

Policy Name	Clinical Policy – Corneal Topography and Tomography
Policy Number	1314.00
Department	Clinical Strategy
Subcategory	Medical Management
Original Approval Date	02/06/2018
Current MPC/CCO Approval Date	01/07/2026
Current Effective Date	05/01/2026

Company Entities Supported (Select All that Apply)

Superior Vision Benefit Management
 Superior Vision Services
 Superior Vision of New Jersey, Inc.
 Block Vision of Texas, Inc. d/b/a Superior Vision of Texas
 Davis Vision
 (Collectively referred to as 'Versant Health' or 'the Company')

ACRONYMS

CT	Corneal topography or corneal tomography
----	--

PURPOSE

To provide the medical necessity criteria to support the indication(s) for corneal topography/tomography and to render medical necessity determinations. Applicable procedure codes are also defined.

POLICY
A. BACKGROUND

Both corneal topography and corneal tomography are used to assess the shape and structure of the cornea. Corneal topography, also known as photokeratoscopy or video keratography, is a non-invasive imaging technique for mapping the surface curvature of the cornea particularly when astigmatism is present. Corneal tomography offers a more comprehensive evaluation of the corneal shape using advanced imaging technologies such as scanning slit technology, Scheimpflug-based imaging, and optical coherence tomography. It provides a three dimensional map of the entire cornea, including both the anterior and posterior surfaces.

B. Medically Necessary

1. Corneal topography or tomography is medically necessary when the information garnered from an eye exam is insufficient to assess the patient's condition, as in the following conditions:
 - a. Bullous keratopathy,
 - b. Clinically significant irregular corneal astigmatism,
 - c. Complications of transplanted cornea,
 - d. Corneal dystrophies,
 - e. Keratoconus or pellucid marginal degeneration,
 - f. Monocular diplopia,
 - g. Post surgical or post traumatic astigmatism,
 - h. Pterygium and/or corneal ectasia causing visual impairment,
 - i. Salzmann nodular degeneration.
2. A repeat corneal topography or tomography for the stated conditions above, may not be medically necessary except under the following circumstances:
 - a. A change in vision is reported due to one of the listed conditions; or,
 - b. Pediatric keratoconus; or,
 - c. When history and subjective vision changes are unreliable;
 - d. When early crosslinking would provide a benefit; and,
 - e. To document topographic change after treatment of the conditions listed in section B1.
3. Corneal topography or tomography is appropriate as an adjunct to the fitting of medically necessary contact lenses. (For criteria see 1309 Medically Necessary Contact lenses.)

C. Not Medically Necessary

Corneal topography or tomography may not be medically necessary when:

1. It is performed as baseline documentation of a healthy eye such as during an evaluation for refractive surgery or as preventive medicine to screen for potential disease; or,
2. It is used on an eye without signs, symptoms, serious ophthalmic disease, ocular abnormalities, or contributory medical history; or,
3. It is used prior to cataract surgery when there is no indication of corneal disease; or,
4. It is used to confirm a diagnosis that has already been determined; or,
5. It is used to determine the need for cosmetic refractive corneal surgery; or,
6. It is used to refine the selection of an astigmatism correcting or presbyopia correcting intraocular lens related to cosmetic refractive surgery; or,
7. It is without a documented medical rationale in the medical record.

D. Documentation

Medical necessity must be supported by adequate and complete documentation in the patient's medical record that describes the procedure and the medical rationale for it as in the requirements above. All medical record items must be available upon request to initiate or sustain previous payments. For any retrospective review, a full operative report and medical plan of care are needed.

Every page of the record must be legible and include appropriate patient identification information (e.g., complete name, date(s) of service). Services provided or ordered must be authenticated by the physician, in a handwritten or electronic signature. Stamped signatures are not acceptable.

Corneal topography or tomography requires an interpretation and report which includes:

1. Physician's order for CT with medical rationale
2. Date performed
3. Reliability of the CT (Do not bill a CT of dubious value.)
4. Patient cooperation
5. CT findings
6. Comparison of results from previous tests
7. Assessment, diagnosis
8. Impact on treatment, prognosis

E. Procedural Detail

CPT Code	
92025	Computerized corneal topography, unilateral or bilateral, with interpretation and report. (CPT code includes computerized tomography.)
Invalid Modifiers	
Anatomical Modifiers	RT, LT, 50

DISCLAIMER and COPYRIGHTS

This policy is provided for information purposes only and does not constitute medical advice. Versant Health, Inc., and its affiliates (the "Company") do not provide health care services and cannot guarantee any results or outcomes. Treating doctors are solely responsible for determining what services or treatments are provided to their patients. Patients (members) should always consult their doctor before making any decisions about medical care.

Subject to applicable law, compliance with this clinical policy is not a guarantee of coverage or payment. Coverage is based on the terms of an individual's particular benefit plan document, which may not cover the service(s) or procedure(s) addressed in this clinical policy. The terms of the individual's specific benefit plan are always determinative.

Every effort has been made to ensure that the information in this clinical policy is accurate and complete, however the Company does not guarantee that there are no errors in this policy or that the display of this file on a website is without error. The company and its employees are not liable for any errors, omissions, or other inaccuracies in the information, product, or processes disclosed herein. Neither the company nor the employees represent that the use of this information, products, or processes infringes on privately owned rights. In no event shall the

Company be liable for direct, indirect, special, incidental, or consequential damages arising out of the use of such information, product, or process.

COMPANY'S COPYRIGHT STATEMENT Except for any copyrights described below, this clinical policy is confidential and proprietary, and no part of this clinical policy may be copied, distributed or used without Versant Health, or its applicable affiliates' express prior written approval.

AMA COPYRIGHT STATEMENT CPT©™ is the copyright and registered trademark of the American Medical Association with all rights reserved. Applicable FARS/DFARS apply for government use. Fee schedules, relative value units, conversion factors or related components are not assigned by the AMA, and are not part of CPT. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein.

RELATED POLICIES AND PROCEDURES	
1304	Optical Coherence Tomography

DOCUMENT HISTORY		
Approval Date	Revisions	Effective Date
02/06/2018	Initial Policy	02/06/2018
03/13/2019	Annual review; no criteria changes.	03/13/2019
02/19/2020	Annual review; no criteria changes.	04/01/2020
01/06/2021	Annual review; no criteria changes.	04/01/2021
01/05/2022	Annual review; no criteria changes.	04/01/2022
01/04/2023	Annual review; no criteria changes.	04/01/2023
09/20/2023	Administrative review for CMS 2024 final rule Medicare Part C equity: no changes.	n/a
01/03/2024	Clarify indication for medically necessary contact lens fitting.	04/01/2024
01/08/2025	Add indications where CT is allowed without vision changes: pediatric cases, when subjective vision change is unreliable and early crosslinking would be beneficial.	05/01/2025
01/07/2026	Add the allowable indication of Salzmann nodular degeneration; add allowable repeat of procedure to document topographic change after treatment for specific conditions.	05/01/2026

REFERENCES

1. Aghaei H, Es'haghi A. Importance of corneal topography in surgical planning for toric intraocular lenses. *J Cataract Refract Surg.* 2020 Oct;46(10):1450. doi: 10.1097/j.jcrs.0000000000000387. PMID: 32925644.
2. Alqudah N. Keratoconus: imaging modalities and management. *Med Hypothesis Discov Innov Ophthalmol.* 2024 Jul 1;13(1):44-54. doi: 10.51329/mehdiophthal1493. PMID: 38978828; PMCID: PMC11227666.
3. Bandlitz S, Bäumer J, Conrad U, et.al. Scleral topography analysed by optical coherence tomography. *Cont Lens Anterior Eye.* 2017 Aug;40(4):242-247. doi: 10.1016/j.clae.2017.04.006. Epub 2017 May 8. PMID: 28495356.
4. Binder PS. Topography and Tomography Findings in Patients with Down Syndrome. *JAMA Ophthalmol.* 2018 Sep 1;136(9):979-980. doi: 10.1001/jamaophthalmol.2018.2374. PMID: 29931036.
5. Delrivo M, Ruiseñor Vázquez PR, Galletti JD, et.al. Agreement between placido topography and Scheimpflug tomography for corneal astigmatism assessment. *J Refract Surg.* 2014 Jan;30(1):49-53. doi: 10.3928/1081597x-20131217-06. PMID: 24864328.
6. Fan R, Chan TC, Prakash G, Jhanji V. Applications of corneal topography and tomography: a review. *Clin Exp Ophthalmol.* 2018 Mar;46(2):133-146. doi: 10.1111/ceo.13136. Epub 2018 Jan 11. PMID: 29266624.
7. Flockerzi E, Seitz B. Keratectasia severity staging and progression assessment based on the biomechanical E-staging. *Eye Vis (Lond).* 2024 Jul 1;11(1):24. doi: 10.1186/s40662-024-00392-3. PMID: 38946004; PMCID: PMC11215830.
8. Ghemame M, Charpentier P, Mouriaux F. Corneal topography in clinical practice. *J Fr Ophtalmol.* 2019 Dec;42(10): e439-e451. doi: 10.1016/j.jfo.2019.09.001. Epub 2019 Nov 11. PMID: 31727328.
9. Gokul A, Vellara HR, Patel DV. Advanced anterior segment imaging in keratoconus: a review. *Clin Exp Ophthalmol.* 2018 Mar;46(2):122-132. doi: 10.1111/ceo.13108. Epub 2017 Dec 21. PMID: 29160595.
10. González-Pérez J, Queiruga Piñeiro J, Sánchez García Á, et.al. Comparison of Central Corneal Thickness Measured by Standard Ultrasound Pachymetry, Corneal Topography, Tono-Pachymetry and Anterior Segment Optical Coherence Tomography. *Curr Eye Res.* 2018 Jul;43(7):866-872. doi: 10.1080/02713683.2018.1461910. Epub 2018 Apr 13. PMID: 29634372.
11. Goto S, Maeda N. Corneal Topography for Intraocular Lens Selection in Refractive Cataract Surgery. *Ophthalmology.* 2021 Nov;128(11): e142-e152. doi: 10.1016/j.ophtha.2020.11.016. Epub 2020 Nov 19. PMID: 33221325.
12. Mülhaupt M, Dietzko S, Wolffsohn J, et.al. Corneal topography with an aberrometry-topography system. *Contact Lens Anterior Eye.* 2018; 41(5):436–441; 2018.
13. Ono T, Kawasaki Y, Chen LW, et.al. Corneal topography in keratoconus evaluated more than 30 years after penetrating keratoplasty: a Fourier harmonic analysis. *Sci Rep.* 2020 Sep 10;10(1):14880. doi: 10.1038/s41598-020-71818-w. PMID: 32913233; PMCID: PMC7483710.
14. Schiano-Lomoriello D, Bono V, Abicca I, et.al. Repeatability of anterior segment measurements by optical coherence tomography combined with Placido disk corneal topography in eyes with keratoconus. *Sci Rep.* 2020 Jan 24;10(1):1124. doi: 10.1038/s41598-020-57926-7. PMID: 31980662; PMCID: PMC6981210.
15. Shao X, Zhou KJ, Pan AP, et al. Age-Related Changes in Corneal Astigmatism. *J Refract Surg.* 2017; 33(10):696–703.

16. Sridhar U, Tripathy K. Corneal Topography. In: StatPearls. Treasure Island (FL): StatPearls Publishing; September 4, 2023.
17. Sulley A, Osborn LK, Wolffsohn JS, et.al. Theoretical fitting characteristics of typical soft contact lens designs. *Cont Lens Anterior Eye*. 2017; 40(4):248–252.
18. Syed ZA, Tomaiuolo M, Zhang Q, et al. Trends and Sociodemographic Patterns in Keratoconus Management 2015-2020: An American Academy of Ophthalmology IRIS® Registry Analysis. *Ophthalmology*. 2024;131(8):892-901. doi:10.1016/j.ophtha.2024.01.036.
19. Tăbăcaru B, Stanca TH. Corneal topography in preoperative evaluation for laser keratorefractive surgery - a review. *Rom J Ophthalmol*. 2020 Oct-Dec;64(4):333-341. doi: 10.22336/rjo.2020.55. PMID: 33367171; PMCID: PMC7739023.
20. Uçakhan Ö. Current Corneal Topography/Tomography Systems. *Eye Contact Lens*. 2020 May;46(3):127-128. doi: 10.1097/ICL.0000000000000707. PMID: 32324686.
21. Wylegała A, Mazur R, Bolek B, et.al. Reproducibility, and repeatability of corneal topography measured by Revo NX, Galilei G6 and Casia 2 in normal eyes. *PLoS One*. 2020 Apr 2;15(4): e0230589. doi: 10.1371/journal.pone.0230589. PMID: 32240192; PMCID: PMC7117679.
22. Zéboulon P, Debellemanière G, Gatinel D. Unsupervised learning for large-scale corneal topography clustering. *Sci Rep*. 2020 Oct 12;10(1):16973. doi: 10.1038/s41598-020-73902-7. PMID: 33046810; PMCID: PMC7550569.
23. Zhang YH, Wang Y, Li LY, et.al. Study on Corneal Biomechanical properties of suspicious keratoconus patients in corneal topography. 2019; 55(6):442–447; 2019.

SOURCES

1. [American Academy of Ophthalmology, Cornea/External Disease Summary Benchmarks. 2024](#). Accessed 10/2025.
2. [American Academy of Ophthalmology, Preferred Practice Pattern: Corneal Edema and Opacification, 2023](#). Accessed 10/2025.
3. [American Academy of Ophthalmology, Preferred Practice Pattern, Corneal Ectasia PPP. 2023](#). Accessed 10/2025.