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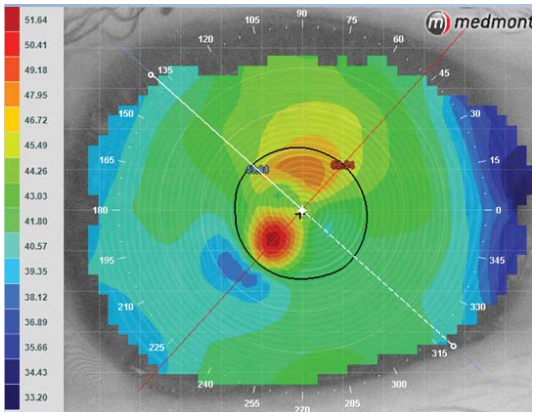
Successful ACE lens fit resolves monocular diplopia after penetrating eye injury

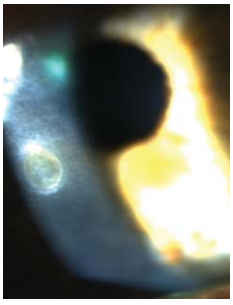
by Nicholas Gidosh, OD & Bethany Peebles, ABOC, NCLE-AC

Introduction: JB is a 65 year old male who recently had a penetrating injury to his right eye only. His left eye is normal and healthy. The patient is currently wearing glasses and complains of double vision. He had previously worn spherical GPs successfully for several years in the following parameters: OU 7.90 BC/9.50mm DIA

OD	Keratometer Readings:	43.64*138/52.54*048
	Refraction and entering VAs:	-5.50 -3.00 x130 20/40+ with monocular diplopia
OS	Keratometer Readings:	42.74*012/44.39*102
	Refraction and entering VAs:	-2.50 -1.50 x180 20/25



Topography: OD



OD Scar

Optic section showing scar depth

Evaluation: Due to the patient's prior experience with corneal GPs, Dr. Nick Gidosh chose to continue with this modality. The OD topography indicates that an aspheric design would be required due to the irregularity. The ACE (Art Custom Eccentric) lens was chosen for its wide range of customizable parameters and the availability of a diagnostic fit.

Trial Lens: An initial trial lens with a 7.90 base curve and 9.60 diameter was chosen for both eyes based on the patient's previous history. The 7.90 base curve was too flat centrally for the OD but fit well on the OS. A second lens with a steeper base curve of 7.80 was then trialed on the OD. This base curve showed an improved central fluorescein image; however, the peripheral fluorescein was minimal and would require an adjusted edge lift on the ordered lens.

Final ACE Lens Parameters

	BC	DIAM	PWR	OZ	ECC	EL
OD	7.80	9.60	-4.00	8.00	.50	.13
OS	7.90	9.60	-2.50	8.00	.50	.11

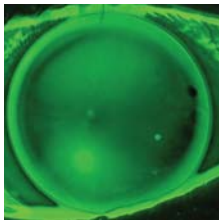


Image of final OD ACE lens with adjusted edge lift

Conclusion: With the ACE lenses, the patient achieved 20/30+ OD and 20/20 OS along with the elimination of monocular diplopia.

Dr. Nicholas Gidosh was the 2016 Cornea and Contact Lens Resident at the Michigan College of Optometry at Ferris State University. He completed his Bachelor of Science degree in Chemistry at Muhlenberg College in 2011 and his Doctorate of Optometry at the Pennsylvania College of Optometry at Salus University in 2015. Dr. Gidosh is providing care for patients in need of specialty contact lenses in a private practice setting.

Bethany Peebles is the Consultation Operations Leader and Cornea & Contact Lens Resident Program Administrator at Art Optical. She is a 2002 graduate of the Ferris State University Opticianry program and was NCLE certified that same year. She obtained advanced certification in 2005 and has over 15 years of experience as a specialty lens fitter.