

Clinical Policy: Fundus Photography

Reference Number: CP.VP.29

Last Review Date: 11/2024

[Coding Implications](#)

[Revision Log](#)

See [Important Reminder](#) at the end of this policy for important regulatory and legal information.

Description

Fundus photography involves the use of a retinal camera to photograph regions of the vitreous, retina, choroid, and optic nerve. The resultant images may be either photographic or digital and become part of the patient's permanent record. Fundus photographs are usually taken through a dilated pupil in order to enhance the quality of the photographic record, unless unnecessary for image acquisition or clinically contraindicated. This policy describes the medical necessity guidelines for fundus photography.

Policy/Criteria

- I. It is the policy of health plans affiliated with Centene Corporation® (Centene) and Envolve Vision, Inc.® (Envolve) that fundus photography is **medically necessary** for the following indications:
 - A. Histoplasmosis
 - B. Choroidal neoplasms
 - C. Glaucoma
 - D. Optic nerve pathology
 - E. Diabetic retinopathy
 - F. Hypertensive retinopathy
 - G. Vascular occlusion
 - H. Retinal neovascularization
 - I. Macular pathology
 - J. Retinal tear, thinning, schisis or detachment
 - K. Hereditary retinal dystrophies
 - L. Other visible retinal disorders requiring detailed imaging for adequate documentation
- II. It is the policy of health plans affiliated with Centene and Envolve that fundus photography is **not medically necessary** under the following situations:
 - A. Routine replacement of standard ophthalmoscopy with fundus photography to document the appearance of healthy retinal anatomy;
 - B. Duplicative documentation of retinal pathology with fundus photography in conjunction with extended ophthalmoscopy, fluorescein angiography, etc., unless the additional diagnostic procedures provide new information to assist in clinical decision-making.
 - C. Repeated performance in the presence of controlled and/or stable disease.

Background

The optical design of fundus cameras is based on the principle of monocular indirect ophthalmoscopy. A fundus camera provides an upright, magnified view of the fundus. A typical camera views 30 to 50° of retinal area, with a magnification of 2.5x, and allows some modification of this relationship through zoom or auxiliary lenses from 15°, which provides 5x magnification, to 140° with a wide angle lens, which minifies the image by half. The optics of a fundus camera are similar to those of an indirect ophthalmoscope in that the observation and

illumination systems follow dissimilar paths. The observation light is focused via a series of lenses through a doughnut shaped aperture, which then passes through a central aperture to form an annulus, before passing through the camera objective lens and through the cornea onto the retina. The light reflected from the retina passes through the un-illuminated hole in the doughnut formed by the illumination system. As the light paths of the two systems are independent, there are minimal reflections of the light source captured in the formed image. The image forming rays continue towards the low powered telescopic eyepiece. When the button is pressed to take a picture, a mirror interrupts the path of the illumination system allow the light from the flash bulb to pass into the eye. Simultaneously, a mirror falls in front of the observation telescope, which redirects the light onto the capturing medium, whether it is film or a digital CCD. Because of the eye's tendency to accommodate while looking through a telescope, it is imperative that the exiting vergence is parallel in order for an in-focus image to be formed on the capturing medium.

Fundus photography should be employed only when photographic documentation is necessary to the ongoing management of the specific ocular disease process affecting the patient. Fundus photography or similar scanning laser image shall not replace a thorough fundus exam through dilated pupils. Fundus photography may not be used as a screening tool, except in the case of teleretinal evaluation for diabetic retinopathy when the patient is non-compliant with diabetic eye examinations. However, it is preferred that the patient establish a relationship with an eye care provider and receive a comprehensive diabetic eye evaluation. See policy CP.VP.88 Diabetic Retinopathy Screening.

In fundus autofluorescence, autofluorescent patterns result from the complex interaction of fluorophores such as lipofuscin, which release an autofluorescent signal, and elements such as melanin and rhodopsin, which absorb the excitation beam and attenuate autofluorescence. Other structures such as retinal vessels and the crystalline lens may also influence autofluorescence through blocking and interference. Spatial variations in normal background autofluorescence reflect the distribution of lipofuscin and other fluorophores, which in turn reflect the distribution of photoreceptors and RPE cells. Meanwhile, the overall intensity of the autofluorescent signal is determined by individual factors such as age, light exposure, genotype, etc.

A large portion of hyper-autofluorescent lesions results from alterations in lipofuscin metabolism. Accumulation of lipofuscin in RPE cells, accumulation of bisretinoids in photoreceptor outer segments, and photooxidation of bisretinoids in lipofuscin can all contribute to enhanced autofluorescence. Specific mechanisms vary by disease, ranging from the inability to clear bisretinoids from photoreceptor cells in Stargardt disease to superimposed RPE cells in geographic atrophy (GA) of age-related macular degeneration (AMD). Accumulation of subretinal vitelliform material in Best disease, adult onset vitelliform maculopathy, and other acquired vitelliform disorders is another classic etiology of hyper-autofluorescence. Hyper-autofluorescence can also result from a window defect due to loss of rhodopsin, which normally absorbs the excitation wavelength and decreases autofluorescence. Rhodopsin attenuation and hyper-autofluorescence can occur physiologically as seen in the bleaching effect. In disease, photoreceptor degeneration and loss of rhodopsin unmask the autofluorescent signal of the underlying RPE, creating hyper-autofluorescent lesions such as in white dot syndromes and other pathologies. Fluorophores other than lipofuscin, including optic disc drusen, can also form hyper-autofluorescent lesions.

In contrast, hypo-autofluorescence can arise from decreased lipofuscin or blockage by material anterior to the RPE/photoreceptors. Perhaps the most striking example of hypo-autofluorescence due to decreased lipofuscin is the absence of autofluorescence at the site of RPE tears, where the RPE is completely denuded. Other pathologies involving decreased lipofuscin include RPE atrophy in GA and visual cycle defects in fundus albipunctatus. Meanwhile, blockage can occur from any material anterior to the RPE/photoreceptors, including physiologic structures such as blood vessels and macular pigments, and pathologic structures such as media opacities, intraretinal or subretinal hemorrhage, and fibrosis.

Coding Implications

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2024, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

CPT® Codes	Description
92250	Fundus photography with interpretation and report

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

+ Indicates a code requiring an additional character

ICD-10-CM Code	Description
A18.53	Tuberculous chorioretinitis
A51.43	Secondary syphilitic oculopathy
A52.15	Late syphilitic neuropathy
B20	Human immunodeficiency virus [HIV] disease
B25.8	Other cytomegaloviral diseases
B39.4	Histoplasmosis capsulati, unspecified
B39.5	Histoplasmosis duboisii
B58.01	Toxoplasma chorioretinitis
C69.21	Malignant neoplasm of right retina
C69.22	Malignant neoplasm of left retina
C69.31	Malignant neoplasm of right choroid
C69.32	Malignant neoplasm of left choroid
C69.41	Malignant neoplasm of right ciliary body
C69.42	Malignant neoplasm of left ciliary body
C69.61	Malignant neoplasm of right orbit
C69.62	Malignant neoplasm of left orbit
C69.81	Malignant neoplasm of overlapping sites of right eye and adnexa
C69.82	Malignant neoplasm of overlapping sites of left eye and adnexa
C72.31	Malignant neoplasm of right optic nerve

ICD-10-CM Code	Description
C72.32	Malignant neoplasm of left optic nerve
C72.59	Malignant neoplasm of other cranial nerves
D09.21	Carcinoma in situ of right eye
D09.22	Carcinoma in situ of left eye
D31.21	Benign neoplasm of right retina
D31.22	Benign neoplasm of left retina
D31.31	Benign neoplasm of right choroid
D31.32	Benign neoplasm of left choroid
D31.41	Benign neoplasm of right ciliary body
D31.42	Benign neoplasm of left ciliary body
D33.3	Benign neoplasm of other cranial nerves
D48.7	Neoplasm of uncertain behavior of other specified sites
D49.81	Neoplasm of unspecified behavior of retina and choroid
E08.3211	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, right eye
E08.3212	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, left eye
E08.3213	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, bilateral
E08.3291	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, right eye
E08.3292	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, left eye
E08.3293	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, bilateral
E08.3311	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, right eye
E08.3312	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, left eye
E08.3313	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, bilateral
E08.3391	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, right eye
E08.3392	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, left eye
E08.3393	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, bilateral
E08.3411	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, right eye
E08.3412	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, left eye
E08.3413	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, bilateral

ICD-10-CM Code	Description
E08.3491	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, right eye
E08.3492	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, left eye
E08.3493	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, bilateral
E08.3511	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, right eye
E08.3512	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, left eye
E08.3513	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, bilateral
E08.3521	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye
E08.3522	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye
E08.3523	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral
E08.3531	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye
E08.3532	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye
E08.3533	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral
E08.3541	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye
E08.3542	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye
E08.3543	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral
E08.3551	Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, right eye
E08.3552	Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, left eye

ICD-10-CM Code	Description
E08.3553	Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, bilateral
E08.3591	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, right eye
E08.3592	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, left eye
E08.3593	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, bilateral
E08.37X1	Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, right eye
E08.37X2	Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, left eye
E08.37X3	Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, bilateral
E09.3211	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye
E09.3212	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye
E09.3213	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral
E09.3291	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye
E09.3292	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye
E09.3293	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral
E09.3311	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye
E09.3312	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye
E09.3313	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral
E09.3391	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye
E09.3392	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye
E09.3393	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral
E09.3411	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye
E09.3412	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye
E09.3413	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral

ICD-10-CM Code	Description
E09.3491	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye
E09.3492	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye
E09.3493	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral
E09.3511	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye
E09.3512	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye
E09.3513	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral
E09.3521	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye
E09.3522	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye
E09.3523	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral
E09.3531	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye
E09.3532	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye
E09.3533	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral
E09.3541	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye
E09.3542	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye
E09.3543	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral
E09.3551	Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, right eye
E09.3552	Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, left eye

ICD-10-CM Code	Description
E09.3553	Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, bilateral
E09.3591	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye
E09.3592	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye
E09.3593	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral
E09.37X1	Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, right eye
E09.37X2	Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, left eye
E09.37X3	Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral
E10.3211	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye
E10.3212	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye
E10.3213	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral
E10.3291	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye
E10.3292	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye
E10.3293	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral
E10.3311	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye
E10.3312	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye
E10.3313	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral
E10.3391	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye
E10.3392	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye
E10.3393	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral
E10.3411	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye
E10.3412	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye
E10.3413	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral

ICD-10-CM Code	Description
E10.3491	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye
E10.3492	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye
E10.3493	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral
E10.3511	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye
E10.3512	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye
E10.3513	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral
E10.3521	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye
E10.3522	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye
E10.3523	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral
E10.3531	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye
E10.3532	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye
E10.3533	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral
E10.3541	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye
E10.3542	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye
E10.3543	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral
E10.3551	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, right eye
E10.3552	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, left eye
E10.3553	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral
E10.3591	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye
E10.3592	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye

ICD-10-CM Code	Description
E10.3593	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral
E10.37X1	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye
E10.37X2	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye
E10.37X3	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral
E11.3211	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye
E11.3212	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye
E11.3213	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral
E11.3291	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye
E11.3292	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye
E11.3293	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral
E11.3311	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye
E11.3312	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye
E11.3313	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral
E11.3391	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye
E11.3392	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye
E11.3393	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral
E11.3411	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye
E11.3412	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye
E11.3413	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral
E11.3491	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye
E11.3492	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye
E11.3493	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral

ICD-10-CM Code	Description
E11.3511	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye
E11.3512	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye
E11.3513	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral
E11.3521	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye
E11.3522	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye
E11.3523	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral
E11.3531	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye
E11.3532	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye
E11.3533	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral
E11.3541	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye
E11.3542	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye
E11.3543	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral
E11.3551	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, right eye
E11.3552	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, left eye
E11.3553	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral
E11.3591	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye
E11.3592	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye
E11.3593	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral
E11.37X1	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye
E11.37X2	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye

ICD-10-CM Code	Description
E11.37X3	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral
E13.3211	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye
E13.3212	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye
E13.3213	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral
E13.3291	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye
E13.3292	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye
E13.3293	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral
E13.3311	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye
E13.3312	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye
E13.3313	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral
E13.3391	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye
E13.3392	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye
E13.3393	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral
E13.3411	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye
E13.3412	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye
E13.3413	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral
E13.3491	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye
E13.3492	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye
E13.3493	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral
E13.3511	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye
E13.3512	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye
E13.3513	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral

ICD-10-CM Code	Description
E13.3521	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye
E13.3522	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye
E13.3523	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral
E13.3531	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye
E13.3532	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye
E13.3533	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral
E13.3541	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye
E13.3542	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye
E13.3543	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral
E13.3551	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, right eye
E13.3552	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, left eye
E13.3553	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, bilateral
E13.3591	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye
E13.3592	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye
E13.3593	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral
E13.37X1	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, right eye
E13.37X2	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, left eye
E13.37X3	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral
G35	Multiple sclerosis
G45.3	Amaurosis fugax
G93.2	Benign intracranial hypertension
H15.031	Posterior scleritis, right eye
H15.032	Posterior scleritis, left eye

ICD-10-CM Code	Description
H15.033	Posterior scleritis, bilateral
H15.841	Scleral ectasia, right eye
H15.842	Scleral ectasia, left eye
H15.843	Scleral ectasia, bilateral
H16.241	Ophthalmia nodosa right eye
H16.242	Ophthalmia nodosa left eye
H16.243	Ophthalmia nodosa bilateral
H20.821	Vogt-Koyanagi syndrome, right eye
H20.822	Vogt-Koyanagi syndrome, left eye
H20.823	Vogt-Koyanagi syndrome, bilateral
H21.331	Parasitic cyst of iris, ciliary body or anterior chamber right eye
H21.332	Parasitic cyst of iris, ciliary body or anterior chamber left eye
H21.333	Parasitic cyst of iris, ciliary body or anterior chamber bilateral
H21.82	Plateau iris syndrome (post-iridectomy) (postprocedural)
H27.111	Subluxation of lens, right eye
H27.112	Subluxation of lens, left eye
H27.113	Subluxation of lens, bilateral
H27.131	Posterior dislocation of lens, right eye
H27.132	Posterior dislocation of lens, left eye
H27.133	Posterior dislocation of lens, bilateral
H30.011	Focal chorioretinal inflammation, juxtapapillary, right eye
H30.012	Focal chorioretinal inflammation, juxtapapillary, left eye
H30.013	Focal chorioretinal inflammation, juxtapapillary, bilateral
H30.021	Focal chorioretinal inflammation of posterior pole, right eye
H30.022	Focal chorioretinal inflammation of posterior pole, left eye
H30.023	Focal chorioretinal inflammation of posterior pole, bilateral
H30.031	Focal chorioretinal inflammation, peripheral, right eye
H30.032	Focal chorioretinal inflammation, peripheral, left eye
H30.033	Focal chorioretinal inflammation, peripheral, bilateral
H30.041	Focal chorioretinal inflammation, macular or paramacular, right eye
H30.042	Focal chorioretinal inflammation, macular or paramacular, left eye
H30.043	Focal chorioretinal inflammation, macular or paramacular, bilateral
H30.111	Disseminated chorioretinal inflammation of posterior pole, right eye
H30.112	Disseminated chorioretinal inflammation of posterior pole, left eye
H30.113	Disseminated chorioretinal inflammation of posterior pole, bilateral
H30.121	Disseminated chorioretinal inflammation, peripheral right eye
H30.122	Disseminated chorioretinal inflammation, peripheral, left eye
H30.123	Disseminated chorioretinal inflammation, peripheral, bilateral
H30.131	Disseminated chorioretinal inflammation, generalized, right eye
H30.132	Disseminated chorioretinal inflammation, generalized, left eye
H30.133	Disseminated chorioretinal inflammation, generalized, bilateral
H30.141	Acute posterior multifocal placoid pigment epitheliopathy, right eye
H30.142	Acute posterior multifocal placoid pigment epitheliopathy, left eye

ICD-10-CM Code	Description
H30.143	Acute posterior multifocal placoid pigment epitheliopathy, bilateral
H30.21	Posterior cyclitis, right eye
H30.22	Posterior cyclitis, left eye
H30.23	Posterior cyclitis, bilateral
H30.811	Harada's disease, right eye
H30.812	Harada's disease, left eye
H30.813	Harada's disease, bilateral
H31.011	Macula scars of posterior pole (postinflammatory) (post-traumatic), right eye
H31.012	Macula scars of posterior pole (postinflammatory) (post-traumatic), left eye
H31.013	Macula scars of posterior pole (postinflammatory) (post-traumatic), bilateral
H31.021	Solar retinopathy, right eye
H31.022	Solar retinopathy, left eye
H31.023	Solar retinopathy, bilateral
H31.111	Age-related choroidal atrophy, right eye
H31.112	Age-related choroidal atrophy, left eye
H31.113	Age-related choroidal atrophy, bilateral
H31.121	Diffuse secondary atrophy of choroid, right eye
H31.122	Diffuse secondary atrophy of choroid, left eye
H31.123	Diffuse secondary atrophy of choroid, bilateral
H31.21	Choroideremia
H31.22	Choroidal dystrophy (central areolar) (generalized) (peripapillary)
H31.23	Gyrate atrophy, choroid
H31.29	Other hereditary choroidal dystrophy
H31.311	Expulsive choroidal hemorrhage, right eye
H31.312	Expulsive choroidal hemorrhage, left eye
H31.313	Expulsive choroidal hemorrhage, bilateral
H31.321	Choroidal rupture, right eye
H31.322	Choroidal rupture, left eye
H31.323	Choroidal rupture, bilateral
H31.411	Hemorrhagic choroidal detachment, right eye
H31.412	Hemorrhagic choroidal detachment, left eye
H31.413	Hemorrhagic choroidal detachment, bilateral
H31.421	Serous choroidal detachment, right eye
H31.422	Serous choroidal detachment, left eye
H31.423	Serous choroidal detachment, bilateral
H33.011	Retinal detachment with single break, right eye
H33.012	Retinal detachment with single break, left eye
H33.013	Retinal detachment with single break, bilateral
H33.021	Retinal detachment with multiple breaks, right eye
H33.022	Retinal detachment with multiple breaks, left eye

ICD-10-CM Code	Description
H33.023	Retinal detachment with multiple breaks, bilateral
H33.031	Retinal detachment with giant retinal tear, right eye
H33.032	Retinal detachment with giant retinal tear, left eye
H33.033	Retinal detachment with giant retinal tear, bilateral
H33.041	Retinal detachment with retinal dialysis, right eye
H33.042	Retinal detachment with retinal dialysis, left eye
H33.043	Retinal detachment with retinal dialysis, bilateral
H33.051	Total retinal detachment, right eye
H33.052	Total retinal detachment, left eye
H33.053	Total retinal detachment, bilateral
H33.111	Cyst of ora serrata, right eye
H33.112	Cyst of ora serrata, left eye
H33.113	Cyst of ora serrata, bilateral
H33.121	Parasitic cyst of retina, right eye
H33.122	Parasitic cyst of retina, left eye
H33.123	Parasitic cyst of retina, bilateral
H33.191	Other retinoschisis and retinal cysts, right eye
H33.192	Other retinoschisis and retinal cysts, left eye
H33.192	Other retinoschisis and retinal cysts, left eye
H33.193	Other retinoschisis and retinal cysts, bilateral
H33.21	Serous retinal detachment, right eye
H33.22	Serous retinal detachment, left eye
H33.23	Serous retinal detachment, bilateral
H33.311	Horseshoe tear of retina without detachment, right eye
H33.312	Horseshoe tear of retina without detachment, left eye
H33.313	Horseshoe tear of retina without detachment, bilateral
H33.321	Round hole, right eye
H33.322	Round hole, left eye
H33.323	Round hole, bilateral
H33.331	Multiple defects of retina without detachment, right eye
H33.332	Multiple defects of retina without detachment, left eye
H33.333	Multiple defects of retina without detachment, bilateral
H33.41	Traction detachment of retina, right eye
H33.42	Traction detachment of retina, left eye
H33.43	Traction detachment of retina, bilateral
H34.01	Transient retinal artery occlusion, right eye
H34.02	Transient retinal artery occlusion, left eye
H34.03	Transient retinal artery occlusion, bilateral
H34.11	Central retinal artery occlusion, right eye
H34.12	Central retinal artery occlusion, left eye
H34.13	Central retinal artery occlusion, bilateral
H34.211	Partial retinal artery occlusion, right eye
H34.212	Partial retinal artery occlusion, left eye

ICD-10-CM Code	Description
H34.213	Partial retinal artery occlusion, bilateral
H34.231	Retinal artery branch occlusion, right eye
H34.232	Retinal artery branch occlusion, left eye
H34.233	Retinal artery branch occlusion, bilateral
H34.8110	Central retinal vein occlusion, right eye, with macular edema
H34.8111	Central retinal vein occlusion, right eye, with retinal neovascularization
H34.8112	Central retinal vein occlusion, right eye, stable
H34.8120	Central retinal vein occlusion, left eye, with macular edema
H34.8121	Central retinal vein occlusion, left eye with retinal neovascularization
H34.8122	Central retinal vein occlusion, left eye, stable
H34.8130	Central retinal vein occlusion, bilateral, with macular edema
H34.8131	Central retinal vein occlusion, bilateral, with retinal neovascularization
H34.8132	Central retinal vein occlusion, bilateral, stable
H34.821	Venous engorgement, right eye
H34.822	Venous engorgement, left eye
H34.823	Venous engorgement, bilateral
H34.8310	Tributary (branch) retinal vein occlusion, right eye, with macular edema
H34.8311	Tributary (branch) retinal vein occlusion, right eye, with retinal neovascularization
H34.8312	Tributary (branch) retinal vein occlusion, right eye, stable
H34.8320	Tributary (branch) retinal vein occlusion, left eye, with macular edema
H34.8321	Tributary (branch) retinal vein occlusion, left eye, with retinal neovascularization
H34.8322	Tributary (branch) retinal vein occlusion, left eye, stable
H34.8330	Tributary (branch) retinal vein occlusion, bilateral, with macular edema
H34.8331	Tributary (branch) retinal vein occlusion, bilateral, with retinal neovascularization
H34.8332	Tributary (branch) retinal vein occlusion, bilateral, stable
H35.011	Changes in retinal vascular appearance, right eye
H35.012	Changes in retinal vascular appearance, left eye
H35.013	Changes in retinal vascular appearance, bilateral
H35.021	Exudative retinopathy, right eye
H35.022	Exudative retinopathy, left eye
H35.023	Exudative retinopathy, bilateral
H35.031	Hypertensive retinopathy, right eye
H35.032	Hypertensive retinopathy, left eye
H35.033	Hypertensive retinopathy, bilateral
H35.041	Retinal micro-aneurysms, unspecified, right eye
H35.042	Retinal micro-aneurysms, unspecified, left eye
H35.043	Retinal micro-aneurysms, unspecified, bilateral
H35.051	Retinal neovascularization, unspecified, right eye
H35.052	Retinal neovascularization, unspecified, left eye
H35.053	Retinal neovascularization, unspecified, bilateral

ICD-10-CM Code	Description
H35.061	Retinal vasculitis, right eye
H35.062	Retinal vasculitis, left eye
H35.063	Retinal vasculitis, bilateral
H35.071	Retinal telangiectasis, right eye
H35.072	Retinal telangiectasis, left eye
H35.073	Retinal telangiectasis, bilateral
H35.111	Retinopathy of prematurity, stage 0, right eye
H35.112	Retinopathy of prematurity, stage 0, left eye
H35.113	Retinopathy of prematurity, stage 0, bilateral
H35.121	Retinopathy of prematurity, stage 1, right eye
H35.122	Retinopathy of prematurity, stage 1, left eye
H35.123	Retinopathy of prematurity, stage 1, bilateral
H35.131	Retinopathy of prematurity, stage 2, right eye
H35.132	Retinopathy of prematurity, stage 2, left eye
H35.133	Retinopathy of prematurity, stage 2, bilateral
H35.141	Retinopathy of prematurity, stage 3, right eye
H35.142	Retinopathy of prematurity, stage 3, left eye
H35.143	Retinopathy of prematurity, stage 3, bilateral
H35.151	Retinopathy of prematurity, stage 4, right eye
H35.152	Retinopathy of prematurity, stage 4, left eye
H35.153	Retinopathy of prematurity, stage 4, bilateral
H35.161	Retinopathy of prematurity, stage 5, right eye
H35.162	Retinopathy of prematurity, stage 5, left eye
H35.163	Retinopathy of prematurity, stage 5, bilateral
H35.171	Retrolental fibroplasia, right eye
H35.172	Retrolental fibroplasia, left eye
H35.173	Retrolental fibroplasia, bilateral
H35.21	Other non-diabetic proliferative retinopathy, right eye
H35.22	Other non-diabetic proliferative retinopathy, left eye
H35.23	Other non-diabetic proliferative retinopathy, bilateral
H35.3111	Nonexudative age-related macular degeneration, right eye, early dry stage
H35.3112	Nonexudative age-related macular degeneration, right eye, intermediate dry stage
H35.3113	Nonexudative age-related macular degeneration, right eye, advanced atrophic without subfoveal involvement
H35.3114	Nonexudative age-related macular degeneration, right eye, advanced atrophic with subfoveal involvement
H35.3121	Nonexudative age-related macular degeneration, left eye, early dry stage
H35.3122	Nonexudative age-related macular degeneration, left eye, intermediate dry stage
H35.3123	Nonexudative age-related macular degeneration, left eye, advanced atrophic without subfoveal involvement

ICD-10-CM Code	Description
H35.3124	Nonexudative age-related macular degeneration, left eye, advanced atrophic with subfoveal involvement
H35.3131	Nonexudative age-related macular degeneration, bilateral, early dry stage
H35.3132	Nonexudative age-related macular degeneration, bilateral, intermediate dry stage
H35.3133	Nonexudative age-related macular degeneration, bilateral, advanced atrophic without subfoveal involvement
H35.3134	Nonexudative age-related macular degeneration, bilateral, advanced atrophic with subfoveal involvement
H35.3211	Exudative age-related macular degeneration, right eye with active choroidal neovascularization
H35.3212	Exudative age-related macular degeneration, right eye, with inactive choroidal neovascularization
H35.3213	Exudative age-related macular degeneration, right eye, with inactive scar
H35.3221	Exudative age-related macular degeneration, left eye with active choroidal neovascularization
H35.3222	Exudative age-related macular degeneration, left eye, with inactive choroidal neovascularization
H35.3223	Exudative age-related macular degeneration, left eye, with inactive scar
H35.3231	Exudative age-related macular degeneration, bilateral, with active choroidal neovascularization
H35.3232	Exudative age-related macular degeneration, bilateral, with inactive choroidal neovascularization
H35.3233	Exudative age-related macular degeneration, bilateral, with inactive scar
H35.33	Angioid streaks of macula
H35.341	Macular cyst, hole, or pseudohole, right eye
H35.342	Macular cyst, hole, or pseudohole, left eye
H35.343	Macular cyst, hole, or pseudohole, bilateral
H35.351	Cystoid macular degeneration, right eye
H35.352	Cystoid macular degeneration, left eye
H35.353	Cystoid macular degeneration, bilateral
H35.361	Drusen (degenerative) of macula, right eye
H35.362	Drusen (degenerative) of macula, left eye
H35.363	Drusen (degenerative) of macula, bilateral
H35.371	Puckering of macula, right eye
H35.372	Puckering of macula, left eye
H35.373	Puckering of macula, bilateral
H35.381	Toxic maculopathy, right eye
H35.382	Toxic maculopathy, left eye
H35.383	Toxic maculopathy, bilateral
H35.411	Lattice degeneration of retina, right eye
H35.412	Lattice degeneration of retina, left eye
H35.413	Lattice degeneration of retina, bilateral

ICD-10-CM Code	Description
H35.421	Microcystoid degeneration of retina, right eye
H35.422	Microcystoid degeneration of retina, left eye
H35.423	Microcystoid degeneration of retina, bilateral
H35.431	Paving stone degeneration of retina, right eye
H35.432	Paving stone degeneration of retina, left eye
H35.433	Paving stone degeneration of retina, bilateral
H35.441	Age-related reticular degeneration of retina, right eye
H35.442	Age-related reticular degeneration of retina, left eye
H35.443	Age-related reticular degeneration of retina, bilateral
H35.451	Secondary pigmentary degeneration, right eye
H35.452	Secondary pigmentary degeneration, left eye
H35.453	Secondary pigmentary degeneration, bilateral
H35.461	Secondary vitreoretinal degeneration, right eye
H35.462	Secondary vitreoretinal degeneration, left eye
H35.463	Secondary vitreoretinal degeneration, bilateral
H35.51	Vitreoretinal dystrophy
H35.52	Pigmentary retinal dystrophy
H35.53	Other dystrophies primarily involving the sensory retina
H35.54	Dystrophies primarily involving the retinal pigment epithelium
H35.61	Retinal hemorrhage, right eye
H35.62	Retinal hemorrhage, left eye
H35.63	Retinal hemorrhage, bilateral
H35.711	Central serous chorioretinopathy, right eye
H35.712	Central serous chorioretinopathy, left eye
H35.713	Central serous chorioretinopathy, bilateral
H35.721	Serous detachment of retinal pigment epithelium, right eye
H35.722	Serous detachment of retinal pigment epithelium, left eye
H35.723	Serous detachment of retinal pigment epithelium, bilateral
H35.731	Hemorrhagic detachment of retinal pigment epithelium, right eye
H35.732	Hemorrhagic detachment of retinal pigment epithelium, left eye
H35.733	Hemorrhagic detachment of retinal pigment epithelium, bilateral
H35.81	Retinal edema
H35.82	Retinal ischemia
H36.811	Nonproliferative sickle-cell retinopathy, right eye
H36.812	Nonproliferative sickle-cell retinopathy, left eye
H36.813	Nonproliferative sickle-cell retinopathy, bilateral
H36.821	Proliferative sickle-cell retinopathy, right eye
H36.822	Proliferative sickle-cell retinopathy, left eye
H36.823	Proliferative sickle-cell retinopathy, 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

ICD-10-CM Code	Description
H40.022	Open angle with borderline findings, high risk, left eye
H40.023	Open angle with borderline findings, high risk, bilateral
H40.031	Anatomical narrow angle, right eye
H40.032	Anatomical narrow angle, left eye
H40.033	Anatomical narrow angle, bilateral
H40.041	Steroid responder, right eye
H40.042	Steroid responder, left eye
H40.043	Steroid responder, bilateral
H40.051	Ocular hypertension, right eye
H40.052	Ocular hypertension, left eye
H40.053	Ocular hypertension, bilateral
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
H40.1111	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
H40.1121	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
H40.1131	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
H40.1211	Low-tension glaucoma, right eye, mild stage
H40.1212	Low-tension glaucoma, right eye, moderate stage
H40.1213	Low-tension glaucoma, right eye, severe stage
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
H40.1231	Low-tension glaucoma, bilateral, mild stage
H40.1232	Low-tension glaucoma, bilateral, moderate stage
H40.1233	Low-tension glaucoma, bilateral, severe stage
H40.1311	Pigmentary glaucoma, right eye, mild stage
H40.1312	Pigmentary glaucoma, right eye, moderate stage
H40.1313	Pigmentary glaucoma, right eye, severe stage
H40.1321	Pigmentary glaucoma, left eye, mild stage
H40.1322	Pigmentary glaucoma, left eye, moderate stage
H40.1323	Pigmentary glaucoma, left eye, severe stage
H40.1331	Pigmentary glaucoma, bilateral, mild stage
H40.1332	Pigmentary glaucoma, bilateral, moderate stage
H40.1333	Pigmentary glaucoma, bilateral, severe stage
H40.1411	Capsular glaucoma with pseudoexfoliation of lens, right eye, mild stage

ICD-10-CM Code	Description
H40.1412	Capsular glaucoma with pseudoexfoliation of lens, right eye, moderate stage
H40.1413	Capsular glaucoma with pseudoexfoliation of lens, right eye, severe stage
H40.1421	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
H40.1431	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
H40.151	Residual stage of open-angle glaucoma, right eye
H40.152	Residual stage of open-angle glaucoma, left eye
H40.153	Residual stage of open-angle glaucoma, bilateral
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
H40.2221	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
H40.2231	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
H40.231	Intermittent angle-closure glaucoma, right eye
H40.232	Intermittent angle-closure glaucoma, left eye
H40.233	Intermittent angle-closure glaucoma, bilateral
H40.241	Residual stage of angle-closure glaucoma, right eye
H40.242	Residual stage of angle-closure glaucoma, left eye
H40.243	Residual stage of angle-closure glaucoma, bilateral
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
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
H40.33X1	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
H40.41X1	Glaucoma secondary to eye inflammation, right eye, mild stage
H40.41X2	Glaucoma secondary to eye inflammation, right eye, moderate stage

ICD-10-CM Code	Description
H40.41X3	Glaucoma secondary to eye inflammation, right eye, severe stage
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
H40.43X1	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
H40.51X1	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
H40.52X1	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
H40.53X1	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
H40.61X1	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
H40.62X1	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
H40.63X1	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
H40.811	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
H40.821	Hypersecretion glaucoma, right eye
H40.822	Hypersecretion glaucoma, left eye
H40.823	Hypersecretion glaucoma, bilateral
H40.831	Aqueous misdirection, right eye
H40.832	Aqueous misdirection, left eye
H40.833	Aqueous misdirection, bilateral
H43.01	Vitreous prolapse, right eye
H43.02	Vitreous prolapse, left eye
H43.03	Vitreous prolapse, bilateral
H43.11	Vitreous hemorrhage, right eye
H43.12	Vitreous hemorrhage, left eye
H43.13	Vitreous hemorrhage, bilateral
H43.21	Crystalline deposits in vitreous body, right eye
H43.22	Crystalline deposits in vitreous body, left eye
H43.23	Crystalline deposits in vitreous body, bilateral

ICD-10-CM Code	Description
H43.311	Vitreous membranes and strands, right eye
H43.312	Vitreous membranes and strands, left eye
H43.313	Vitreous membranes and strands, bilateral
H43.391	Other vitreous opacities, right eye
H43.392	Other vitreous opacities, left eye
H43.393	Other vitreous opacities, bilateral
H43.811	Vitreous degeneration, right eye
H43.812	Vitreous degeneration, left eye
H43.813	Vitreous degeneration, bilateral
H43.821	Vitreomacular adhesion, right eye
H43.822	Vitreomacular adhesion, left eye
H43.823	Vitreomacular adhesion, bilateral
H44.011	Panophthalmitis (acute) right eye
H44.012	Panophthalmitis (acute) left eye
H44.013	Panophthalmitis (acute) bilateral
H44.021	Vitreous abscess (chronic) right eye
H44.022	Vitreous abscess (chronic) left eye
H44.023	Vitreous abscess (chronic) bilateral
H44.111	Panuveitis, right eye
H44.112	Panuveitis, left eye
H44.113	Panuveitis, bilateral
H44.121	Parasitic endophthalmitis unspecified, right eye
H44.122	Parasitic endophthalmitis unspecified, left eye
H44.123	Parasitic endophthalmitis unspecified, bilateral
H44.131	Sympathetic uveitis, right eye
H44.132	Sympathetic uveitis, left eye
H44.133	Sympathetic uveitis, bilateral
H44.21	Degenerative myopia, right eye
H44.22	Degenerative myopia, left eye
H44.23	Degenerative myopia, bilateral
H44.2A1	Degenerative myopia with choroidal neovascularization, right eye
H44.2A2	Degenerative myopia with choroidal neovascularization, left eye
H44.2A3	Degenerative myopia with choroidal neovascularization, bilateral
H44.2B1	Degenerative myopia with macular hole, right eye
H44.2B2	Degenerative myopia with macular hole, left eye
H44.2B3	Degenerative myopia with macular hole, bilateral
H44.2C1	Degenerative myopia with retinal detachment, right eye
H44.2C2	Degenerative myopia with retinal detachment, left eye
H44.2C3	Degenerative myopia with retinal detachment, bilateral
H44.2D1	Degenerative myopia with foveoschisis, right eye
H44.2D2	Degenerative myopia with foveoschisis, left eye
H44.2D3	Degenerative myopia with foveoschisis, bilateral.
H44.2E1	Degenerative myopia with other maculopathy, right eye

ICD-10-CM Code	Description
H44.2E2	Degenerative myopia with other maculopathy, left eye
H44.2E3	Degenerative myopia with other maculopathy, bilateral
H44.311	Chalcosis, right eye
H44.312	Chalcosis, left eye
H44.313	Chalcosis, bilateral
H44.321	Siderosis of eye, right eye
H44.322	Siderosis of eye, left eye
H44.323	Siderosis of eye, bilateral
H44.411	Flat anterior chamber hypotony of right eye
H44.412	Flat anterior chamber hypotony of left eye
H44.413	Flat anterior chamber hypotony of eye, bilateral
H44.421	Hypotony of right eye due to ocular fistula
H44.422	Hypotony of left eye due to ocular fistula
H44.423	Hypotony of eye due to ocular fistula, bilateral
H44.431	Hypotony of eye due to other ocular disorders, right eye
H44.432	Hypotony of eye due to other ocular disorders, left eye
H44.433	Hypotony of eye due to other ocular disorders, bilateral
H44.441	Primary hypotony of right eye
H44.442	Primary hypotony of left eye
H44.443	Primary hypotony of eye, bilateral
H44.511	Absolute glaucoma, right eye
H44.512	Absolute glaucoma, left eye
H44.513	Absolute glaucoma, bilateral
H44.521	Atrophy of globe, right eye
H44.522	Atrophy of globe, left eye
H44.523	Atrophy of globe, bilateral
H44.531	Leucocoria, right eye
H44.532	Leucocoria, left eye
H44.533	Leucocoria, bilateral
H44.611	Retained (old) magnetic foreign body in anterior chamber, right eye
H44.612	Retained (old) magnetic foreign body in anterior chamber, left eye
H44.613	Retained (old) magnetic foreign body in anterior chamber, bilateral
H44.621	Retained (old) magnetic foreign body in iris or ciliary body, right eye
H44.622	Retained (old) magnetic foreign body in iris or ciliary body, left eye
H44.623	Retained (old) magnetic foreign body in iris or ciliary body, bilateral
H44.631	Retained (old) magnetic foreign body in lens, right eye
H44.632	Retained (old) magnetic foreign body in lens, left eye
H44.633	Retained (old) magnetic foreign body in lens, bilateral
H44.641	Retained (old) magnetic foreign body in posterior wall of globe, right eye
H44.642	Retained (old) magnetic foreign body in posterior wall of globe, left eye
H44.643	Retained (old) magnetic foreign body in posterior wall of globe, bilateral
H44.651	Retained (old) magnetic foreign body in vitreous body, right eye
H44.652	Retained (old) magnetic foreign body in vitreous body, left eye

ICD-10-CM Code	Description
H44.653	Retained (old) magnetic foreign body in vitreous body, bilateral
H44.691	Retained (old) intraocular foreign body, magnetic, in other or multiple sites, right eye
H44.692	Retained (old) intraocular foreign body, magnetic, in other or multiple sites, left eye
H44.693	Retained (old) intraocular foreign body, magnetic, in other or multiple sites, bilateral
H44.711	Retained (nonmagnetic) (old) foreign body in anterior chamber, right eye
H44.712	Retained (nonmagnetic) (old) foreign body in anterior chamber, left eye
H44.713	Retained (nonmagnetic) (old) foreign body in anterior chamber, bilateral
H44.721	Retained (nonmagnetic) (old) foreign body in iris or ciliary body, right eye
H44.722	Retained (nonmagnetic) (old) foreign body in iris or ciliary body, left eye
H44.723	Retained (nonmagnetic) (old) foreign body in iris or ciliary body, bilateral
H44.731	Retained (nonmagnetic) (old) foreign body in lens, right eye
H44.732	Retained (nonmagnetic) (old) foreign body in lens, left eye
H44.733	Retained (nonmagnetic) (old) foreign body in lens, bilateral
H44.741	Retained (nonmagnetic) (old) foreign body in posterior wall of globe, right eye
H44.742	Retained (nonmagnetic) (old) foreign body in posterior wall of globe, left eye
H44.743	Retained (nonmagnetic) (old) foreign body in posterior wall of globe, bilateral
H44.751	Retained (nonmagnetic) (old) foreign body in vitreous body, right eye
H44.752	Retained (nonmagnetic) (old) foreign body in vitreous body, left eye
H44.753	Retained (nonmagnetic) (old) foreign body in vitreous body, bilateral
H44.791	Retained (old) intraocular foreign body, nonmagnetic, in other or multiple sites, right eye
H44.792	Retained (old) intraocular foreign body, nonmagnetic, in other or multiple sites, left eye
H44.793	Retained (old) intraocular foreign body, nonmagnetic, in other or multiple sites, bilateral
H44.811	Hemophthalmos, right eye
H44.812	Hemophthalmos, left eye
H44.813	Hemophthalmos, bilateral
H44.821	Luxation of globe right eye
H44.822	Luxation of globe left eye
H44.823	Luxation of globe bilateral
H46.01	Optic papillitis, right eye
H46.02	Optic papillitis, left eye
H46.03	Optic papillitis, bilateral
H46.11	Retrobulbar neuritis, right eye

ICD-10-CM Code	Description
H46.12	Retrobulbar neuritis, left eye
H46.13	Retrobulbar neuritis, bilateral
H46.2	Nutritional optic neuropathy
H46.3	Toxic optic neuropathy
H47.011	Ischemic optic neuropathy, right eye
H47.012	Ischemic optic neuropathy, left eye
H47.013	Ischemic optic neuropathy, bilateral
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
H47.031	Optic nerve hypoplasia, right eye
H47.032	Optic nerve hypoplasia, left eye
H47.033	Optic nerve hypoplasia, bilateral
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
H47.211	Primary optic atrophy, right eye
H47.212	Primary optic atrophy, left eye
H47.213	Primary optic atrophy, bilateral
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
H47.311	Coloboma of optic disc, right eye
H47.312	Coloboma of optic disc, left eye
H47.313	Coloboma of optic disc, bilateral
H47.321	Drusen of optic disc, right eye
H47.322	Drusen of optic disc, left eye
H47.323	Drusen of optic disc, bilateral
H47.331	Pseudopapilledema of optic disc, right eye
H47.332	Pseudopapilledema of optic disc, left eye
H47.333	Pseudopapilledema of optic disc, bilateral
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
H53.51	Achromatopsia
H53.52	Acquired color vision deficiency
H53.53	Deuteranomaly
H53.54	Protanomaly

ICD-10-CM Code	Description
H53.55	Tritanomaly
H59.031	Cystoid macular edema following cataract surgery, right eye
H59.032	Cystoid macular edema following cataract surgery, left eye
H59.033	Cystoid macular edema following cataract surgery, bilateral
Q14.0	Congenital malformation of vitreous humor
Q14.1	Congenital malformation of retina
Q14.2	Congenital malformation of optic disc
Q14.3	Congenital malformation of choroid
Q14.8	Other congenital malformations of posterior segment of eye
Q15.0	Congenital glaucoma
Q85.1	Tuberous sclerosis
Q87.42	Marfan's syndrome with ocular manifestations
S04.011A	Injury of optic nerve right side initial encounter
S04.011D	Injury of optic nerve right side subsequent encounter
S04.011S	Injury of optic nerve right side sequela
S04.012A	Injury of optic nerve left side initial encounter
S04.012D	Injury of optic nerve left side subsequent encounter
S04.012S	Injury of optic nerve left side sequela
S04.02XA	Injury of optic chiasm initial encounter
S04.02XD	Injury of optic chiasm subsequent encounter
S04.02XS	Injury of optic chiasm sequela
S04.031A	Injury of optic tract and pathways right eye initial encounter
S04.031D	Injury of optic tract and pathways right eye subsequent encounter
S04.031S	Injury of optic tract and pathways right eye sequela
S04.032A	Injury of optic tract and pathways left eye initial encounter
S04.032D	Injury of optic tract and pathways left eye subsequent encounter
S04.032S	Injury of optic tract and pathways left eye sequela
S04.041A	Injury of visual cortex right eye initial encounter
S04.041D	Injury of visual cortex right eye subsequent encounter
S04.041S	Injury of visual cortex right eye sequela
S04.042A	Injury of visual cortex left eye initial encounter
S04.042D	Injury of visual cortex left eye subsequent encounter
S04.042S	Injury of visual cortex left eye sequela
S05.41XA	Penetrating wound of orbit with or without foreign body, right eye, initial encounter
S05.41XD	Penetrating wound of orbit with or without foreign body, right eye, subsequent encounter
S05.41XS	Penetrating wound of orbit with or without foreign body, right eye, sequela
S05.42XA	Penetrating wound of orbit with or without foreign body, left eye, initial encounter
S05.42XD	Penetrating wound of orbit with or without foreign body, left eye, subsequent encounter

ICD-10-CM Code	Description
S05.42XS	Penetrating wound of orbit with or without foreign body, left eye, sequela
S05.51XA	Penetrating wound with foreign body of right eyeball, initial encounter
S05.51XD	Penetrating wound with foreign body of right eyeball, subsequent encounter
S05.51XS	Penetrating wound with foreign body of right eyeball, sequela
S05.52XA	Penetrating wound with foreign body of left eyeball, initial encounter
S05.52XD	Penetrating wound with foreign body of left eyeball, subsequent encounter
S05.52XS	Penetrating wound with foreign body of left eyeball, sequela
S05.61XA	Penetrating wound without foreign body of right eyeball, initial encounter
S05.61XD	Penetrating wound without foreign body of right eyeball, subsequent encounter
S05.61XS	Penetrating wound without foreign body of right eyeball, sequela
S05.62XA	Penetrating wound without foreign body of left eyeball, initial encounter
S05.62XD	Penetrating wound without foreign body of left eyeball, subsequent encounter
S05.62XS	Penetrating wound without foreign body of left eyeball, sequela
T37.2X1A	Poisoning by antimalarials and drugs acting on other blood protozoa, accidental (unintentional), initial encounter
T37.2X1D	Poisoning by antimalarials and drugs acting on other blood protozoa, accidental (unintentional), subsequent encounter
T37.2X1S	Poisoning by antimalarials and drugs acting on other blood protozoa, accidental (unintentional), sequela
T37.2X2A	Poisoning by antimalarials and drugs acting on other blood protozoa, intentional self-harm, initial encounter
T37.2X2D	Poisoning by antimalarials and drugs acting on other blood protozoa, intentional self-harm, subsequent encounter
T37.2X2S	Poisoning by antimalarials and drugs acting on other blood protozoa, intentional self-harm, sequela
T37.2X3A	Poisoning by antimalarials and drugs acting on other blood protozoa, assault, initial encounter
T37.2X3D	Poisoning by antimalarials and drugs acting on other blood protozoa, assault, subsequent encounter
T37.2X3S	Poisoning by antimalarials and drugs acting on other blood protozoa, assault, sequela
T37.2X4A	Poisoning by antimalarials and drugs acting on other blood protozoa, undetermined, initial encounter
T37.2X4D	Poisoning by antimalarials and drugs acting on other blood protozoa, undetermined, subsequent encounter
T37.2X4S	Poisoning by antimalarials and drugs acting on other blood protozoa, undetermined, sequela

ICD-10-CM Code	Description
Z09 ¹	Encounter for follow-up examination after completed treatment for conditions other than malignant neoplasm
Z79.899 ¹	Other long term (current) drug therapy
Z85.840	Personal history of malignant neoplasm of eye

Reviews, Revisions, and Approvals	Date	Approval Date
Original approval date	12/2019	12/2019
Converted to new template	05/2020	06/2020
Annual Review; Updated references	12/2020	12/2020
Annual Review; Added conditions under which fundus photography is not considered medically indicated; Updated ICD-10 diagnosis codes to include penetrating orbital wounds and parasitic retinal cysts	12/2021	01/2022
Annual Review	11/2022	12/2022
Updated medically indicated diagnoses to include new ICD-10 codes for sickle-cell retinopathy.	11/2023	12/2023
Annual Review	11/2024	12/2024

References

1. American Academy of Ophthalmology Retina Panel. Preferred Practice Pattern® Guidelines. Age-Related Macular Degeneration. San Francisco, CA: American Academy of Ophthalmology; 2019, <https://www.aao.org/preferred-practice-pattern/age-related-macular-degeneration-ppp>
2. American Academy of Ophthalmology Retina Panel. Preferred Practice Pattern® Guidelines. Diabetic Retinopathy PPP 2019. San Francisco, CA: American Academy of Ophthalmology; 2019, <https://www.aao.org/preferred-practice-pattern/diabetic-retinopathy-ppp>
3. American Academy of Ophthalmology Retina Panel. Preferred Practice Pattern® Guidelines. Retinal Vein Occlusions PPP 2019. San Francisco, CA: American Academy of Ophthalmology; 2019, <https://www.aao.org/preferred-practice-pattern/retinal-vein-occlusions-ppp>
4. American Academy of Ophthalmology Retina Panel. Preferred Practice Pattern® Guidelines. Retinal and Ophthalmic Artery Occlusions PPP 2019. San Francisco, CA: American Academy of Ophthalmology; 2019, <https://www.aao.org/preferred-practice-pattern/retinal-ophthalmic-artery-occlusions-ppp>
5. Panwar N, Huang P, Lee J, et al. Fundus Photography in the 21st Century--A Review of Recent Technological Advances and Their Implications for Worldwide Healthcare. *Telemed J E Health*. 2016;22(3):198-208.
6. Abramoff MD, Garvin MK, Sonka M. Retinal imaging and image analysis. *IEEE Rev Biomed Eng*. 2010;3:169-208.

¹ Must be used in conjunction with the appropriate systemic disease

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

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Note: For Medicaid members, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <https://www.cms.gov> for additional information.

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