

## INTRODUCTION

Presbyopic patients with high visual demands can be challenging fits. Other factors, such as corneal warpage, can further complicate our ability to satisfy these patients. This case study demonstrates a case where a patient with corneal warpage secondary to a chalazion was successfully refit empirically after failing two other lens modalities.

## HISTORY

A 69-year-old white female complained of distance blur in her right eye in her Proclear distance-center multifocal toric soft lenses. She reported the blur began after she developed a chalazion of the superior lid, which was recently removed by oculoplastics. After probing the patient further, she reported longstanding blur at near as well. She is a violinist who needs to read music at intermediate and near distances. She reported using reading glasses over her lenses frequently, even before developing a chalazion. Prior to wearing Proclear multifocal toric soft lenses, she wore Synergeyes Hybrid Duette Progressive lenses. She reported near blur with these lenses as well. Systemic history was remarkable for hypertension, well-controlled with medication. Ocular history was remarkable for history of a large chalazion OD, recently removed, causing superior corneal warpage OD.

## EXAMINATION

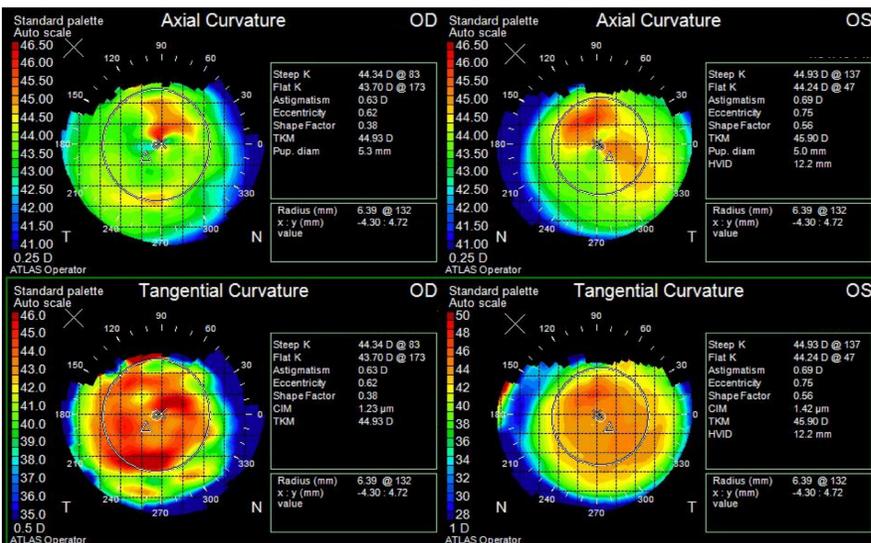


Figure 1: Topography at initial visit revealed superior corneal warpage OD.

Findings	OD	OS
Entering VA in Soft Lenses	20/30	20/20
Spectacle Rx	+0.75 -1.00 x 090 +2.50 Add	0.00 -1.25 x 105 +2.50 Add
External Evaluation	Palpebral fissure: 10mm Pupil diameter: 4mm Corneal diameter: 10.7mm Bottom of pupil to top of lower lid: 4mm Lower lid at limbus Lid tonicity: normal	Palpebral fissure: 9mm Pupil diameter: 4mm Corneal diameter: 10.7mm Bottom of pupil to top of lower lid: 4mm Lower lid at limbus Lid tonicity: normal
SLE	Cornea clear	Cornea clear

## RESULTS

After patient education and discussion of lens modality options and taking into consideration failure with soft and hybrid multifocals, the patient agreed to try a corneal gas permeable lens, although she was apprehensive about the comfort. A translating design was chosen due the patient's critical visual demands as well as the ability of the lens to switch between working distances quickly while maintaining clear vision. The patient was fit empirically into Art Optical Expert Progressive translating multifocal lenses using the data above.

**Dispense visit:** The lenses demonstrated an aligned fluorescein pattern with excellent centration and acceptable translation on downgaze. Distance VA was 20/20 OD, OS and near VA was 20/20 OD, OS. The patient reported acceptable subjective vision in office. The lenses were dispensed after insertion and removal training and education on lens care and hygiene. The patient was instructed to slowly build-up wear time.

**Follow-Up Visit:** The patient returned 2 weeks later reporting excellent vision at all distances. She was able to play her violin and read music without any additional glasses. BCVA remained 20/20 in both eyes at distance and near and there was no over-refraction in either eye. The fit was acceptable with no corneal staining. No lens modifications were necessary.

### Final Lens Parameters

	Lens	Base Curve	Prism	Power	Diameter/ Seg Height	Material
<b>OD</b>	Art Optical Expert Progressive	7.55mm	1.5 pd BD	+0.50 D Add: +2.50	9.00mm 3.90mm	Optimum Comfort
<b>OS</b>	Art Optical Expert Progressive	7.55mm	1.5 pd BD	-0.50 D Add: +2.50	9.00mm 3.90mm	Optimum Comfort

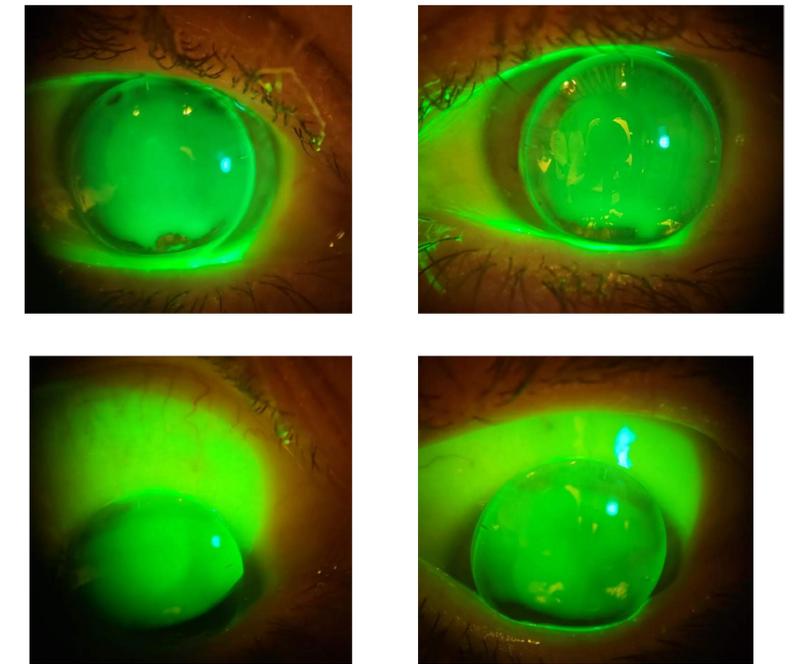


Figure 2: Slit lamp photography demonstrating aligned fluorescein patterns and excellent centration OU (top) and adequate translation in downgaze in both eyes (bottom).

## DISCUSSION AND CONCLUSION

When fitting presbyopic patients with high visual demands, multiple lens modalities are often attempted before we reach a successful fit. Translating GP lenses are an excellent option in such cases as they provide uncompromised vision at all distances but are traditionally fit diagnostically. The Art Expert Progressive translating multifocal can be ordered empirically with great success, like in this case. Not only did the lens provide acceptable vision when other modalities failed to do so, but also it masked any remaining corneal warpage from the patient's chalazion.

## REFERENCES

- Bennett, E. S. (2019). Bifocal and Multifocal Contact Lenses. In A. J. Phillips & L. Speedwell, *Contact Lenses* (6th ed., pp. 265-285). Elsevier.
- Expert Progressive Fitting Guide*. Art Optical Contact Lens, Inc., Grand Rapids, MI.
- Potter, R. (December 2016). New Designs in GP Translating Bifocals and Multifocals. *Contact Lens Spectrum*, 31, 32-35.