

Current Effective Date: 8/7/25

Status: Approved

Reviewed by Medical Policy Subcommittee: 12/28/23, 11/7/24, 8/7/25

Reviewed Dates: 6/20/23, 6/25/25

INSTRUCTIONS FOR USE DISCLAIMER:

SummaCare posts policies relating to coverage and medical necessity issues to assist members and providers in administering member benefits. These policies do not constitute a contract or agreement between SummaCare and any member or provider. The policies are guidelines only and are intended to assist members and providers with coverage issues. SummaCare is not a health care provider, does not provide or assist with health care services or treatment, and does not make guarantees as to the effectiveness of treatment administered by providers. The treatment of members is the sole responsibility of the treating provider, who is not an employee of SummaCare, but is an independent contractor in private practice. The policies posted to this site may be updated and are subject to change without prior notice to members or providers.

Medical policies in conjunction with other nationally recognized standards of care are used to make medical coverage decisions.

Corneal Collagen Cross-linking Policy

Indication/Usage:

Corneal collagen cross-linking (CXL) is a photochemical procedure approved by the FDA for the treatment of progressive keratoconus and corneal ectasia following refractive surgery. Keratoconus is a dystrophy of the cornea characterized by progressive deformation (steepening) of the cornea while corneal ectasia is keratoconus that occurs following refractive surgery. Both conditions lead to functional loss of vision. During a corneal cross-linking procedure, riboflavin (vitamin B2) eye drops are applied, and then ultraviolet light is applied directly onto the cornea. The eye drops consist of a substance conducive to photo enhancing, which enables cross-linking to take place. The procedure causes new corneal collagen cross-links to develop. Those cross-links cause the collagen fibrils to shorten and thicken, leading to a stiffer, stronger cornea.

Medical Indications for Authorization Commercial and Medicare Members

SummaCare considers corneal collagen cross-linking using riboflavin (Photrex) and ultraviolet A medically necessary when **one** of the following conditions have been met:

- Keratoconus, when the diagnosis has been established and progression of the disease is considered likely.
- Corneal ectasia after refractive surgery (keratectasia).

Billing Codes

| | |
|----------------|---|
| CPT 0402T | Collagen cross-linking of cornea including removal of the corneal epithelium, when performed, and intraoperative pachymetry, when performed |
| HCPCS J2787 | Riboflavin 5'-phosphate, ophthalmic solution, up to 3 mL [Photrex, Photrex Viscous |
| - | - |

There is currently no NCD or LCD per CMS

Limitations

Collagen cross-linking is considered experimental and investigational for all other indications because its effectiveness has not been established. Collagen cross-linking in combination with other procedures is also considered experimental and investigational.

Coverage Decisions

Coverage decisions made per CMS Guidelines, Hayes Research and industry standards research

Plans Covered By This Policy

Commercial and Medicare

Self-funded Commercial groups refer to plan document for coverage

Sources Reviewed

Caporossi A, Mazzotta C, Baiocchi S, Caporossi T. Long-term results of riboflavin ultraviolet a corneal collagen cross-linking for keratoconus in Italy: The Siena eye cross study. Am J Ophthalmol. 2010;149(4):585-593

Henriquez MA, Izquierdo L Jr, Bernilla C, et al. Riboflavin/Ultraviolet A corneal collagen crosslinking for the treatment of keratoconus: Visual outcomes and Scheimpflug analysis. *Cornea*. 2011;30(3):281-286

Konstantopoulos A, Mehta JS. Conventional versus accelerated collagen cross-linking for keratoconus. *Eye Contact Lens*. 2015; 41(2):65-71.

Hersh PS, Stulting RD, Muller D, et al. United States multicenter clinical trial of corneal collagen crosslinking for keratoconus treatment. *Ophthalmology*. 2017a Sep; 124(9):1259-1270.

Kontadakis GA, Kankariya VP, Tsoulfas K, et al. Long-Term Comparison of Simultaneous Topography Guided Photorefractive Keratectomy Followed by Corneal Cross-linking versus Corneal Cross-linking Alone. *Ophthalmology*. 2016;123(5):974-983

McAnena L, Doyle F, O'Keefe M. Cross-linking in children with keratoconus: a systematic review and meta-analysis. *Acta Ophthalmol*. 2017 May; 95(3):229-239.

Wang YM, Chan TC, Yu MCY, et al. Comparative evaluation of progression rate in keratoconus before and after collagen crosslinking. *Br J Ophthalmol*. 2018 Aug; 102(8):1109-1113.

Knutsson KA, Paganoni G, Matuska S, et al. Corneal collagen cross-linking in pediatric patients affected by keratoconus. *Br J Ophthalmol*. Feb 2018; 102(2):248-252

Toprak I, Yaylali V, Yildirim C. Visual, topographic, and pachymetric effects of pediatric corneal collagen cross-linking. *J Pediatr Ophthalmol Strabismus*. Mar 1 2017; 54(2):84-89

[Home - Centers for Medicare & Medicaid Services | CMS](#)