

# MEDICAL POLICY

MEDICAL POLICY DETAILS	
Medical Policy Title	CORNEAL ULTRASOUND PACHYMETRY
Policy Number	9.01.07
Category	Technology Assessment
Effective Date	08/21/03
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Product Disclaimer	<ul style="list-style-type: none"> <li>• If a product excludes coverage for a service, it is not covered, and medical policy criteria do not apply.</li> <li>• If a commercial product (including an Essential Plan product) or a Medicaid product covers a specific service, medical policy criteria apply to the benefit.</li> <li>• If a Medicare product covers a specific service, and there is no national or local Medicare coverage decision for the service, medical policy criteria apply to the benefit.</li> </ul>

## POLICY STATEMENT

Based upon our criteria and assessment of peer-reviewed literature, corneal pachymetry is considered **medically appropriate** for the following:

- I. In the diagnosis of Fuch's endothelial dystrophy;
- II. In the diagnosis of bullous keratopathy;
- III. In the diagnosis of corneal edema;
- IV. In the diagnosis of Posterior polymorphous dystrophy;
- V. Patients with suspected glaucoma (e.g., elevated intraocular pressure, enlarged vertical cup-disc ratio); or
- VI. Patients with known glaucoma.

## POLICY GUIDELINES

- I. Coverage of corneal pachymetry for those medically appropriate indications listed above requires that there is a reasonable expectation that the outcome of corneal pachymetry will impact clinical decision making in the medical management of the patient.
- II. Corneal pachymetry will be allowed once per lifetime when performed due to suspected glaucoma or known glaucoma.
- III. Corneal pachymetry is considered inclusive when performed as part of the preoperative or postoperative evaluation of a patient undergoing an approved ophthalmologic surgery, such as a corneal transplant.
- IV. Corneal pachymetry is **ineligible for coverage** when performed as part of the pre- or postoperative evaluation of a patient undergoing a non-covered ophthalmologic refractive surgery, such as elective LASIK.

## DESCRIPTION

Corneal thickness is an important indication of the health and function of the cornea. Measurement of corneal thickness is useful for the diagnosis of certain corneal diseases, in determining the effectiveness of specific ophthalmologic medical and surgical treatments such as corneal transplant, penetrating keratoplasty and refractive surgeries and in the evaluation of contact lens wear.

Central corneal thickness has been found to be of predictive value for the development of glaucoma in patients with ocular hypertension. Several techniques have been developed for the clinical measurement of corneal thickness with ultrasound pachymetry currently the most commonly used method as it provides a rapid, precise measurement.

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**RATIONALE**

Studies have found that corneal thickness is an important indication of corneal function and is routinely determined in several clinical settings. Its evaluation reflects the endothelial function, offers insight to the cornea’s adaptation in contact lens wear, is of postoperative prognostic value after penetrating keratoplasty and can reveal local or systemic metabolic disorders. Corneal pachymetry is an essential measurement prior to refractive surgical procedures such as LASIK as this measurement ascertains whether the cornea will retain enough central tissue thickness to prevent ectasia.

Although there are several techniques and instruments used to measure corneal thickness, ultrasound pachymetry is most frequently utilized due to its ease of use, portability, accuracy and reproducibility.

The Ocular Hypertension Treatment Study (OHTS) is the first large scale study to demonstrate that lowering ocular pressure with topical medications can safely and effectively delay and possibly prevent primary open angle glaucoma (POAG). The OHTS also attempted to identify patients who would most likely benefit from treatment. The study found that the factor that was most predictive was the presence of a thin central cornea. Patients with a central corneal thickness of 555um or less had a 3-fold greater risk of developing POAG than those with a central corneal thickness of 588 um or greater. Central corneal thickness appears to be a powerful predictor of the progression from ocular hypertension to POAG. The study also found that older age, larger initial cup- to- disc ratio and a higher intraocular pressure (IOP) were predictive of glaucoma. Repeat measurements of corneal thickness for glaucoma are not necessary unless the patient has corneal diseases or surgery affecting corneal thickness. Changes in corneal thickness with age are minimal in adulthood, with estimated changes of 0.006 to 0.015 mm per decade.

Because the thickness of the cornea can impact the measurement of IOP (when the corneal thickness is reduced, the measured pressure underestimates the actual intraocular pressure), corneal pachymetry can be helpful in patients with known glaucoma whose visual fields are worsening despite reasonable intraocular pressure.

**CODES**

- *Eligibility for reimbursement is based upon the benefits set forth in the member’s subscriber contract.*
- ***CODES MAY NOT BE COVERED UNDER ALL CIRCUMSTANCES. PLEASE READ THE POLICY AND GUIDELINES STATEMENTS CAREFULLY.***
- *Codes may not be all inclusive as the AMA and CMS code updates may occur more frequently than policy updates.*

**CPT Codes**

<b>Code</b>	<b>Description</b>
76514	Ophthalmic ultrasound, diagnostic; corneal pachymetry, unilateral or bilateral (determination of corneal thickness)

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**HCPCS Codes**

<b>Code</b>	<b>Description</b>
	No specific code(s)

**ICD10 Codes**

<b>Code</b>	<b>Description</b>
H18.10-H18.13	Bullous keratopathy (code range)
H18.20	Unspecified corneal edema
H18.51	Endothelial corneal dystrophy
H18.59	Other hereditary corneal dystrophies
H40.00-H40.069	Glaucoma suspect (code range)
H40.10x0-H40.10x4	Unspecified open-angle glaucoma (code range)

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Code	Description
H40.11x0-H40.11x4	Primary open-angle glaucoma (code range)
H40.1210-H40.1294	Low-tension glaucoma (code range)
H40.1310-H40.1394	Pigmentary glaucoma (code range)
H40.141-H40.1494	Capsular glaucoma with pseudoexfoliation of lens (code range)
H40.1510-H40.1594	Residual stage of open-angle glaucoma (code range)
H40.20x0-H40.249	Angle-closure glaucoma (code range)
H40.30x0-H40.33x4	Glaucoma secondary to eye trauma (code range)
H40.40x0-H40.43x4	Glaucoma secondary to eye inflammation (code range)
H40.50x0-H40.53x4	Glaucoma secondary to other eye disorders (code range)
H40.60x0-H40.63x4	Glaucoma secondary to drugs (code range)
H40.811-H40.819	Glaucoma with increased episcleral venous pressure (code range)
H40.821-H40.829	Hypersecretion glaucoma (code range)
H40.831-H40.839	Aqueous misdirection (code range)
H40.89	Other specified glaucoma
H40.9	Unspecified glaucoma
H42	Glaucoma in diseases classified elsewhere
Q15.0	Congenital glaucoma

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\*Key Article

### **KEY WORDS**

Corneal thickness, Pachymetry

### **CMS COVERAGE FOR MEDICARE PRODUCT MEMBERS**

There is currently a Local Coverage Determination (LCD) for corneal pachymetry. Please refer to the following LCD website for Medicare Members: <https://www.cms.gov/medicare-coverage-database/license/cpt-license.aspx?from=~/overview-and-quick-search.aspx&npage=/medicare-coverage-database/details/lcd-details.aspx&LCDId=33630&ver=16&CoverageSelection=Local&ArticleType=All&PolicyType=Final&s=New+York++Entire+State&KeyWord=corneal+pachymetry&KeyWordLookUp=Title&KeyWordSearchType=And&bc=gAAAACA AAAA&>