Policy Number	OTH903.031
Policy Effective Date	05/01/2026

Corneal Hysteresis

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None

Disclaimer

Carefully check state regulations and/or the member contract.
Each benefit plan, summary plan description or contract defines which services are covered, which services are excluded, and which services are subject to dollar caps or other limitations, conditions or exclusions. Members and their providers have the responsibility for consulting the member's benefit plan, summary plan description or contract to determine if there are any exclusions or other benefit limitations applicable to this service or supply. **If there is a discrepancy between a Medical Policy and a member's benefit plan, summary plan description or contract, the benefit plan, summary plan description or contract will govern.**

Coverage

All corneal hysteresis assessments as a means of risk assessment or monitoring for progression of ophthalmic disease activity **are considered experimental, investigational and/or unproven**.

Policy Guidelines

None.

Description

Hysteresis is a measure of resistance to deformation to an applied force. Corneal hysteresis (CH) is a measure of the viscoelastic dampening property of the cornea and is postulated to be a surrogate for the viscoelastic dampening properties of the posterior sclera and lamina cribrosa, through which the retinal ganglion cell axons pass as they exit the eye. It has been theorized that glaucomatous damage to the retinal ganglion cell axons occurs at the lamina cribrosa and that viscoelastic differences in the lamina cribrosa are responsible for differential

effects of intraocular pressure within these tissues and contribute to the susceptibility to intraocular pressure (IOP)-mediated damage. Studies show an association between a lower CH and glaucoma or glaucoma risk, and it has been proposed as a risk stratification tool for use in the treatment of glaucoma, glaucoma suspect, and ocular hypertension. Corneal hysteresis is not itself a modifiable risk factor for glaucoma but theoretically could signal the need for more aggressive IOP reduction. (1)

Regulatory Status
The Ocular Response Analyzer (ORA) (Reichert, Inc., Buffalo, NY) is a non-contact tonometer that measures CH. The ORA received clearance through the U.S. Food and Drug Administration (FDA) 510(k) process in January 2004 for the intended use of measurement of IOP and the biomechanical response of the corneal "for the purpose of aiding in the diagnosis and monitoring of glaucoma." (2) This device measures CH by measuring the difference of 2 applanation event pressures taken during the inward and outward movement of the cornea following delivery of a metered pulse of air. Product code: HKX

NOTE: This section is to be used for informational purposes only. FDA approval alone is not a basis for coverage.

Rationale

This policy is based on a review of coverage guidance from the Centers for Medicare and Medicaid Services (CMS) specific to corneal hysteresis. (1)

Centers for Medicare and Medicaid Services (CMS)
While Medicare does not currently have a national coverage determination (NCD) on corneal hysteresis, multiple local coverage determinations (LCDs) have been published, including L38211 (last revised 2025). (1) Under the section titled "Coverage Indications, Limitations, and/or Medical Necessity", the LCD indicates that "this is a NON-coverage policy for all corneal hysteresis assessments as a means of risk assessment or monitoring for progression of ophthalmic disease activity."

The LCD goes on to state that "…CH [corneal hysteresis] is promising as a risk assessment tool in the diagnosis and management of glaucoma or corneal pathology. However, while the body of evidence is large, the overall quality is low. The studies are relatively small, observational, often confounded by lack of treatment control, uniformly citing simple correlations, precluding cause-and-effect conclusions. Not only are there no Level I studies, but none of the reviewed studies demonstrate that CH measurement alters clinical management and improves clinical outcomes. A wide array of tests are accepted for detection and monitoring of glaucoma (tonometry for IOP, perimetry to assess visual field, ophthalmoscopy to detect a glaucomatous optic nerve head [ONH] and retinal nerve fiber layer [RNFL] changes, and pachymetry for central corneal thickness [CCT]). It is still unclear whether CH provides useful additional information, much less its optimal role in any diagnostic, prognostic, and treatment algorithm. Randomized controlled

trials (RCTs) that compare outcomes in patients whose treatment is selected based on CH are needed to determine definitive patient selection criteria and clinical utility."

Coding

Procedure codes on Medical Policy documents are included **only** as a general reference tool for each policy. **They may not be all-inclusive.**

The presence or absence of procedure, service, supply, or device codes in a Medical Policy document has no relevance for determination of benefit coverage for members or reimbursement for providers. **Only the written coverage position in a Medical Policy should be used for such determinations.**

Benefit coverage determinations based on written Medical Policy coverage positions must include review of the member's benefit contract or Summary Plan Description (SPD) for defined coverage vs. non-coverage, benefit exclusions, and benefit limitations such as dollar or duration caps.

CPT Codes	92145
HCPCS Codes	None

*Current Procedural Terminology (CPT®) ©2025 American Medical Association: Chicago, IL.

References

Local Coverage Determination:

1. Centers for Medicare and Medicaid Services. Local Coverage Determination for Corneal Hysteresis (L38211) (July 31, 2025). Available at <https://www.cms.gov> (accessed March 10, 2026).

Other:

2. U.S. Food and Drug Administration (FDA). 510(k) Summary: Ocular Response Analyzer (K032799) (2004). Available at <https://www.accessdata.fda.gov> (accessed April 6, 2026).

Centers for Medicare and Medicaid Services (CMS)

The information contained in this section is for informational purposes only. HCSC makes no representation as to the accuracy of this information. It is not to be used for claims adjudication for HCSC Plans.

The Centers for Medicare and Medicaid Services (CMS) does not have a national Medicare coverage position. Coverage may be subject to local carrier discretion.

A national coverage position for Medicare may have been developed since this medical policy document was written. See Medicare's National Coverage at <https://www.cms.hhs.gov>.

Policy History/Revision

Date	Description of Change

05/01/2026	Document updated. Coverage unchanged. No new references added; some updated/removed.
11/15/2025	Document updated. The following change was made to Coverage: Revised the experimental, investigational and/or unproven statement. Added all new references; others updated/removed.
02/15/2025	Document updated with literature review. Coverage unchanged. Added references 21-23.
03/15/2024	Reviewed. No changes.
05/01/2023	Document updated with literature review. Coverage unchanged. Added the following references: 17, 19, and 20.
07/15/2022	Reviewed. No changes.
01/15/2022	Document updated with literature review. Coverage unchanged. Added the following references: 11-13, and 17-19; others updated or deleted.
10/15/2020	Reviewed. No changes.
01/15/2020	Document updated with literature review. Coverage unchanged. Added references 11-13.
07/15/2018	Reviewed. No changes.
07/15/2017	Document updated with literature review. Coverage unchanged.
09/01/2016	Reviewed. No changes.
01/01/2015	New medical document. Corneal hysteresis (CH) determination by air impulse stimulation for the diagnosis and management of glaucoma and corneal disorders is considered experimental, investigational and/or unproven.