

**Medical Policy
Corneal Collagen Cross-linking**

Document Number: 055

	Commercial and Qualified Health Plans	MassHealth
Authorization required	X	X
Authorization not required		
Not covered		

Overview

The purpose of this document is to describe the guidelines AllWays Health Partners utilizes to determine medical appropriateness for corneal collagen cross-linking. The treating specialist must request prior authorization for the procedure.

Coverage Guidelines

AllWays Health Partners covers corneal collagen cross-linking for the treatment of progressive corneal thinning caused by progressive keratoconus or corneal ectasia following refractive surgery. AllWays Health Partners will only authorize the epithelium-off corneal collagen cross-linking protocol, as it is currently the only corneal collagen cross-linking approved by the Food and Drug Administration (FDA).

AllWays Health Partners covers medically necessary corneal collagen cross-linking treatment in the following instances:

1. For members with **progressive keratoconus** who have failed to respond to spectacle **correction**/rigid contact lens.

OR

2. For members with a diagnosis of **corneal ectasia following refractive surgery**. Documentation must be supported by *all* of the following:
 - a. Consistent axial topography pattern, including relative inferior steepening with inferior-superior difference of at least 1.5 diopters
 - b. Corrected distance visual acuity worse than 20/20
 - c. Corneal thickness of at least 300 micrometers at the thinnest area

Exclusions

AllWays Health Partners does not provide coverage for corneal collagen cross-linking for conditions that do not meet the criteria noted above.

Definitions

Corneal Collagen Cross-linking: A procedure used that uses riboflavin drops, ultraviolet light, and a photosensitizer to strengthen bonds in the cornea. Ultraviolet (UV) light is combined with riboflavin eye drops to create new collagen crosslinks in the cornea, strengthening and stabilizing the cornea. The viscous riboflavin solution is applied to the eye topically before and during UV irradiation using the KXL System.

Ectasia: A serious long-term complication of laser in situ keratomileusis (LASIK) surgery and photorefractive keratectomy. It is similar to keratoconus but occurs postoperatively and primarily affects older populations.

Keratoconus: A bilateral dystrophy characterized by progressive ectasia (paracentral steepening and stromal thinning) that impairs visual acuity. While frequently diagnosed at a young age, the progression of keratoconus is variable.

CPT/HCPC Codes

Authorized CPT/HCPCS Codes	Code Description
0402T	Collagen cross-linking of cornea (including removal of the corneal epithelium and intraoperative pachymetry when performed)
J2787	Riboflavin 5'-phosphate, ophthalmic solution, up to 3 mL

Effective

January 2019: Code update.

October 2018: Effective date.

References

Alnawaiseh M, Rosentreter A, Eveslage M, Eter N, Zuhagen L. Changes in Corneal Transparency After Cross-linking for Progressive Keratoconus: Long-term Follow-up. *Journal of Refractive Surgery* 2015;31(9):614–8.

Hersh PS, Greenstein SA, Fry KL. Corneal collagen crosslinking for keratoconus and corneal ectasia: One-year results. *J Cataract Refract Surg.* Jan 2011;37(1):149-160. PMID 21183110.

Hersh PS, Stulting RD, Muller D, et al. U.S. multicenter clinical trial of corneal collagen crosslinking for treatment of corneal ectasia after refractive surgery. *Ophthalmology.* Oct 2017;124(10):1475-1484. PMID 28655538

Kobashi H, Rong SS. Corneal Collagen Cross-Linking for Keratoconus: Systematic Review. *BioMed Research International.* 2017;2017:8145651. doi:10.1155/2017/8145651.

Meiri Z, Keren S, Rosenblatt A, et al. Efficacy of corneal collagen cross-linking for the treatment of keratoconus: a systematic review and meta-analysis. *Cornea.* Mar 2016;35(3):417-428. PMID 26751990

Poli M, Lefevre A, Auxenfans C, Burillon C. Corneal Collagen Cross-linking for the Treatment of Progressive Corneal Ectasia: 6-Year Prospective Outcome in a French Population. *Am J Ophthalmol.* 2015;160(4):654-662.e1. doi:10.1016/j.ajo.2015.06.027.

Syakakis E, Karim R, Evans JR, et al. Corneal collagen cross-linking for treating keratoconus. *Cochrane Database Syst Rev.* Mar 24 2015;3(3):CD010621. PMID 25803325

Tian, Mingxia MS a; Ma, Ping MD b; Zhou, Weiyan MD b; Feng, Jie MS a; Mu, Guoying MD. Outcomes of corneal crosslinking for central and paracentral keratoconus. *Medicine.* March 2017 96:10(e6247)



Wan Q, Wang D, Ye H, Tang J, Han Y. A review and meta-analysis of corneal cross-linking for post-laser vision correction ectasia. *Journal of Current Ophthalmology*. 2017;29(3):145-153. doi:10.1016/j.joco.2017.02.008.