

Refractive Keratoconus Surgical Clinic: Evan D. Schoenberg, M.D.

I offer the following surgical treatments which each can have a role for keratoconus patients:

- Corneal crosslinking (“CXL”)
- Topography guided PRK, with or without CXL
- INTACS, with or without CXL
- ICL and Toric ICL
 - Treats up to -16 D spherical equivalent with up to 4 D of refractive astigmatism
- Refractive lens exchange (femtosecond-assisted cataract surgery with toric IOLs)
- Corneal transplantation

CXL indications:

- Progressive keratoconus, pellucid marginal degeneration, & corneal ectasia at any age
- Prevention of progression in newly diagnosed patients under 25 years old with spectacle BCVA 20/25 or worse
- Combinatorial effect when providing refractive treatment with topography guided PRK or INTACS.
- Covered by most commercial insurance plans with documentation of progression.
 - *Sample criteria (BCBS):* 1 D increase in max K, 1 D increase in refractive astigmatism, increase in myopia by -0.50 D, or ≥ 0.1 mm in the back optical zone radius in rigid contact lens wearers.

Topography guided PRK:

- Performed 6 months to 1 year after CXL
- Mild to moderate keratoconus, mild pellucid marginal degeneration, or corneal ectasia with a relatively clear central visual axis
- Must be able to obtain high quality and reproducible topographic maps on the Vario Topolyzer for planning
- Myopic or myopic astigmatism (best assessed in minus cylinder; sphere should be 0 or negative, as should cylinder). Hyperopic and mixed astigmatism can not be treated effectively.
- reliable and relatively high quality spherocylindrical refraction
- Goal: for patients who desire reduced dependence on corrective lenses, reduce irregular astigmatism & treat part of the refractive error. Improve UCVA to some extent, spectacle BCVA to a greater extent, and improve success with contacts as desired. In some cases this may prepare the eye for further refractive treatment (traditional PRK, toric ICL, RLE, etc).
- Not covered by insurance

INTACS:

- If evidence of progressive disease or if augmentation of effect is desired, performed in rapid-sequential combination with CXL
 - *INTACS first; CXL 2 to 4 weeks later*
- Mild to severe keratoconus or corneal ectasia
- Clear central visual axis
- Generally flattens the steepest aspect of the cornea (single segment) and/or flattens the central cornea (paired segments, potentially asymmetrically placed)
- Goal: Provide opportunity for Improved visual quality with a soft toric contact or with glasses. Improve ability to fit a speciality contact lens and improve comfort, particularly with RGPs. May improve UCVA. In some cases this may prepare the eye for further refractive treatment (topo guided PRK, traditional PRK, toric ICL, RLE, etc).
- Covered by most commercial insurance plans

In addition to our in-house specialty contact lens clinic, we collaborate with optometrists in the Atlanta area to provide resources including training in the prescribing of speciality contact lenses.