

## CASE STUDY

### USING BOSTONSIGHT SCLERAL SMARTSIGHT® FSE TO IMPROVE VISUAL ACUITY IN PATIENT WITH KERATOCONUS AND CROSS-LINKING

#### BACKGROUND

Male patient, 29 years old, was referred for contact lens evaluation. He was recently diagnosed with keratoconus and has no history of contact lens wear. His vision with glasses is:

- OD: 20/40, PH 20/25
- OS: 20/20

Goal is to improve vision quality.

#### INITIAL FITTING OD

1st Lens: BSS 18mm; **FSE 1\***

- OR: +1.50 DS 20/20-2
- ghosting/slow reading letters
- awareness of edge, excessive sag

2nd lens: 16mm, **FSE 2**

- OR: +1.00 -0.75 x 155 20/20
- much better quality
- able to quickly read letters
- increased diameter to 16.5mm, adjust BC

\*Note: All BostonSight SCLERAL trial lenses have a built-in front surface eccentricity (FSE) value of 1 for visual acuity. The trial sets also include two additional FSE lenses (FSE 0 and FSE 2) for additional refinement if needed.



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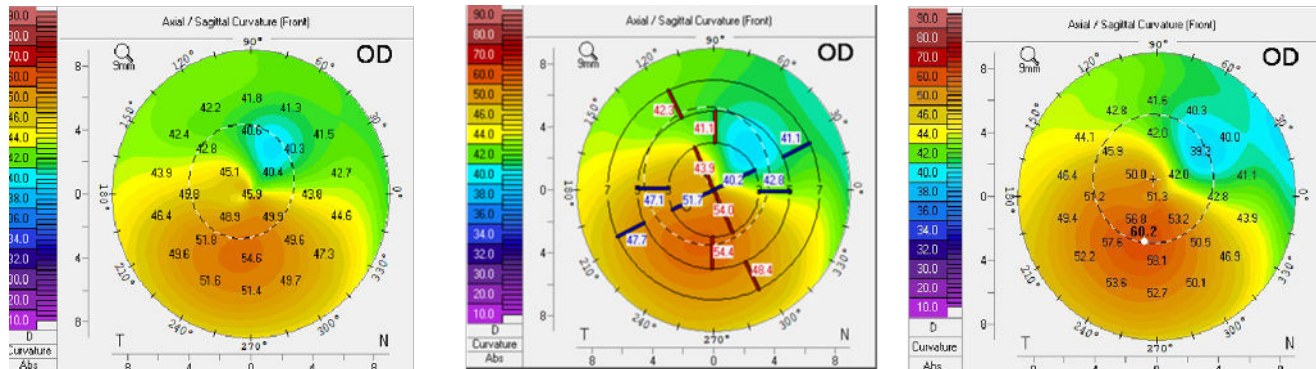
*Dr. Pisano is Associate Clinical Professor, Optometry Division, at The Ohio State University College of Medicine. Dr. Pisano practices in the Advanced Specialty Contact Lens Clinic in the Department of Ophthalmology and Visual Sciences where she sees patients in need of specialty medical contact lenses for various conditions. The Advanced Specialty Contact Lens Clinic uses the highest level of scleral and contact lens technology to evaluate patients in need of custom contact lenses. These technologies include: EyePrint Impression, PROSE, and Profilometry. She is a member of the Ohio Optometric Association (OOA), the American Optometric Association (AOA), and a fellow of both the American Academy of Optometry (FAAO) and Scleral Lens Society (FSLs).*

## 6 MONTH FOLLOW UP

Patient returns for scleral lens OD/soft lens OS follow up. He reports that the scleral lens is comfortable but notes new blurred vision. His vision with contact lenses is now:

- OD (**FSE 2**) - 20/30, PH: 20/25
- OS: (soft lens)- 20/20

Scleral lens fit is adequate but over-refraction shows no significant improvement.



## PLAN

For ocular health, I recommended he follow up with a corneal specialist for corneal cross-linking (CXL) evaluation. For scleral lens improvement, I trialed a different FSE to improve quality of vision. I applied a 16.5mm BostonSight SCLERAL diagnostic lens and adjusted FSE using the **FSE 0** trial lens included in set. Visual acuity is stable at 20/15. Patient to return after CXL for scleral lens follow up.

## RESULTS

### All-day comfort and improved vision/stability.

Patient returns 30 days post-CXL and reports scleral lens is comfortable and that he has good quality vision. His final lenses and vision are now:

- OD (BSS 16.5mm FSE 0): 20/20+3
- OS: (soft lens): 20/20

