VANCE THOMPSON VISION

CLINIC NEWSLETTER

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- **EVO lens adds to refractive options without the need for PIs**
- **Crosslinking considerations from Tanner Ferguson, MD**
  "It is helpful to include a baseline or recent manifest refraction and/or corneal topography to assist with documentation of disease progression in the referral for CXL."

VANCE THOMPSON VISION

Fall 2022

New & Noteworthy

Upcoming CE Event Schedule

Spring Tech Training
TUESDAYS, JANUARY 10 - MARCH 25

SPRING SYMPOSIA
Sioux Falls Symposium
SATURDAY, FEBRUARY 25

Watch for invitations to these and other events throughout the year.

See & Do Programs

Our See & Do programs have grown in popularity among patients over the past few years. With this expedited process, patients can be seen for their consultation in our clinic and have surgery that same day. When the surgeon's schedule allows, cataract patients may also be able to have their second eye done the following day.

Technology Highlight

EVO Phakic IOL

Doug Wallin, OD & Keith Rasmussen, OD

To be a well-rounded refractive surgery center, doctors should offer all surgical options to their patients. This includes laser vision correction (LASIK, PRK, SMILE), phakic intra-ocular lenses (IOL) (Verisyse, Visian ICL, and EVO Visian ICL) and refractive lens exchange (RLE). It is important to have the capability to be able to match a patient's eye to a specific technology versus trying to fit a technology into a patient's eye. In this article, we will do a deeper dive on all things phakic IOL and how they play a crucial role in rounding out our refractive surgery program.

Having implanted phakic IOLs for over 20 years, we have just loved the safety profile and patient satisfaction these implants have provided. A lot of times, patients who receive a phakic IOL end up being our happiest patients.

Verisyse Phakic Intraocular lens

In 2004, the FDA approved the Verisyse lens for patients with -5.00 to -20.00 D of myopia. An ideal patient would be someone who has at least 3.20 mm of anterior chamber depth and adequate endothelial cell count. Although Verisyse does not come in a toric version, we can reduce larger amounts of astigmatism by placing the incision on the steep axis. The Verisyse lens is made of PMMA and is non-foldable, so it goes through a slightly larger incision that usually requires 3-4 sutures. These sutures are usually removed around one month post-operatively. There are two peripheral iridotomies placed around 11 and 1 o'clock to prevent any pupil blockage. One of the beauties of

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the Verisyse lens is that it attaches to the iris via haptics, therefore there is no sizing that is required for this lens. The Verisyse is attached in the anterior chamber to the iris so the lens can be perfectly centered on the pupil. These Verisyse patients can also be dilated without any complications.

EVO Visian (Implantable collamer lens) ICL

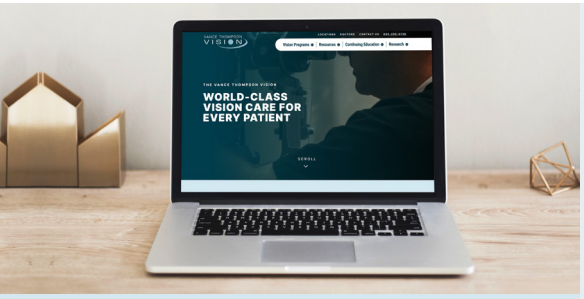
The EVO Visian ICL is approved for myopic patients ranging from -3.00 D to -20.00 D of myopia. The EVO offers a toric version which can correct from 1.00 D up to 4.00 D of astigmatism. The Visian ICL material is foldable, so it can go through a smaller incision and avoid sutures. Previous versions of the Visian ICL still required peripheral iridotomies. However, the new EVO Visian ICL has a 360-micron port in the center of the IOL providing better aqueous flow decreasing the risk of pupillary block or cataracts. Thus, with the EVO Visian ICL, we no longer need to do a peripheral iridotomy. The EVO sits behind the patient's iris, thus requiring different diameters for fitting and maintaining an adequate vault over the anterior lens capsule.

Post-op considerations

Post-op care with phakic IOLs is very similar to post-op care with cataract patients. We like these phakic IOL patients to be seen at 1 day, 1 week, 1 month, 3-6 months, and then yearly. These patients will be on a combo antibiotic/steroid drop for 1 month. We can consider doing a laser fine tune for any residual refractive error at 3 months post-op.

It's important for these patients to be seen on an annual basis to check their endothelial cell count. We also like to check the vault of the Visian. When assessing vault, we compare the space between the Visian and the natural lens to the cross section of the cornea. If, for example, the space between the Visian and the natural lens is the same as the corneal thickness, we grade this a 1.0 vault. If the space between the Visian and natural lens is half the thickness of the cornea, we grade this 0.5 vault. A vault ranging from 0.5 to 1.5 is acceptable.

We've had the honor of helping the Verisyse, Visian and EVO get FDA approved and have been amazed at how the EVO especially is making this process easier and safer than ever for our mutual patients.



The Doctor Portal features resources that are available to you and your staff like:

- Practice Information
- Patient Information
- Resource Library
- Webinars, Research Studies, and More!
- Continuing Education
- Vision Programs
- Important Updates

vancethompsonvision.com/od

Crosslinking Considerations

Tanner Ferguson, MD

Corneal ectasia is an umbrella term describing a progressive thinning and warpage of the cornea that includes keratoconus (KCN), pellucid marginal degeneration (PMD), and post-refractive ectasia. Corneal cross-linking (CXL) is a safe, in-office procedure that stabilizes ectatic corneas by increasing the biomechanical stability of the cornea. The advent of CXL has revolutionized our care of KCN and corneal ectasia patients, providing stabilization of patients' ectatic disease and reducing the need for penetrating keratoplasty (PKP). Prior to the introduction of CXL, keratoconus remained the most common indication for PKP.

A multitude of different protocols have been described and studied employing CXL. Although it's only been approved in the US in the last decade, there is ample published data available from outside the US highlighting its long-term impact on stabilization of cornea ectasia. At Vance Thompson Vision, we use the FDA-approved, epithelial-off approach (Dresden protocol) whereby the corneal epithelium is removed in a central 7-8 mm zone followed by instillation of riboflavin (vitamin

Research

Kowa K-321-302
(SF, Fargo, Bozeman, Omaha)

- Safety and efficacy of Ripasudil (K-321) eye drops after cataract surgery for the treatment of corneal edema after cataract surgery
- Patients will dose QID for 12 weeks in the study eye
- Patients must have healthy eyes other than cataracts.
- 9-11 visits over up to 6 months; Patient is compensated up to $90/visit

B&L Hyperopia
(SF)

- TENEO laser unilateral study. (Fellow eye is treated commercially at no cost)
- Hyperopic refractive error with sphere +1.00 D to +4.00 D with or without cylinder up to +2.00 D and MAX MRSE = +5.00 D
- 9 visits over 1 year. Free LASIK OU + up to $480 compensation.

Alcon Lasik Amplio IIT
(SF, Fargo, Bozeman, Omaha)

- Study looking at post-op outcomes when patient is randomized to contura phorcides or wavefront guided LASIK
- Hyperopes and myopes, up to 9.00 MRSE
- 2 visits over 3 months. Patient pays full price lasik and is compensated $250 at end of study

iSTAR
(Alexandria)

- Study to evaluate the effectiveness of the MINIJECT implant
- POAG (No pigmentary, PXE, NVG)
- Pseudophakic (uncomplicated PKE ≥ 12 months prior to enrollment)
- Medicated IOP ≤ 25; unmedicated IOP ≥ 21 and ≤ 33
- 14 visits over 48 months; Compensation is $1600

B2) every 2 minutes combined with exposure to UVA radiation for 60 minutes. Although there is interest in an epithelium-on approach for CXL to circumvent the issues associated with epithelial removal, the data thus far is mixed and not equivalent to an epithelial-off approach in terms of providing biomechanical stability or reducing progression of ectasia. There are ongoing studies and work to further answer this question.

The CXL procedure is approved for progressive KCN and patients with post-refractive ectasia. Patients with evidence of progression on corneal topography or manifest refraction are considered candidates for CXL and the procedure has been shown to be beneficial in patients of all ages. Insurance coverage for CXL has improved but remains challenging in some cases if there is lack of documented progression. In order to avoid delayed treatment and insurance barriers, it is helpful to include a baseline or recent manifest refraction and/or corneal topography to assist with documentation of disease progression in the referral for CXL. Baseline keratometry values obtained via autokeratometry can also aid in the assessment of progression. Recognizing that coverage determinants can vary, these are general policy guidelines that we use to determine progression:

- An increase of 1 diopter (D) in the steepest keratometry (Kmax) value
- An increase of 1 D in astigmatism based on manifest refraction
- A myopic shift of 0.5 D based on manifest refraction

CXL patients are typically seen at around 4-7 days post-operatively to ensure the epithelial defect has healed or the bandage contact lens may need to be replaced. Patients are seen again at 1 month and a manifest refraction for glasses can be performed at this visit. If fitting for a hard contact lens, it is recommended to wait until 3 months after the procedure for stabilization. Further, as eye rubbing represents a modifiable risk factor associated with disease progression, it is critically important to continue to counsel patients on eye rubbing cessation.