Medical Coverage Policy | Corneal Topography/Computer-Assisted Corneal Topography/Photokeratoscopy

EFFECTIVE DATE: 04|01|2025
POLICY LAST REVIEWED: 10|01|2025

OVERVIEW

Computer-assisted corneal topography (also called photokeratoscopy or videokeratography) provides a quantitative measure of corneal curvature. Measurement of corneal topography is being evaluated to aid the diagnosis of and follow-up for corneal disorders such as keratoconus, difficult contact lens fits, and pre- and postoperative assessment of the cornea, most commonly after refractive surgery.

MEDICAL CRITERIA

Not applicable

PRIOR AUTHORIZATION

Not applicable

POLICY STATEMENT

Medicare Advantage Plans and Commercial Products

Computerized corneal topography is considered medically necessary under any of the following conditions, and when filed with one of the covered ICD-10 codes listed under the Coding section:

- Pre-operative evaluation of irregular astigmatism for intraocular lens power determination with cataract surgery
- Monocular diplopia
- Diagnosis of early keratoconus
- Post-surgical or post-traumatic astigmatism, measuring at a minimum of 3.5 diopters
- Suspected irregular astigmatism based on retinoscopic streak or conventional keratometry
- Post-penetrating keratoplasty surgery
- Post-surgical or post-traumatic irregular astigmatism
- Certain corneal dystrophies
- Complications of transplanted cornea
- Post-traumatic corneal scarring
- Pterygium and/or corneal ectasia that cause visual impairment

Corneal topography considered medically necessary for pre-operative cataract assessment only if the individual has irregular astigmatism. Its use for this purpose should be rare.

Corneal topography is considered medically necessary only when the diagnosis of monocular diplopia is thought to be caused by a corneal irregularity.

Corneal topography is covered when the medically necessary criteria above is met, only if the results will assist in defining further treatment. It is not covered for Medicare Advantage Plans and not medically necessary for Commercial Products for routine follow-up testing.

Repeat testing is only indicated if a change of vision is reported in connection with one of the above listed conditions.

Services performed for screening purposes or in the absence of associated signs, symptoms, illness, or injury as indicated above, are not covered for Medicare Advantage Plans and not medically necessary for Commercial Products.

Corneal topography is not covered for Medicare Advantage Plans and not medically necessary for Commercial Products if it is performed pre- or post-operatively in relation to a non-covered procedure (i.e., refractive eye surgery).

Corneal topography is not covered for Medicare Advantage Plans and not medically necessary for Commercial Products for the management of individuals with the following indications (not an all-inclusive list) because computerized corneal topography has not been shown to alter the clinical management of these conditions as the evidence is insufficient to determine the effects of the technology on health outcomes:

- Acanthomoeba keratitis
- Accommodative disorders
- Band keratopathy
- Diplopia
- Epithelial ingrowth following laser in situ keratomileusis (LASIK)
- Interstitial keratitis
- Kerato-conjunctivitis sicca
- Lattice degeneration of retina
- Lens subluxation (e.g., in Marfan syndrome)
- Limbal dermoids
- Microphthalmia
- Neurotrophic keratoconjunctivitis
- Nodular degeneration of the cornea (e.g., Salzmann's corneal degeneration)
- Ocular graft-versus-host disease
- Ocular surface squamous neoplasia
- Open-angle glaucoma
- Post-herpes simplex virus scarring of cornea
- Refractive errors
- Superficial punctate keratopathy

COVERAGE

Benefits may vary between groups and contracts. Please refer to the appropriate Benefit Booklet, Evidence of Coverage or Subscriber Agreement for applicable not medically necessary/not covered benefits/coverage.

BACKGROUND

Corneal topography describes measurements of the curvature of the cornea. An evaluation of corneal topography is necessary for the accurate diagnosis and follow-up of certain corneal disorders, such as keratoconus, difficult contact lens fits, and pre- and postoperative assessment of the cornea, most commonly after refractive surgery.

Assessing corneal topography is a part of the standard ophthalmologic examination of some patients. Corneal topography can be evaluated and determined in multiple ways. Computer-assisted corneal topography has been used for early identification and quantitative documentation of the progression of keratoconic corneas, and evidence is sufficient to indicate that computer-assisted topographic mapping can detect and monitor disease.

Various techniques and instruments are available to measure corneal topography: keratometer, keratoscope, and computer-assisted photokeratoscopy.

The keratometer (also referred to as an ophthalmometer), the most commonly used instrument, projects an illuminated image onto a central area in the cornea. By measuring the distance between a pair of reflected points in both of the cornea's 2 principal meridians, the keratometer can estimate the radius of curvature of 2 meridians. Limitations of this technique include the fact that the keratometer can only estimate the corneal curvature over a small percentage of its surface and that estimates are based on the frequently incorrect assumption that the cornea is spherical.

The keratoscope is an instrument that reflects a series of concentric circular rings off the anterior corneal surface. Visual inspection of the shape and spacing of the concentric rings provides a qualitative assessment of topography.

A photokeratoscope is a keratoscope equipped with a camera that can provide a permanent record of the corneal topography.

CODING

Medicare Advantage Plans and Commercial Products

Non-computer-assisted corneal topography is considered part of the evaluation and management services of general ophthalmologic services (CPT codes 92002–92014), and therefore this service should not be billed separately. There is no separate CPT code for this type of corneal topography. Non-computer-assisted corneal topography should be considered inclusive to Evaluation and Management services.

The following CPT code(s) are covered when the medical criteria above has been met and when filed with one of the covered ICD-10 codes attached, below:

92025 Computerized corneal topography, unilateral or bilateral, with interpretation and report

Covered ICD-10-CM for CPT Code 92025

RELATED POLICIES

None

PUBLISHED

Provider Update, December 2025
Provider Update, February 2025
Provider Update, June 2024
Provider Update, May 2023
Provider Update, July 2022

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