Clinical Policy: Ophthalmic Biometry

Reference Number: OC.UM.CP.0045
Last Review Date: 11/2022

Coding Implications
Revision Log

See Important Reminder at the end of this policy for important regulatory and legal information.

Description

Optical biometers use infrared light to perform analyses that produce similar lens calculations as A-scan ultrasonography and keratometry. This policy describes the medical necessity requirements for ophthalmic biometry.

Policy/Criteria

I. It is the policy of health plans affiliated with Envolve Vision, Inc.® (Envolve) that ophthalmic biometry is **medically necessary** for preoperative determination of axial length of the eye for the purpose of calculating appropriate intraocular lens power in a patient undergoing cataract surgery.

Background

Optical coherence biometry (CPT code 92136) is an ophthalmic diagnostic test that measures the curvature of the cornea and the depth of the anterior chamber in addition to the axial length of the eye, without ultrasound. This is done to calculate the correct intraocular lens (IOL) power for implantation in order to come as close as possible to the target refraction after surgery. The procedure is non-invasive and uses partial coherence interferometry or birefringent light, as opposed to sound, to perform the imaging. Generally, it is expected that the provider performing the cataract surgery will perform optical coherence biometry or an A-Scan.

Optical biometers use infrared light to perform analyses which produce similar lens calculations as A-scan ultrasonography and keratometry. They are different from traditional A-scan ultrasonography because they use infrared light to calculate axial length, keratometry and anterior chamber depth, all in one machine. The IOL master by Carl Zeiss Meditec is an optical biometer that was approved in March 2000. It measures the distance from the corneal vertex to the retinal pigment epithelium using a patented interference optical method called partial coherence interferometry. The measurement determines refractive axial length because the patient is fixating on a fixation light and the measurement is thus made to the center of the macula. An internal statistically confirmed algorithm which is calibrated against another ultra-high resolution biometer calculates the distance to the retina, providing the equivalent of an immersion A-scan ultrasonography axial length, albeit more precise.

In addition to the axial length measurements, corneal curvature and anterior chamber depth can also be measured with the IOL Master. Both of these measurements are determined by measuring the distance between reflected light images. Corneal curvature represents the distance between the light images projected on the cornea and anterior chamber depth represents the distance between the lens and the cornea with a lateral slit beam illumination.

Optical biometry has several advantages over traditional immersion and applanation A-scan ultrasonography. Optical biometers have lower technician dependence and are rapid tests. In addition, the biometers do not have contact with the cornea, which reduces the variability caused by corneal compression that occurs in applanation A-scan. In addition, the biometer measures refractive axial

length not anatomic axial length (which measures from the cornea to the posterior pole nasal to the foveola and thus is not as accurate). The inclusion of the thickness of the retina in the measurement (the interferometry measures to Bruch's membrane) also increases precision compared to ultrasound which measures to the front of the retina, necessitating a standardized value of 200 microns to be added to the axial length. As a result of these factors, it offers more precise and reproducible IOL measurements than A-scans and keratometry. It is not considered medically reasonable or necessary to perform both an A-scan and optical biometry.

A-scan (CPT code 76519) uses ultrasonography, or echography, to image intraocular anatomy to determine the axial length of the eye (from the cornea to the retina) for calculating the power required for an intraocular lens implant. High-frequency sound waves are introduced into the eye in a straight line by a transducer placed on the eye. As the waves reflect off the eye tissue, they are also picked up by the same transducer, converted to electrical pulses and displayed on screen. The resulting single-dimensional image is composed of vertical spikes that vary according to the tissue density.

Coding Implications

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CPT® Codes	Description
76519	Ophthalmic biometry by ultrasound echography, A-scan; with intraocular lens power calculation
92136	Ophthalmic biometry by partial coherence interferometry with intraocular lens power calculation

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

+ Indicates a code requiring an additional character

ICD-10-CM Code	Description
E08.36	Diabetes mellitus due to underlying condition with diabetic cataract
E09.36	Drug or chemical induced diabetes mellitus with diabetic cataract
E10.36	Type 1 diabetes mellitus with diabetic cataract
E11.36	Type 2 diabetes mellitus with diabetic cataract
E13.36	Other specified diabetes mellitus with diabetic cataract
H25.011	Cortical age-related cataract, right eye
H25.012	Cortical age-related cataract, left eye

ICD-10-CM Code	Description
H25.013	Cortical age-related cataract, bilateral
H25.031	Anterior subcapsular polar age-related cataract, right eye
H25.032	Anterior subcapsular polar age-related cataract, left eye
H25.033	Anterior subcapsular polar age-related cataract, bilateral
H25.041	Posterior subcapsular polar age-related cataract, right eye
H25.042	Posterior subcapsular polar age-related cataract, left eye
H25.043	Posterior subcapsular polar age-related cataract, bilateral
H25.11	Age-related nuclear cataract, right eye
H25.12	Age-related nuclear cataract, left eye
H25.13	Age-related nuclear cataract, bilateral
H25.21	Age-related cataract, morgagnian type, right eye
H25.22	Age-related cataract, morgagnian type, left eye
H25.23	Age-related cataract, morgagnian type, bilateral
H25.811	Combined forms of age-related cataract, right eye
H25.812	Combined forms of age-related cataract, left eye
H25.813	Combined forms of age-related cataract, bilateral
H26.011	Infantile and juvenile cortical, lamellar, or zonular cataract, right eye
H26.012	Infantile and juvenile cortical, lamellar, or zonular cataract, left eye
H26.013	Infantile and juvenile cortical, lamellar, or zonular cataract, bilateral
H26.031	Infantile and juvenile nuclear cataract, right eye
H26.032	Infantile and juvenile nuclear cataract, left eye
H26.033	Infantile and juvenile nuclear cataract, bilateral
H26.041	Anterior subcapsular polar infantile and juvenile cataract, right eye
H26.042	Anterior subcapsular polar infantile and juvenile cataract, left eye
H26.043	Anterior subcapsular polar infantile and juvenile cataract, bilateral
H26.051	Posterior subcapsular polar infantile and juvenile cataract, right eye
H26.052	Posterior subcapsular polar infantile and juvenile cataract, left eye
H26.053	Posterior subcapsular polar infantile and juvenile cataract, bilateral
H26.061	Combined forms of infantile and juvenile cataract, right eye
H26.062	Combined forms of infantile and juvenile cataract, left eye
H26.063	Combined forms of infantile and juvenile cataract, bilateral
H26.111	Localized traumatic opacities, right eye
H26.112	Localized traumatic opacities, left eye
H26.113	Localized traumatic opacities, bilateral
H26.121	Partially resolved traumatic cataract, right eye

ICD-10-CM Code	Description
H26.122	Partially resolved traumatic cataract, left eye
H26.123	Partially resolved traumatic cataract, bilateral
H26.131	Total traumatic cataract, right eye
H26.132	Total traumatic cataract, left eye
H26.133	Total traumatic cataract, bilateral
H26.211	Cataract with neovascularization, right eye
H26.212	Cataract with neovascularization, left eye
H26.213	Cataract with neovascularization, bilateral
H26.221	Cataract secondary to ocular disorders (degenerative) (inflammatory), right eye
H26.222	Cataract secondary to ocular disorders (degenerative) (inflammatory), left eye
H26.223	Cataract secondary to ocular disorders (degenerative) (inflammatory), bilateral
H26.31	Drug-induced cataract, right eye
H26.32	Drug-induced cataract, left eye
H26.33	Drug-induced cataract, bilateral
H27.01	Aphakia, right eye
H27.02	Aphakia, left eye
H27.03	Aphakia, bilateral
H27.111	Subluxation of lens, right eye
H27.112	Subluxation of lens, left eye
H27.113	Subluxation of lens, bilateral
H27.121	Anterior dislocation of lens, right eye
H27.122	Anterior dislocation of lens, left eye
H27.123	Anterior dislocation 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
Q12.0	Congenital cataract
Q12.3	Congenital aphakia
Q12.4	Spherophakia
T85.21XA	Breakdown (mechanical) of intraocular lens, initial encounter
T85.21XD	Breakdown (mechanical) of intraocular lens, subsequent encounter
T85.21XS	Breakdown (mechanical) of intraocular lens, sequela
T85.22XA	Displacement of intraocular lens, initial encounter
T85.22XD	Displacement of intraocular lens, subsequent encounter
T85.22XS	Displacement of intraocular lens, sequela

ICD-10-CM Code	Description
Z96.1	Presence of intraocular lens

Reviews, Revisions, and Approvals	Date	Approval Date
Annual Review	12/2019	12/2019
Converted to new template	07/2020	10/2020
Annual Review, Updated references	12/2020	12/2020
Annual Review	12/2021	12/2021
Annual Review	11/2022	11/2022

References

1. Rocha KM, Krueger RR. Ophthalmic Biometry, Ultrasound Clinics, Volume 3, Issue 2, April 2008, Pages 195-200.
2. Ademola-Popoola DS, Nzeh DA, Saka SE, Olokoba LB, Obajolowo TS. Comparison of ocular biometry measurements by applanation and immersion A-scan techniques. J Curr Ophthalmol. 2016;27(3-4):110-114. Published 2016 Feb 9.
3. Li Y, Li HX, Liu YC, et al. Comparison of immersion ultrasound and low coherence reflectometry for ocular biometry in cataract patients. *Int J Ophthalmol*. 2018;11(6):966-969. Published 2018 Jun 18.

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 Envolve Vision, Inc., 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.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom the Health Plan has no control or right of control. Providers are not agents or employees of the Health Plan.

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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 http://www.cms.gov for additional information.