye, mild stage
H40.1292	Low-tension glaucoma, unspecified eye, moderate stage
H40.1293	Low-tension glaucoma, unspecified eye, severe stage
H40.1294	Low-tension glaucoma, unspecified eye, indeterminate stage
H40.1310	Pigmentary glaucoma, right eye, stage unspecified
H40.1311	Pigmentary glaucoma, right eye, mild stage
H40.1312	Pigmentary glaucoma, right eye, moderate stage
H40.1313	Pigmentary glaucoma, right eye, severe stage
H40.1314	Pigmentary glaucoma, right eye, indeterminate stage
H40.1320	Pigmentary glaucoma, left eye, stage unspecified
H40.1321	Pigmentary glaucoma, left eye, mild stage
H40.1322	Pigmentary glaucoma, left eye, moderate stage
H40.1323	Pigmentary glaucoma, left eye, severe stage
H40.1324	Pigmentary glaucoma, left eye, indeterminate stage
H40.1330	Pigmentary glaucoma, bilateral, stage unspecified
H40.1331	Pigmentary glaucoma, bilateral, mild stage
H40.1332	Pigmentary glaucoma, bilateral, moderate stage
H40.1333	Pigmentary glaucoma, bilateral, severe stage
H40.1334	Pigmentary glaucoma, bilateral, indeterminate stage
H40.1390	Pigmentary glaucoma, unspecified eye, stage unspecified
H40.1391	Pigmentary glaucoma, unspecified eye, mild stage
H40.1392	Pigmentary glaucoma, unspecified eye, moderate stage
H40.1393	Pigmentary glaucoma, unspecified eye, severe stage

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ICD-10-CM Diagnosis Codes	Description
H40.1394	Pigmentary glaucoma, unspecified eye, indeterminate stage
H40.1410	Capsular glaucoma with pseudoexfoliation of lens, right eye, stage unspecified
H40.1411	Capsular glaucoma with pseudoexfoliation of lens, right eye, mild stage
H40.1412	Capsular glaucoma with pseudoexfoliation of lens, right eye, moderate stage
H40.1413	Capsular glaucoma with pseudoexfoliation of lens, right eye, severe stage
H40.1414	Capsular glaucoma with pseudoexfoliation of lens, right eye, indeterminate stage
H40.1420	Capsular glaucoma with pseudoexfoliation of lens, left eye, stage unspecified
H40.1421	Capsular glaucoma with pseudoexfoliation of lens, left eye, mild stage
H40.1422	Capsular glaucoma with pseudoexfoliation of lens, left eye, moderate stage
H40.1423	Capsular glaucoma with pseudoexfoliation of lens, left eye, severe stage
H40.1424	Capsular glaucoma with pseudoexfoliation of lens, left eye, indeterminate stage
H40.1430	Capsular glaucoma with pseudoexfoliation of lens, bilateral, stage unspecified
H40.1431	Capsular glaucoma with pseudoexfoliation of lens, bilateral, mild stage
H40.1432	Capsular glaucoma with pseudoexfoliation of lens, bilateral, moderate stage
H40.1433	Capsular glaucoma with pseudoexfoliation of lens, bilateral, severe stage
H40.1434	Capsular glaucoma with pseudoexfoliation of lens, bilateral, indeterminate stage
H40.211	Acute angle-closure glaucoma, right eye
H40.212	Acute angle-closure glaucoma, left eye
H40.213	Acute angle-closure glaucoma, bilateral
H40.2211	Chronic angle-closure glaucoma, right eye, mild stage
H40.2212	Chronic angle-closure glaucoma, right eye, moderate stage
H40.2213	Chronic angle-closure glaucoma, right eye, severe stage
H40.2214	Chronic angle-closure glaucoma, right eye, indeterminate stage
H40.2220	Chronic angle-closure glaucoma, left eye, stage unspecified
H40.2221	Chronic angle-closure glaucoma, left eye, mild stage
H40.2222	Chronic angle-closure glaucoma, left eye, moderate stage
H40.2223	Chronic angle-closure glaucoma, left eye, severe stage
H40.2224	Chronic angle-closure glaucoma, left eye, indeterminate stage
H40.2230	Chronic angle-closure glaucoma, bilateral, stage unspecified
H40.2231	Chronic angle-closure glaucoma, bilateral, mild stage
H40.2232	Chronic angle-closure glaucoma, bilateral, moderate stage
H40.2233	Chronic angle-closure glaucoma, bilateral, severe stage
H40.2234	Chronic angle-closure glaucoma, bilateral, indeterminate stage
H40.31X0	Glaucoma secondary to eye trauma, right eye, stage unspecified
H40.31X1	Glaucoma secondary to eye trauma, right eye, mild stage
H40.31X2	Glaucoma secondary to eye trauma, right eye, moderate stage
H40.31X3	Glaucoma secondary to eye trauma, right eye, severe stage

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ICD-10-CM Diagnosis Codes	Description
H40.31X4	Glaucoma secondary to eye trauma, right eye, indeterminate stage
H40.32X0	Glaucoma secondary to eye trauma, left eye, stage unspecified
H40.32X1	Glaucoma secondary to eye trauma, left eye, mild stage
H40.32X2	Glaucoma secondary to eye trauma, left eye, moderate stage
H40.32X3	Glaucoma secondary to eye trauma, left eye, severe stage
H40.32X4	Glaucoma secondary to eye trauma, left eye, indeterminate stage
H40.33X0	Glaucoma secondary to eye trauma, bilateral, stage unspecified
H40.33X1	Glaucoma secondary to eye trauma, bilateral, mild stage
H40.33X2	Glaucoma secondary to eye trauma, bilateral, moderate stage
H40.33X3	Glaucoma secondary to eye trauma, bilateral, severe stage
H40.33X4	Glaucoma secondary to eye trauma, bilateral, moderate stage
H40.41X0	Glaucoma secondary to eye inflammation, right eye, stage unspecified
H40.41X1	Glaucoma secondary to eye inflammation, right eye, mild stage
H40.41X2	Glaucoma secondary to eye inflammation, right eye, moderate stage
H40.41X3	Glaucoma secondary to eye inflammation, right eye, severe stage
H40.41X4	Glaucoma secondary to eye inflammation, right eye, indeterminate stage
H40.42X0	Glaucoma secondary to eye inflammation, left eye, stage unspecified
H40.42X1	Glaucoma secondary to eye inflammation, left eye, mild stage
H40.42X2	Glaucoma secondary to eye inflammation, left eye, moderate stage
H40.42X3	Glaucoma secondary to eye inflammation, left eye, severe stage
H40.42X4	Glaucoma secondary to eye inflammation, left eye, indeterminate stage
H40.43X0	Glaucoma secondary to eye inflammation, bilateral, stage unspecified
H40.43X1	Glaucoma secondary to eye inflammation, bilateral, mild stage
H40.43X2	Glaucoma secondary to eye inflammation, bilateral, moderate stage
H40.43X3	Glaucoma secondary to eye inflammation, bilateral, severe stage
H40.43X4	Glaucoma secondary to eye inflammation, bilateral, indeterminate stage
H40.51X0	Glaucoma secondary to other eye disorders, right eye, stage unspecified
H40.51X1	Glaucoma secondary to other eye disorders, right eye, mild stage
H40.51X2	Glaucoma secondary to other eye disorders, right eye, moderate stage
H40.51X3	Glaucoma secondary to other eye disorders, right eye, severe stage
H40.51X4	Glaucoma secondary to other eye disorders, right eye, indeterminate stage
H40.52X0	Glaucoma secondary to other eye disorders, left eye, stage unspecified
H40.52X1	Glaucoma secondary to other eye disorders, left eye, mild stage
H40.52X2	Glaucoma secondary to other eye disorders, left eye, moderate stage
H40.52X3	Glaucoma secondary to other eye disorders, left eye, severe stage
H40.52X4	Glaucoma secondary to other eye disorders, left eye, indeterminate stage
H40.53X0	Glaucoma secondary to other eye disorders, bilateral, stage unspecified

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ICD-10-CM Diagnosis Codes	Description
H40.53X1	Glaucoma secondary to other eye disorders, bilateral, mild stage
H40.53X2	Glaucoma secondary to other eye disorders, bilateral, moderate stage
H40.53X3	Glaucoma secondary to other eye disorders, bilateral, severe stage
H40.53X4	Glaucoma secondary to other eye disorders, bilateral, indeterminate stage
H40.61X0	Glaucoma secondary to drugs, right eye, stage unspecified
H40.61X1	Glaucoma secondary to drugs, right eye, mild stage
H40.61X2	Glaucoma secondary to drugs, right eye, moderate stage
H40.61X3	Glaucoma secondary to drugs, right eye, severe stage
H40.61X4	Glaucoma secondary to drugs, right eye, indeterminate stage
H40.62X0	Glaucoma secondary to drugs, left eye, stage unspecified
H40.62X1	Glaucoma secondary to drugs, left eye, mild stage
H40.62X2	Glaucoma secondary to drugs, left eye, moderate stage
H40.62X3	Glaucoma secondary to drugs, left eye, severe stage
H40.62X4	Glaucoma secondary to drugs, left eye, indeterminate stage
H40.63X0	Glaucoma secondary to drugs, bilateral, stage unspecified
H40.63X1	Glaucoma secondary to drugs, bilateral, mild stage
H40.63X2	Glaucoma secondary to drugs, bilateral, moderate stage
H40.63X3	Glaucoma secondary to drugs, bilateral, severe stage
H40.63X4	Glaucoma secondary to drugs, bilateral, indeterminate stage
H40.811	Glaucoma with increased episcleral venous pressure, right eye
H40.812	Glaucoma with increased episcleral venous pressure, left eye
H40.813	Glaucoma with increased episcleral venous pressure, bilateral
H40.819	Glaucoma with increased episcleral venous pressure, unspecified eye
H40.821	Hypersecretion glaucoma, right eye
H40.822	Hypersecretion glaucoma, left eye
H40.823	Hypersecretion glaucoma, bilateral
H40.829	Hypersecretion glaucoma, unspecified eye
H40.831	Aqueous misdirection, right eye
H40.832	Aqueous misdirection, left eye
H40.833	Aqueous misdirection, bilateral
H40.839	Aqueous misdirection, unspecified eye
H40.89	Other specified glaucoma
H42	Glaucoma in disease classified elsewhere
H46.00	Optic papillitis, unspecified eye
H46.01	Optic papillitis, right eye
H46.02	Optic papillitis, left eye
H46.03	Optic papillitis, bilateral eye

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ICD-10-CM Diagnosis Codes	Description
H46.10	Retrobulbar neuritis, unspecified eye
H46.11	Retrobulbar neuritis, right eye
H46.12	Retrobulbar neuritis, left eye
H46.13	Retrobulbar neuritis, bilateral eye
H46.2	Nutritional optic neuropathy
H46.3	Toxic optic neuropathy
H46.8	Other optic neuritis
H46.9	Unspecified optic neuritis
H47.011	Ischemic optic neuropathy, right eye
H47.012	Ischemic optic neuropathy, left eye
H47.013	Ischemic optic neuropathy, bilateral eye
H47.019	Ischemic optic neuropathy, unspecified eye
H47.021	Hemorrhage in optic nerve sheath, right eye
H47.022	Hemorrhage in optic nerve sheath, left eye
H47.023	Hemorrhage in optic nerve sheath, bilateral eye
H47.029	Hemorrhage in optic nerve sheath, unspecified eye
H47.031	Optic nerve hypoplasia, right eye
H47.032	Optic nerve hypoplasia, left eye
H47.033	Optic nerve hypoplasia, bilateral eye
H47.039	Optic nerve hypoplasia, unspecified eye
H47.091	Other disorders of optic nerve, not elsewhere classified, right eye
H47.092	Other disorders of optic nerve, not elsewhere classified, left eye
H47.093	Other disorders of optic nerve, not elsewhere classified, bilateral eye
H47.099	Other disorders of optic nerve, not elsewhere classified, unspecified eye
H47.10	Unspecified papilledema
H47.11	Papilledema associated with increased intracranial pressure
H47.12	Papilledema associated with decreased ocular pressure
H47.13	Papilledema associated with retinal disorder
H47.141	Foster-Kennedy syndrome, right eye
H47.142	Foster-Kennedy syndrome, left eye
H47.143	Foster-Kennedy syndrome, bilateral eye
H47.149	Foster-Kennedy syndrome, unspecified eye
H47.20	Unspecified optic atrophy
H47.211	Primary optic atrophy, right eye
H47.212	Primary optic atrophy, left eye
H47.213	Primary optic atrophy, bilateral eye
H47.219	Primary optic atrophy, unspecified eye

POLICY TITLE	OPHTHALMOLOGIC TECHNIQUES THAT EVALUATE THE POSTERIOR EYE SEGMENT
POLICY NUMBER	MP-2.056

ICD-10-CM Diagnosis Codes	Description
H47.22	Hereditary optic atrophy
H47.231	Glaucomatous optic atrophy, right eye
H47.232	Glaucomatous optic atrophy, left eye
H47.233	Glaucomatous optic atrophy, bilateral eye
H47.239	Glaucomatous optic atrophy, unspecified eye
H47.291	Other optic atrophy, right eye
H47.292	Other optic atrophy, left eye
H47.293	Other optic atrophy, bilateral eye
H47.299	Other optic atrophy, unspecified eye
H47.311	Coloboma of optic disc, right eye
H47.312	Coloboma of optic disc, left eye
H47.313	Coloboma of optic disc, bilateral eye
H47.319	Coloboma of optic disc, unspecified eye
H47.321	Drusen of optic disc, right eye
H47.322	Drusen of optic disc, left eye
H47.323	Drusen of optic disc, bilateral eye
H47.329	Drusen of optic disc, unspecified eye
H47.331	Pseudopapilledema of optic disc, right eye
H47.332	Pseudopapilledema of optic disc, left eye
H47.333	Pseudopapilledema of optic disc, bilateral eye
H47.339	Pseudopapilledema of optic disc, unspecified eye
H47.391	Other disorders of optic disc, right eye
H47.392	Other disorders of optic disc, left eye
H47.393	Other disorders of optic disc, bilateral eye
H47.399	Other disorders of optic disc, unspecified eye
H47.41	Disorders of optic chiasm in (due to) inflammatory disorders
H47.42	Disorders of optic chiasm in (due to) neoplasm
H47.43	Disorders of optic chiasm in (due to) vascular disorders
H47.49	Disorders of optic chiasm in (due to) other disorders
H47.511	Disorders of visual pathways in (due to) inflammatory disorders, right side
H47.512	Disorders of visual pathways in (due to) inflammatory disorders, left side
H47.519	Disorders of visual pathways in (due to) inflammatory disorders, unspecified side
H47.521	Disorders of visual pathways in (due to) neoplasm, right side
H47.522	Disorders of visual pathways in (due to) neoplasm, left side
H47.529	Disorders of visual pathways in (due to) neoplasm, unspecified side
H47.531	Disorders of visual pathways in (due to) vascular disorders, right side
H47.532	Disorders of visual pathways in (due to) vascular disorders, left side

POLICY TITLE	OPHTHALMOLOGIC TECHNIQUES THAT EVALUATE THE POSTERIOR EYE SEGMENT
POLICY NUMBER	MP-2.056

ICD-10-CM Diagnosis Codes	Description
H47.539	Disorders of visual pathways in (due to) vascular disorders, unspecified side
H47.611	Cortical blindness, right side of brain
H47.612	Cortical blindness, left side of brain
H47.619	Cortical blindness, unspecified side of brain
H47.621	Disorders of visual cortex in (due to) inflammatory disorders, right side of brain
H47.622	Disorders of visual cortex in (due to) inflammatory disorders, left side of brain
H47.629	Disorders of visual cortex in (due to) inflammatory disorders, unspecified side of brain
H47.631	Disorders of visual cortex in (due to) neoplasm, right side of brain
H47.632	Disorders of visual cortex in (due to) neoplasm, left side of brain
H47.639	Disorders of visual cortex in (due to) neoplasm, unspecified side of brain
H47.641	Disorders of visual cortex in (due to) vascular disorders, right side of brain
H47.642	Disorders of visual cortex in (due to) vascular disorders, left side of brain
H47.649	Disorders of visual cortex in (due to) vascular disorders, unspecified side of brain
H47.9	Unspecified disorder of visual pathways
Q15.0	Congenital Glaucoma
Z01.01	Encounter for examination of eyes and vision with abnormal findings

IX. REFERENCES

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X. POLICY HISTORY

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MP 2.056	**CAC 12/2/03**
	CAC 11/30/04
	CAC 9/13/05
	CAC 11/29/05
	CAC 11/28/06
	CAC 9/25/07
	CAC 7/29/08
	CAC 11/25/08
	CAC 11/24/09 Consensus List
	CAC 10/25/11 Adopt BCBSA for Ophthalmologic Techniques for Evaluating Glaucoma. Title changed. Description of stages of glaucoma deleted. Information regarding use of optical coherence tomography (OCT) was differentiated. This policy addresses use of OCT

	for analysis of the optic nerve only. Reference to new policy MP 2.085 Anterior Eye Segment Optical Imaging added which addresses OCT for anterior eye segment evaluation. Information related to retinal telescreening extracted from this policy and a new policy created MP 2.086 Retinal Telescreening for Diabetic Retinopathy was created. Information related to extended ophthalmoscopy exam deleted. Slight wording change to policy statement related to ophthalmologic techniques for evaluating glaucoma does not change intent of policy. Remains medically necessary. Added Medicare variation to LCD L27504 Non-Invasive Cerebrovascular Arterial Studies for doppler ultrasonography.
	CAC 10/30/12 Consensus review. No change to policy statements. References updated**.** Changed FEP variation to reference MP-9.03.06 Ophthalmologic Techniques for Evaluating Glaucoma. Deleted Medicare variation. Coverage criteria matches or current CBC policy is more generous. Codes reviewed. 10/31/12
	CAC 11/26/13 Consensus review. References updated, but no changes to the policy statements.
	CAC 11/25/14 Consensus review. No change to policy statements. References updated. Rationale added. Coding reviewed and ICD 10 ranged coding 11/07/2014.
	CAC 11/24/15 Consensus review. No change to the policy statements. Reference and rationale update. LCD changed from L27529 to L35038 as part of the LCD ICD-10 update.
	CAC 11/29/16 Consensus review. No change to policy statements. Variation reformatting completed. Description/Background, Rationale and Reference sections updated. Coding reviewed/updated.
	6/1/17 Medicare update – Added a variation to LCD L35038.
	1/17/18 Administrative update. Medicare variations removed from Commercial Policies effective 1/1/18.
	CAC 1/30/18 Minor revision. Doppler ultrasonography removed from the second policy statement. However, the intent of the policy statement is unchanged. Title changed to "Ophthalmologic Techniques That Evaluate the Posterior Eye Segment for Glaucoma." Description/Background, Rationale and Reference sections updated.
	5/16/18 Minor revision. Investigational statement expanded to "all other indications". Coding review.
	3/28/19 Consensus review. Policy statement unchanged. References updated.
	10/1/19 Administrative update. Coding review. Diagnosis updated.
	1/1/20 Administrative update. New codes 92201 and 92202 added.
	4/21/20 Consensus review. Policy statement unchanged. Removed procedure codes 92201 and 92202, references updated.
	7/31/20 Major review. Added multiple sclerosis, increased intracranial pressure, optic neuritis and optic nerve disorders to policy statement as potentially medically necessary. Coding updated, added ICD10 codes H46-H47, G35 and G93.2. References updated. "for Glaucoma" removed from policy title.

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