

**INTERNATIONAL CXL EXPERTS MEETING  
ZURICH - 2016**

**THE RESULTS OF  
SIMULTANEOUS ON BOTH  
EYES CORNEAL COLLAGEN  
CROSSLINKING**



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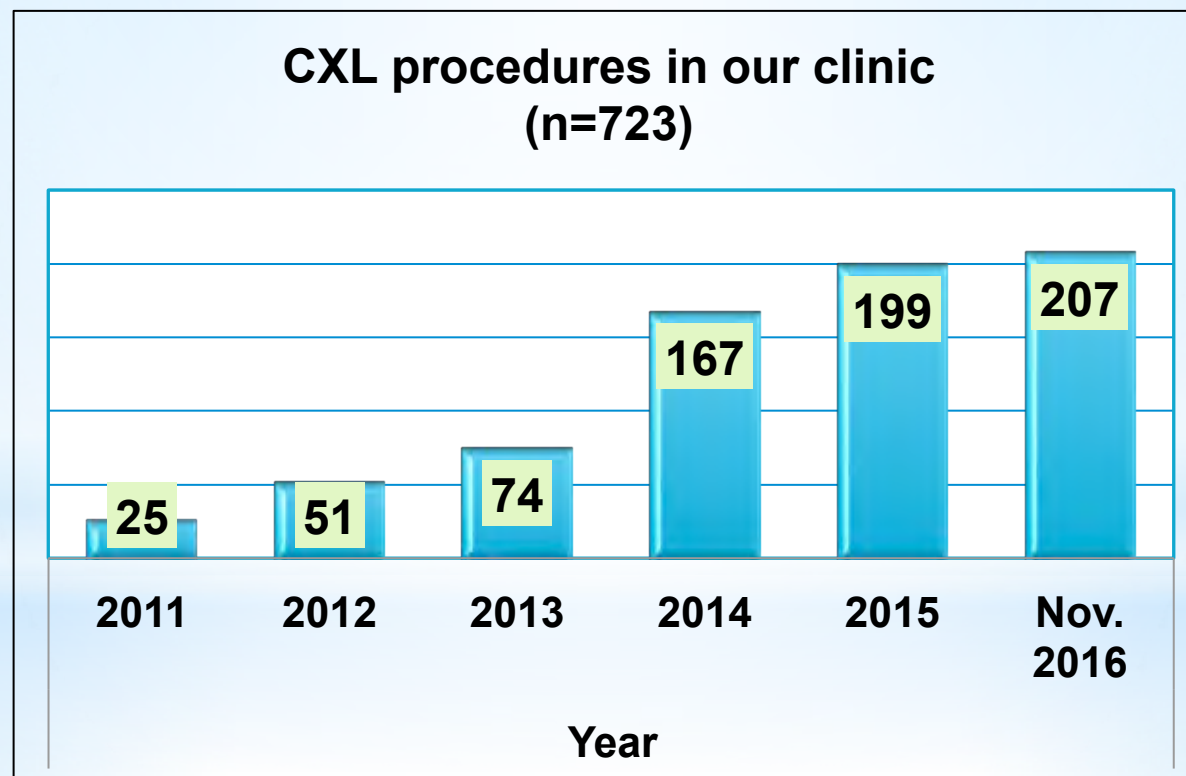
*WE HAVE NO FINANCIAL INTERESTS*



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# Introduction

**Progressive increase in detection of patients with keratoconus determines the need to find crosslinking modifications in order to make procedure faster without losing its efficacy and safety**



# Purpose

**To assess the results of corneal collagen crosslinking performed simultaneously on both eyes to treat progressive keratoconus**



# Methods

- ❖ The study included 18 patients (36 eyes) with primary keratoconus stage I-II
- ❖ Amsler classification (Pentacam)
- ❖ Corneal cross-linking was performed using Russian UV-devices and riboflavin solution with dextran
- ❖ In the main group corneal crosslinking was provided simultaneously on both eyes, in the control group - consistently





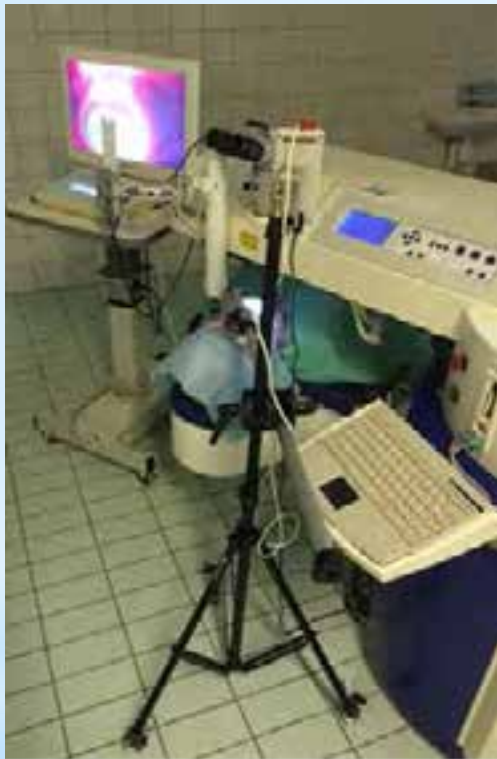
**“Device for cornea  
phototherapy”  
(Moscow, Russia)**

**“Ufalink”  
(Ufa, Russia)**





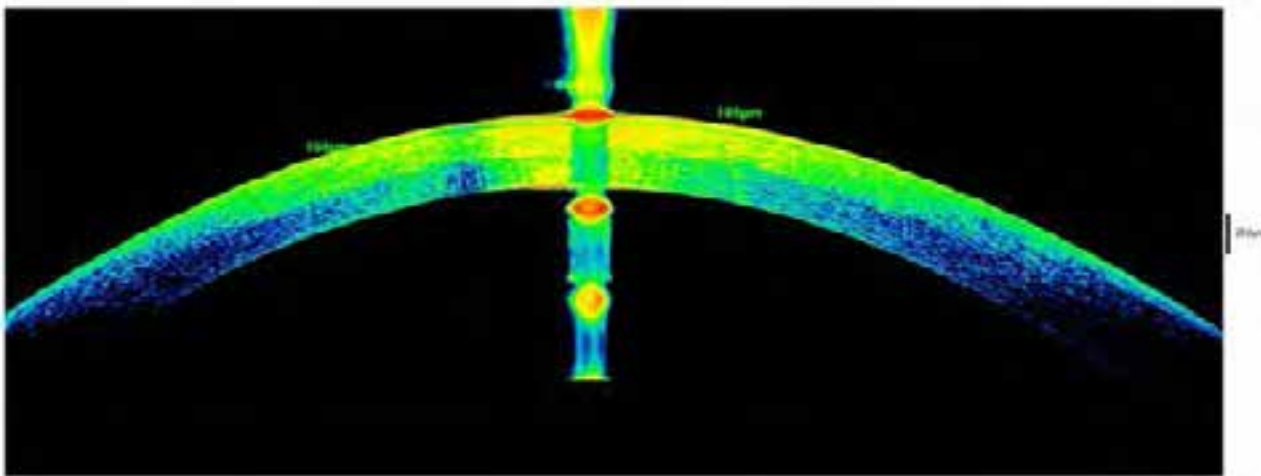
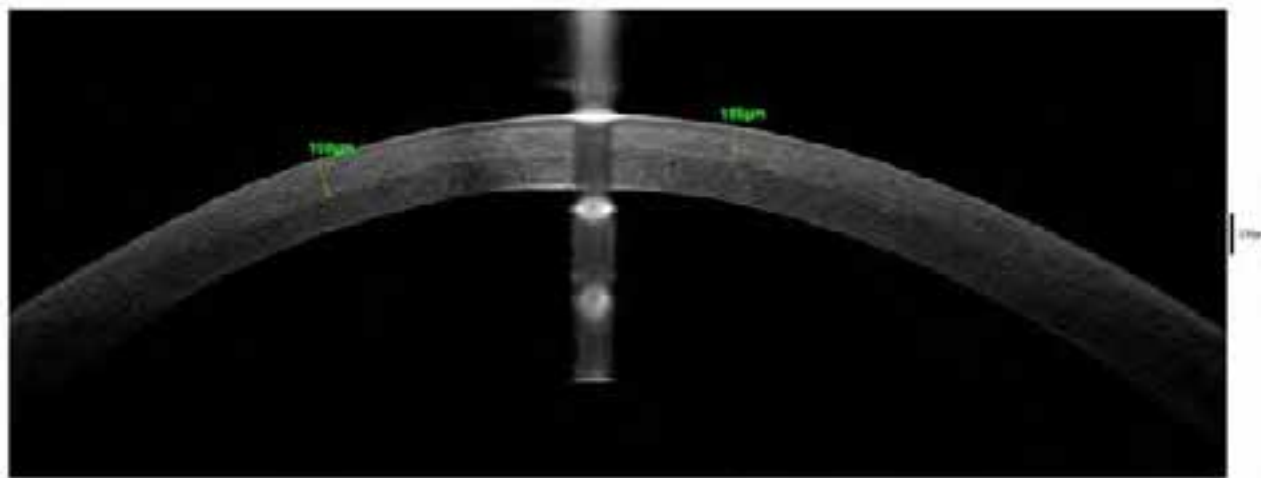
# Methods



- ❖ Epi-off
- ❖ 30 minutes riboflavin instillation
- ❖ 30 minutes UV
- ❖  $\lambda = 370\mu$
- ❖ Fluency - 5 mW/cm<sup>2</sup>
- ❖ Spot diameter – 8 mm



# OCT Optovue

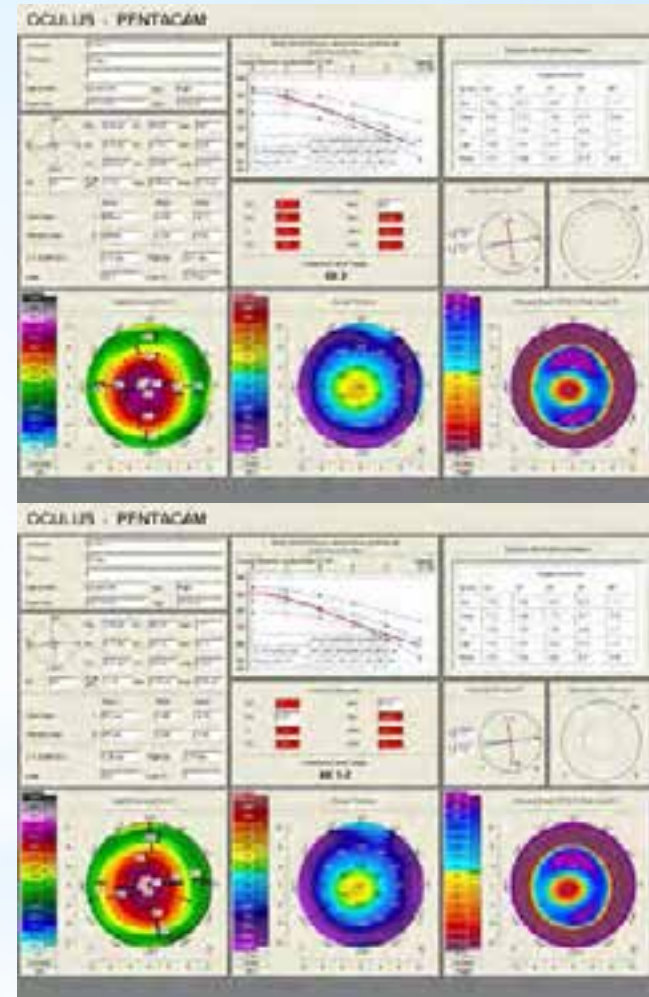


**Demarcation  
line  $\leq$  200  
microns**



# Pentacam

- ❖ No progression
- ❖ No differences in back elevation
- ❖ No increase of topography indices





# Results

- ❖ There were no early or late complications
- ❖ Epithelization completed at  $4,0 \pm 1,0$  day
- ❖ In the main and control groups there were no differences between the severity of corneal syndrome, functional and refractive results and endothelial cells density
- ❖ **Better fixation during simultaneous procedure**



# Conclusion

**Simultaneous on both eyes corneal collagen crosslinking is effective method to treat keratoconus and significantly reduce the duration of the procedure**



# Thank you!



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