



First clinical results after LASIK performed
with a new Microscan Visum 500 Hz
excimer laser
(Nano Vision Group, Russia) connected to
wave front aberrometry

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Financial Interest

Author:	Dementiev, Dimitrii
Session:	Refractive
Presented at:	Ljubljana 2014
Room:	Poster

Microscan Excimer Laser



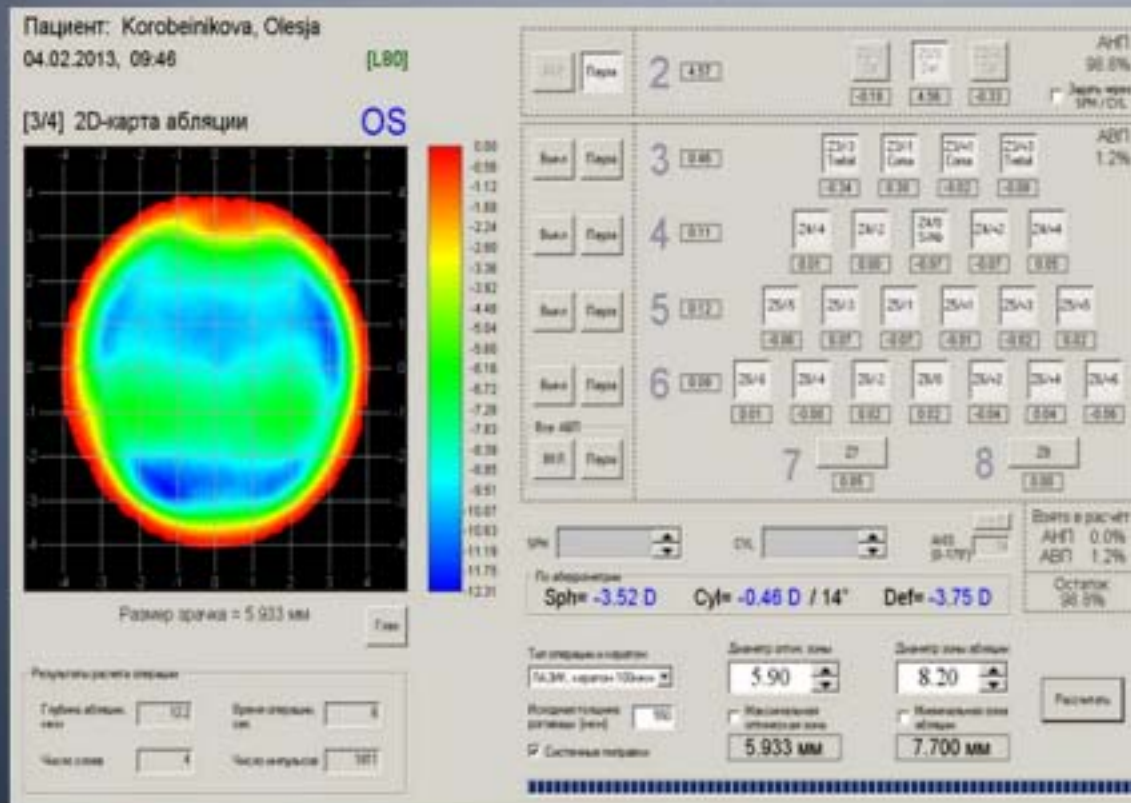
- Repetition rate 500 Hz
- Flying small spot 0.9 mm beam
- Closed-loop eye tracking
- Response time 3 ms
- Long term ablation fluctuations < 2%
- Optical zone to 9.0 mm
- Aspherical transition zone to 10 mm

Aberrometry-Topography System L-80



- Autorefractometer
- Keratometer
- Wavefront aberrometer with high resolution Shack- Hartmann technology
- Placido disk based corneal topography
- Fully automatic real time focusing, centering, and eye tracking

PlatoScan – Wavefront Guided Treatment Algorithm for MicroScan Visum



PlatoScan - special device to transform wavefront data from aberrometry to surgery calculated map

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Materials and methods

*32 eyes (19 eyes 3 month follow up + 13 eyes 5 months follow up) myopia, hyperopia & astigmatism

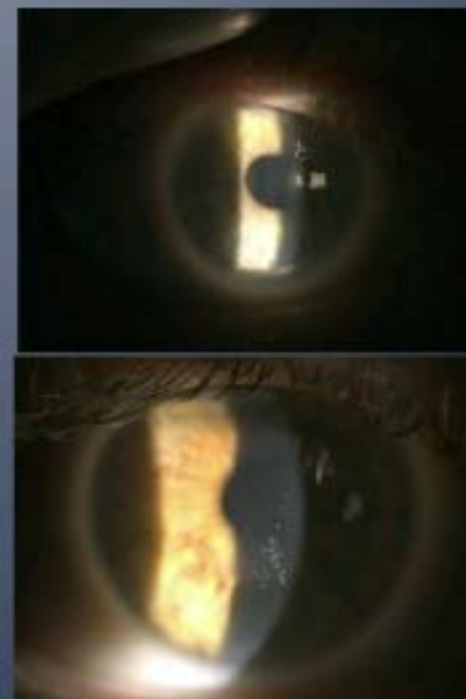
* Average age 36 Y.O.

*All patients were undergone customized wave front treated LASIK. In 1 pseudophakic eye with hyperopia personalized PRK was performed

Complications

Surgical: 1 patient had bleeding from paralimbal vessels after flap creation

Post op follow up: dry eye syndrome in 1 case

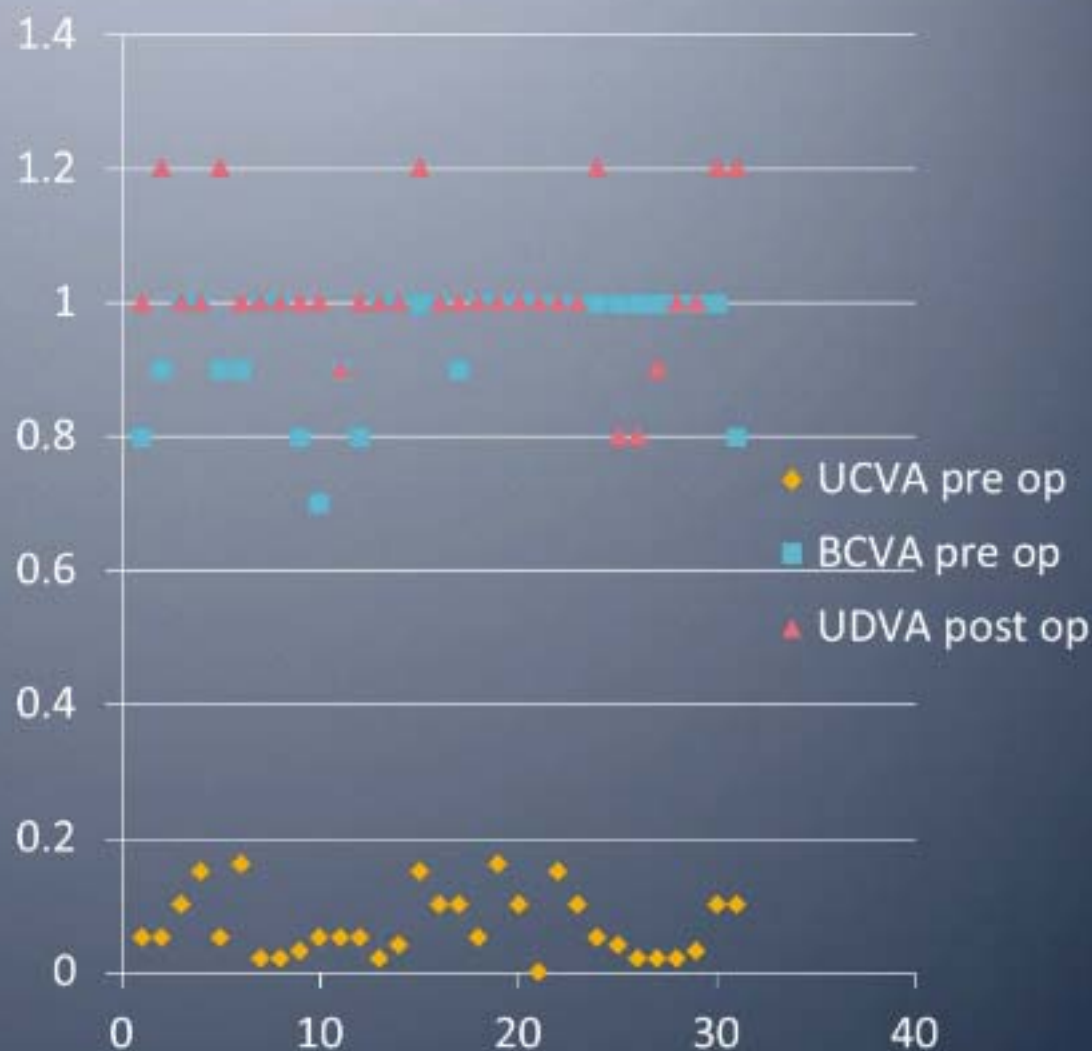


Pre op and Post op VA

Mean UCVA pre op 0.06

Mean BCVA pre op 0.89

Mean UDVA post op
1.06





Conclusion

*Microscan 500 Hz Excimer Laser (NanoVision Group, Russia)
connected to wave front aberrometry*

Showed

- increase of UDVA in all the eyes
- efficacy
- safety
- predictability and stability of refractive results in follow up
- quick visual rehabilitation
- more accuracy of final refractive calculation was achieved as compared with manual calculation
- Can be the equipment of choice in corneal refractive surgery

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