Confidence intervals for progression after Cross-linking using the ABCD Progression Display

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University of Zurich[UZH]

ELZA

BRASCRS

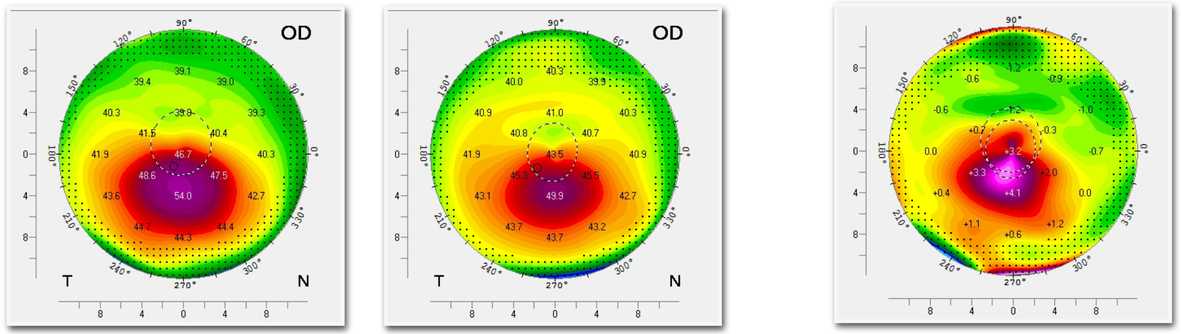
cabmm

1. Background

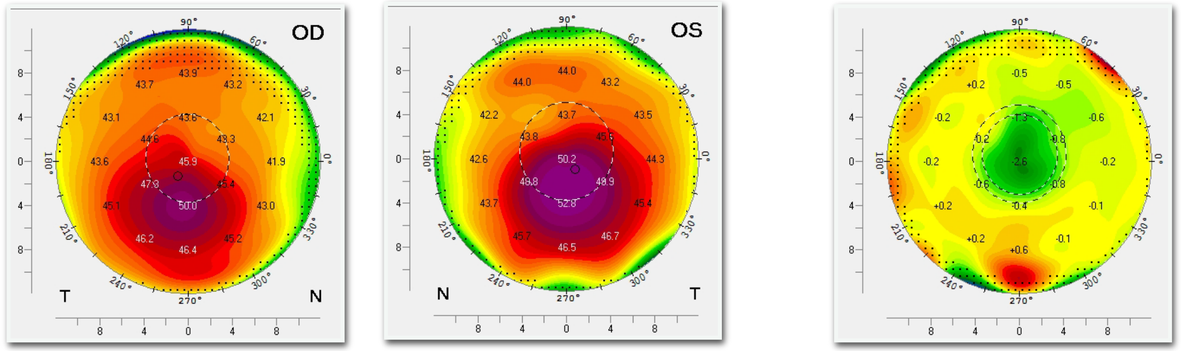
E. Torres-Netto

Determining progression (after CXL)

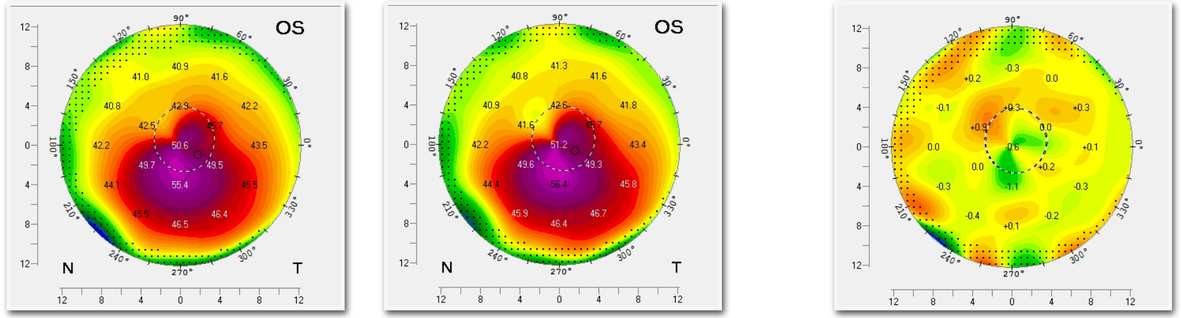
(A) (B) Diff. (A-B)



Progressive KC

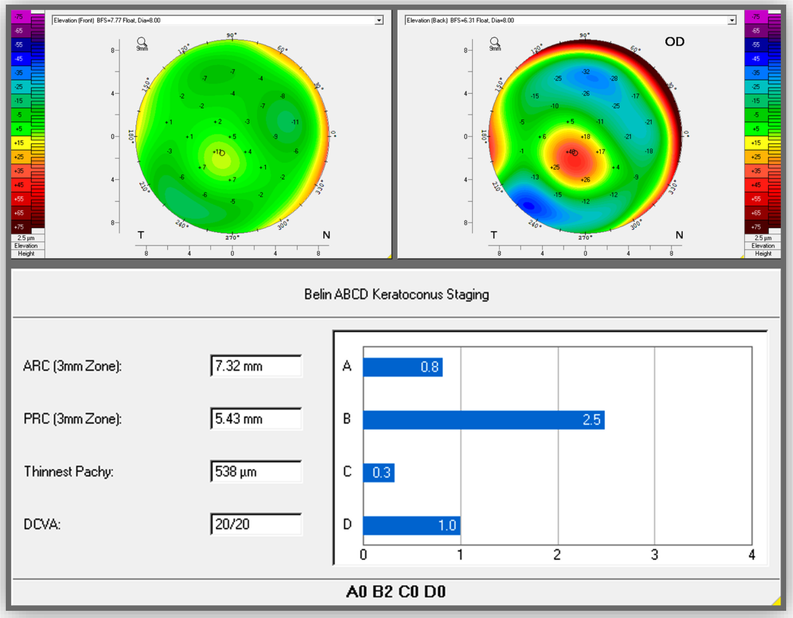


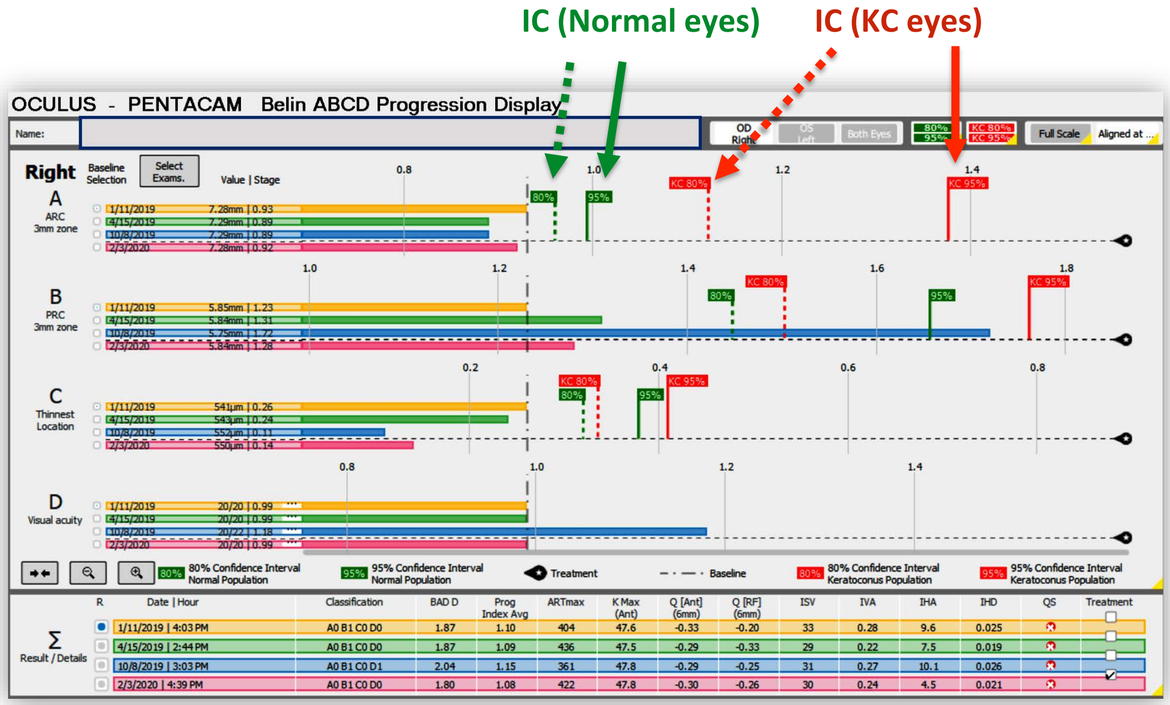
Flattening after CXL



After CXL. **Stable ?**

ABCD Progression display

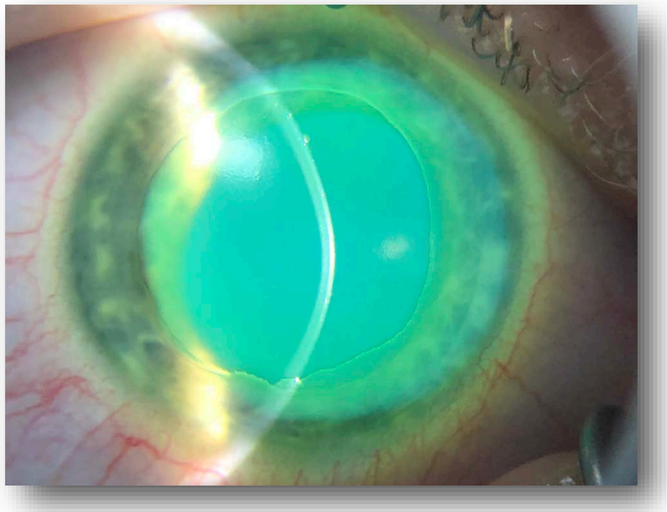




Purpose

As measurement **noise post-CXL was not previously determined**, the current study was designed **to measure noise of post-CXL eyes** and evaluate whether these measurements can **serve as progression determinants after CXL.**

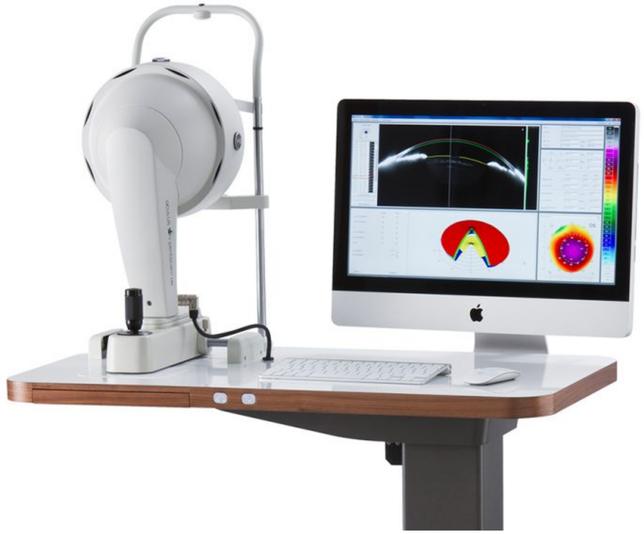
Measuring noise post-CXL



CXL for progressive Keratoconus

minimum

9 months



Scheimpflug measurements

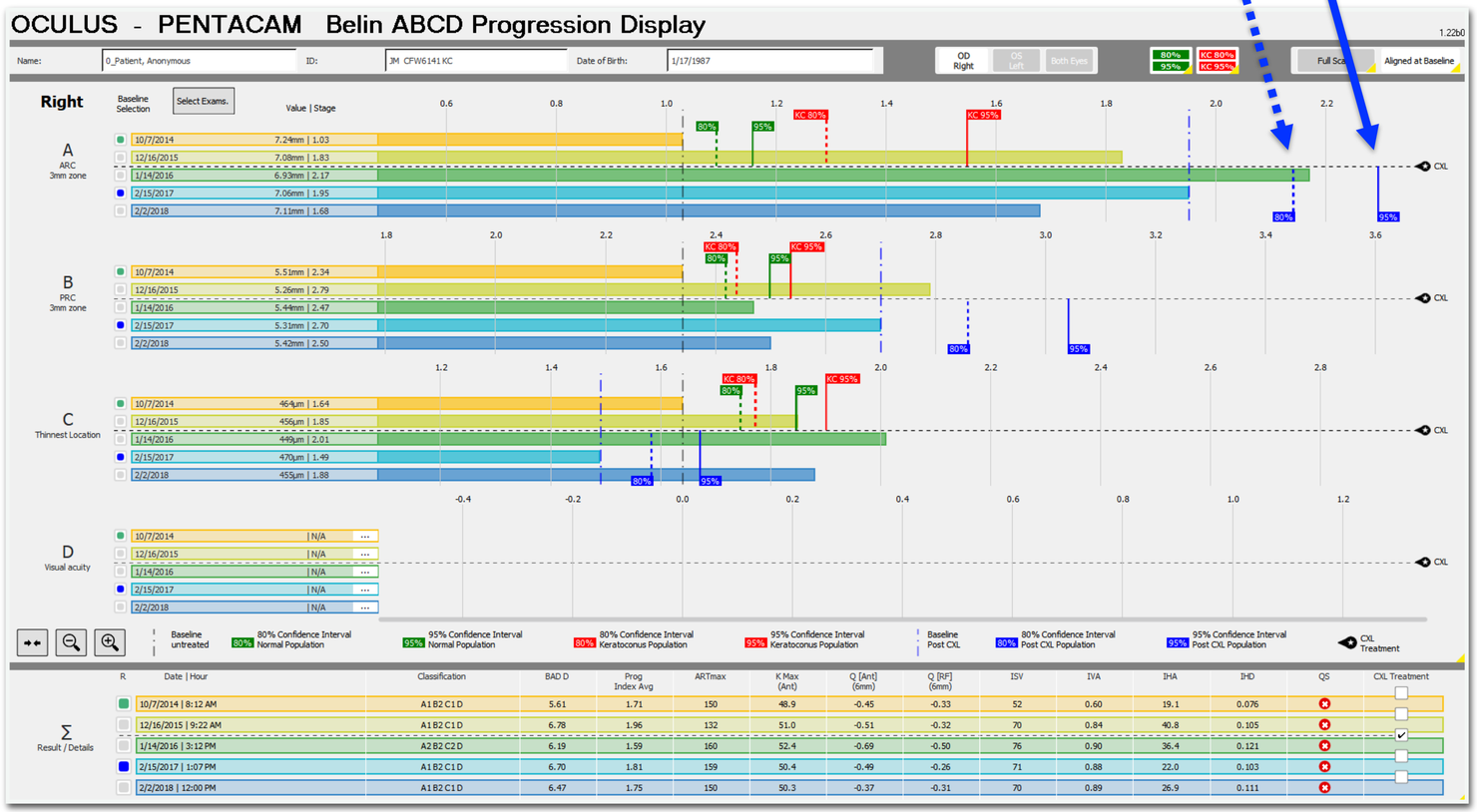
(Pentacam, Oculus GmbH)

3 separate measurements with acceptable quality check, removing patient from device between each measurement

Pooled variance estimates and one-sided confidence intervals were calculated

Confidence intervals (CI) after CXL

		80% one-sided CI	95% one-sided CI
41 eyes, 41 patients			
Age (avg): 32.9 years-old	Post CXL "A" parameter	0.170	0.261
Follow-up (avg): 13.5 months	Post CXL "B" parameter	0.136	0.208
BAD-D (avg): 9.26 ± 4.37	Post CXL "C" parameter	4.5	6.9



Final messages

- Corneal cross-linking (CXL) has a major role on the treatment of ectatic diseases and has consistent results in stabilising such progressive conditions.
- Less is known about the tomographic changes after CXL and what could be considered documentation of progression with the possibility of a re-treatment.
- Currently, no confidence intervals are shown on the ABCD progression display once a CXL procedure is performed.
- Our data creates the confidence intervals for corneas after CXL, and are planned for incorporation in the next generation of the display, allowing analysis of both the pre- and post-CXL corneas.

THANK YOU