

Case Report:

Customized ScanFitPRO lens for very irregular eyes.

Dr. Jeremy Durham

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Introduction

A 64 year old male with a history of keratoconus and pingueculae in both eyes and a visual acuity of OD: 20/80 and OS 20/70. Due to the high irregular condition of these eyes, with keratoconus and dual pingueculae, the decision was taken to fit a ScanFit PRO as these lenses allow for a better customization and less chair time.

Profilometry measurement

Profilometry measurements with the Eye Surface Profiler (ESP) contain half a million data points mapping a 20 by 20 mm images in a single shot. Due to the high density of data points, local scleral elevations are mapped precisely. The measurements of this patient reveal large pingueculae temporally as well as nasally. Additionally, both corneas show peripheral inferior cones.

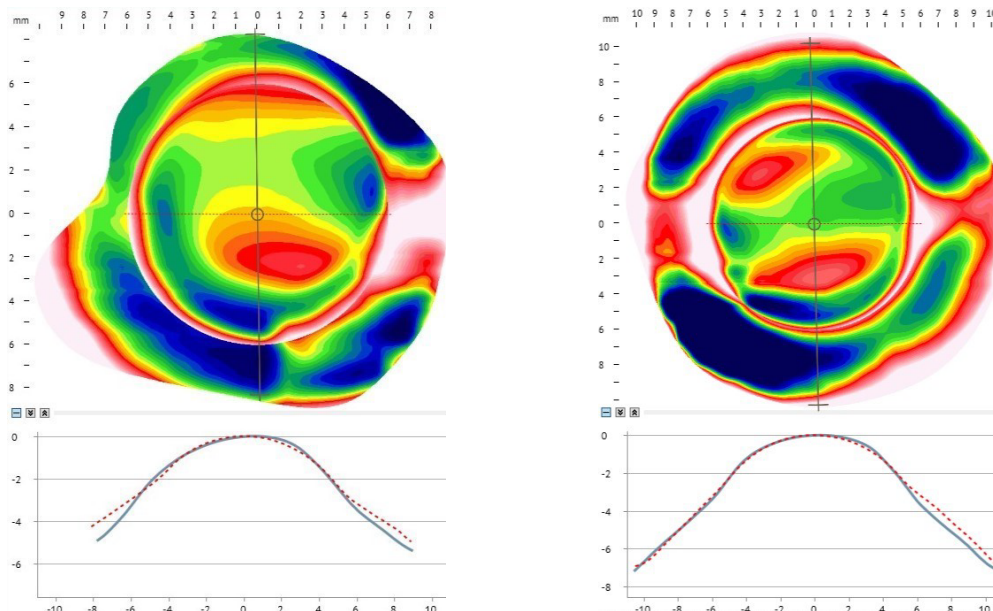
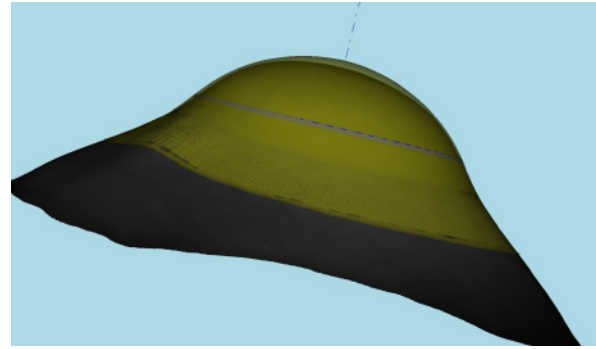


Figure 1 ESP Bisphere Elevation Map as well as the horizontal and vertical meridians.

ScanFitPRO

Especially designing scleral lenses for eyes having large or multiple pingueculae is difficult and time consuming. Although conventional scleral designs are offering a variety of options to deal with pingueculae, they often have limitations.



ScanFitPRO is a scleral lens developed by EyePrint Prosthetics, created from an ocular scan rather than an impression. It automatically adapts the haptic to vault over or align gently with these obstacles. Each meridian of a ScanFitPRO lens is adapted individually to the shape of the eye and therefore the position and rotation of the lens is very predictable, while conventional sclerals often require a small re-design due to unpredicted lens rotation.

DirectConnect

The new DirectConnect™ feature allows the ESP to connect directly to the lab. With just the push of a button, the ESP instantly sends the complete eye measurement to the ScanFitPRO software, which designs the customized lens. The fitted ScanFitPRO gave a VA of OD 20/20 and OS 20/25. With the latest updates, a precise fit on a difficult eye can be achieved on first try.

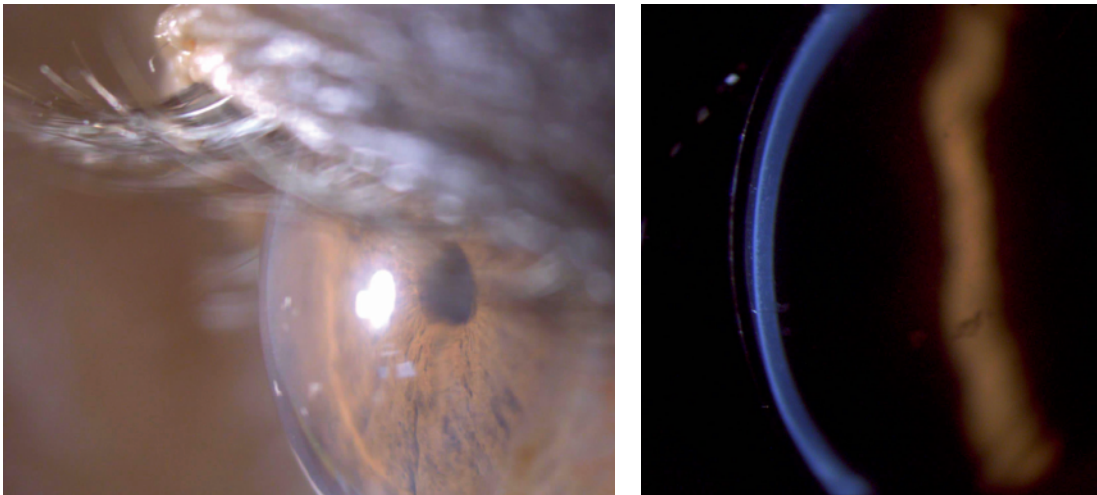


Figure 2

Conclusion

During these COVID-19 times, we want to limit the “settling time” as much as possible to reduce the patient’s time in our office. Therefore, reducing the need for a trial kit and refits/r e-orders is critical to reduce the overall physical fitting process to the minimum: ONE Profmetry measurement with the ESP + ONE lens on eye for the over-refraction = ONE final ScanFitPRO lens, in just one visit. Offering the patients their first lens fitting like a tailor-made-suit is a unique and important experience for many patients.