Healthy Blue

Clinical UM Guideline

Subject:	Posterior Segment Optical Coherence Tomography		
Guideline #:	CG-MED-85	**Publish Date:**	12/18/2019
Status:	New	**Last Review Date:**	11/07/2019

Description

This document addresses optical coherence tomography of the posterior segment of the eye. Posterior segment ocular structures include the choroid, optic nerve, macula, retina, and vitreous.

Clinical Indications

Medically Necessary:

Initial optical coherence tomography of the posterior segment of the eye is considered **medically necessary** for any of the following:

- To establish a diagnosis of a condition affecting the optic nerve or retina (including, but not limited to glaucoma, optic neuropathy, macular degeneration, diabetic retinopathy, macular edema, atrophy associated with degenerative retinal diseases)**,** when a clinical diagnosis is uncertain; **or**
- To establish a baseline prior to treatment of a condition affecting the optic nerve or retina.

Repeat optical coherence tomography of the posterior segment of the eye is considered **medically necessary** to monitor a condition affecting the optic nerve or retina when there is documentation that changes detected on imaging (based on the anticipated clinical progression of the underlying disease) are likely to impact management; for example:

- To monitor for disease progression in individuals with glaucoma; **or**
- To manage retinal conditions undergoing active treatment (such as wet age-related macular degeneration, choroidal neovascularization, macular edema, diabetic retinopathy [proliferative and nonproliferative], branch retinal vein occlusion, central retinal vein occlusion, and cystoid macular edema) (that is: used for therapeutic decision making based on the individual's treatment protocol and clinical response as documented in the medical record); **or**
- To monitor for development of retinopathy for individuals receiving long-term use of chloroquine or hydroxychloroquine.

Not Medically Necessary:

Initial and repeat optical coherence tomography of the posterior segment of the eye is considered **not medically necessary** when the above criteria are not met and for all other indications including, but not limited to multiple sclerosis and amyloidosis.

Coding

The following codes for treatments and procedures applicable to this guideline are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement policy. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

CPT

92133	Scanning computerized ophthalmic diagnostic imaging, posterior segment, with interpretation and report, unilateral or bilateral; optic nerve
92134	Scanning computerized ophthalmic diagnostic imaging, posterior segment, with interpretation and report, unilateral or bilateral; retina

ICD-10 Diagnosis

	Including, but not limited to, the following:
E08.311-E08.3599	Diabetes mellitus due to underlying condition with ophthalmic complications
E09.311-E09.3599	Drug or chemical induced diabetes mellitus with ophthalmic complications
E10.311-E10.3599	Type 1 diabetes mellitus with ophthalmic complications
E11.311-E11.3599	Type 2 diabetes mellitus with ophthalmic complications
E13.311-E13.3599	Other specified diabetes mellitus with ophthalmic complications
H30.001-H36	Disorders of choroid and retina
H40.001-H40.9	Glaucoma
H46.00-H46.9	Optic neuritis
H47.011-H47.299	Disorders of optic nerve, papilledema, optic atrophy
T37.2X5A-T37.2X5S	Adverse effect of antimalarials and drugs acting on other blood protozoa
Z01.00-Z01.021	Encounter for examination of eyes and vision

Discussion/General Information

Optical coherence tomography (OCT) is a non-invasive imaging test that uses light waves to take cross-section pictures of the retina. It shows each of the retina's distinctive layers which allows an ophthalmologist to map and measure their thickness. These measurements help with diagnosis and provide treatment guidance for glaucoma and diseases of the retina such as age-related macular degeneration and diabetic eye disease.

According to the American Academy of Ophthalmology Preferred Practice Pattern® for Diabetic Retinopathy (2017), optical coherence tomography can be used to quantify thickness of the retina, monitor macular edema, and find other forms of macular diseases in those individuals with diabetic macular edema. Optical coherence tomography can direct treatment decisions such as continuing medications, changing of medications, or initiating surgery.

The American Academy of Ophthalmology also has a Preferred Practice Pattern for Age-Related Macular Degeneration (2015) in which they state that the use of optical coherence tomography is able to define the cross-

sectional architecture of the retina. The use of optical coherence tomography can detect the presence of fluid that cannot be found on biomicroscopy alone. Evaluation of the retina by looking at structural changes helps to guide and evaluate response to treatment. The frequency of repeat imaging of individuals undergoing active treatment should consider the treatment protocol and likelihood for a clinical change. For example, OCT imaging twice a year may be appropriate for neurologic conditions such as glaucoma as nerve problems proceed slowly and over time. In individuals with wet age-related macular degeneration treated with antiangiogenic drugs, OCT may be utilized at a higher frequency when used for therapeutic decision making based on the treatment protocol and response. Other conditions that undergo rapid clinical changes monthly requiring aggressive therapy and frequent follow-up (for example, macular hole and traction retinal detachment) may also require more frequent scans.

Repeat OCT of the posterior segment of the eye may be appropriate in monitoring other conditions affecting the optic nerve or retina if changes detected on imaging are likely to impact management. For example, the role of OCT has been proposed as a method in monitoring vitreoretinal interface abnormalities for disease progression (to determine eligibility for surgical treatment), and in monitoring retinoschisis for development of non-acute retinal detachment.

Chloroquine and hydroxychloroquine are medications primarily used for the treatment of malaria. They are known to cause a mild suppression of the immune system and have been used for treating connective tissue disorders in some autoimmune disorders such as rheumatoid arthritis (RA), systemic lupus erythematosus (SLE) and some dermatological and inflammatory diseases. One notable side effect with the use of these medications is the potential risk for the development of retinopathy. The American Academy of Ophthalmology (Marmor, 2016) has recommendations about chloroquine and hydroxychloroquine retinopathy. The risk of toxicity depends on daily dose and duration of use. Screening recommendations include a baseline ophthalmologic exam within a year of starting chloroquine or hydroxychloroquine. If maculopathy is present at the baseline screening, the recommendation is to add visual fields and optical coherence tomography. Following 5 years of use of medication, annual screening should begin, sooner in the presence of major risk factors (that is, renal disease, macular disease, duration of use of greater than 5 years, concomitant use of tamoxifen).

Definitions

Branch retinal vein occlusion: An occlusion near the retina in a branch retinal vein.

Central retinal vein occlusion: An occlusion of the central retinal vein where it enters the eye.

Choroidal neovascularization: The formation of new blood vessels in the choroid layer of the eye.

Diabetic retinopathy: The progressive damage to the blood vessels in the back of the eye.

Glaucoma: A grouping of diseases that can damage the optic nerve and result in vision loss and blindness.

Macular degeneration: Loss of central vision when the part of the retina called the macula is damaged.

Macular edema: Occurs when there is a build-up of fluid in the retina which can lead to swelling and vision distortion.

Optic neuropathy: Damage to the optic nerve.

References

Peer Reviewed Publications:

1. Eibenberger K, Sacu S, Rezar-Dreindl S, et al. Monitoring retinoschisis and non-acute retinal detachment by optical coherence tomography: morphologic aspects and clinical impact. Acta Ophthalmol. 2017; 95(7):710-716.
2. Levison AL, Kaiser PK. Vitreomacular interface diseases: diagnosis and managemen. Taiwan Journal of Ophthalmology. 2014; 4(2):63-68.
3. Marmor MF, Kellner U, Lai TY, et al. Recommendations on screening for chloroquine and hydroxychloroquine retinopathy (2016 Revision). Ophthalmology. 2016; 123(6):1386-1394.

Government Agency, Medical Society, and Other Authoritative Publications:

1. American Academy of Ophthalmology. Preferred Practice Patterns. For additional information visit the AAO website: https://www.aao.org/. Accessed on September 6, 2019.
   - Age-Related Macular Degeneration (2015).
   - Diabetic Retinopathy (2017).

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Optical Coherence Tomography

History

Status	Date	Action
New	11/07/2019	Medical Policy & Technology Assessment Committee (MPTAC) review. Initial document development.