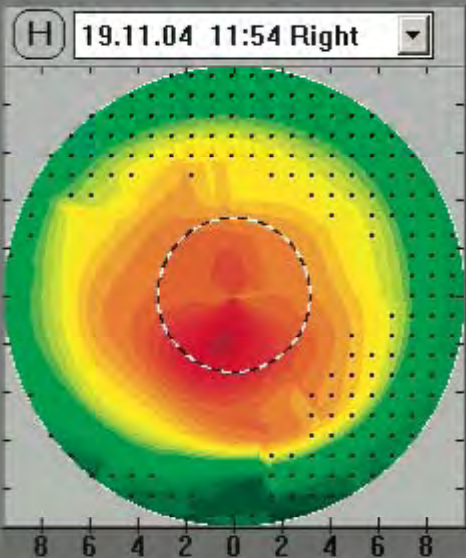
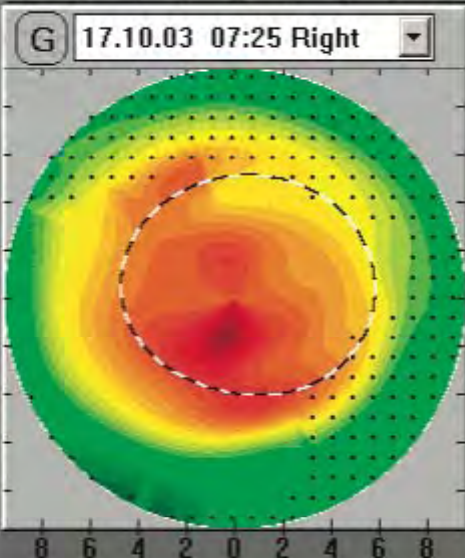
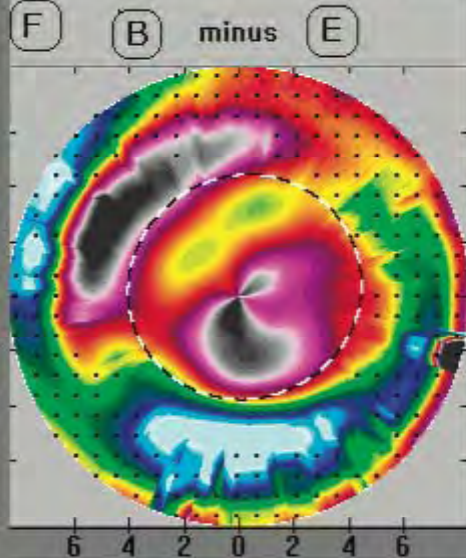
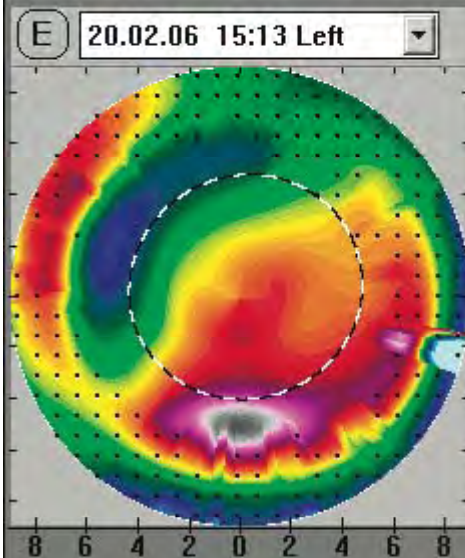
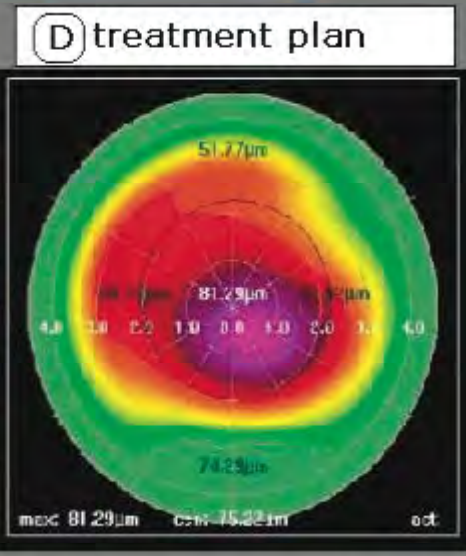
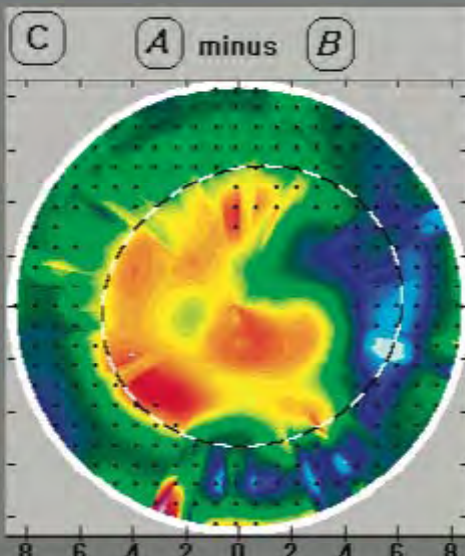
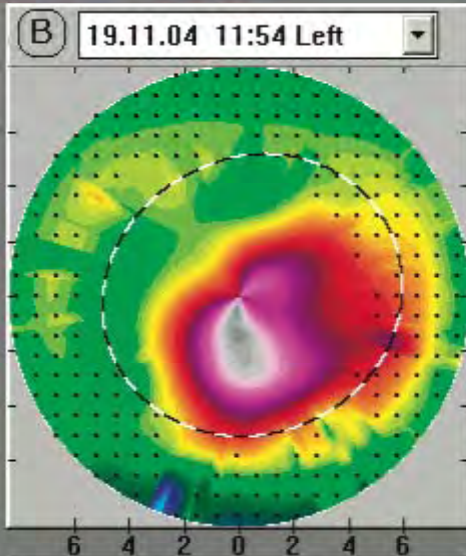
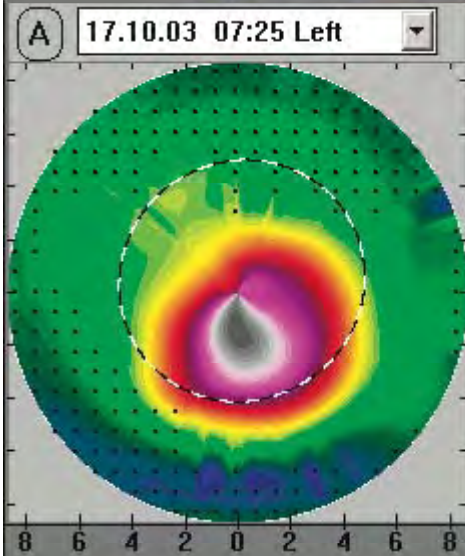


Long term comparison of sequential to combined collagen cross-linking (CCL) and limited topography-guided PRK (tPRK) for keratoconus (KCN)

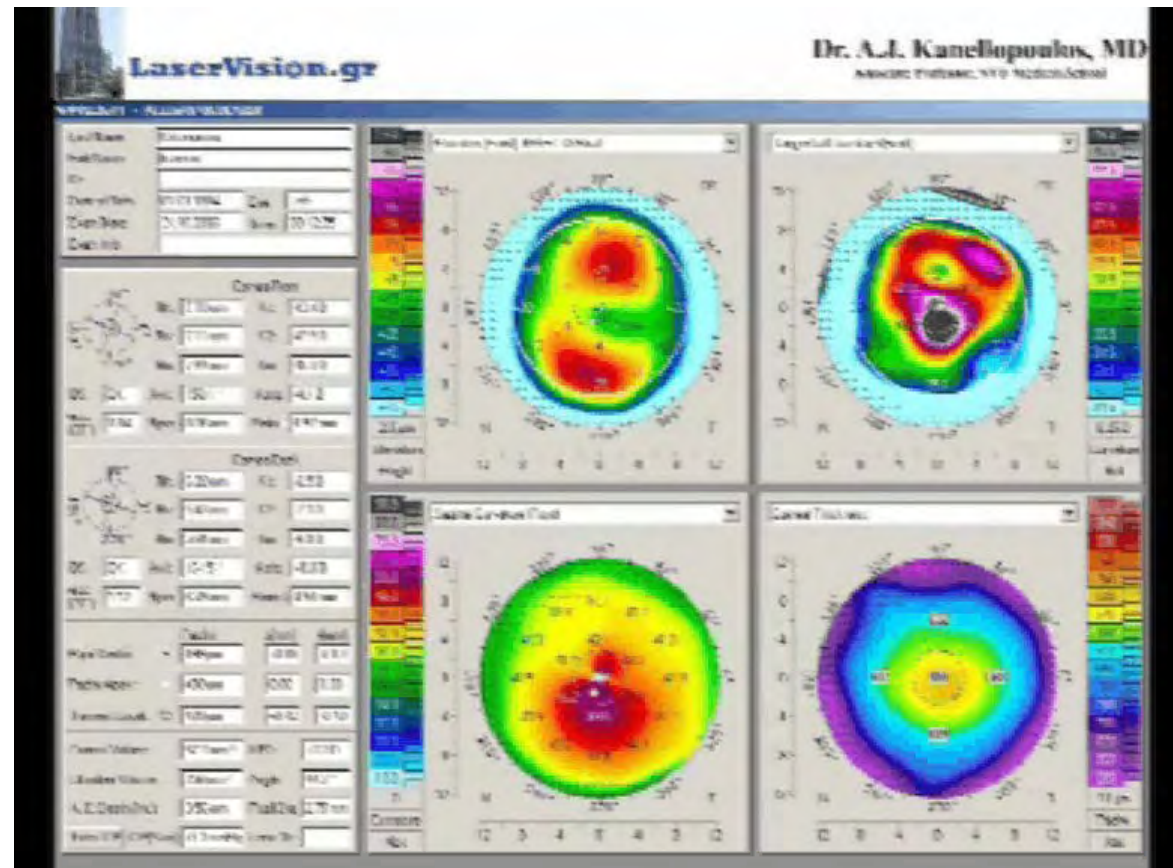
AAO 2009



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Director, Laservision.gr Institute, Athens, Greece



UVA: 300mW / cm² for 30 minutes- Priavision device



Methods new technique:

- **1-Topo-customised surface ablation**
- **Epithelial removal: 6.5mm 50nm PTK**
- **Custom topography-guided treatment utilizing Wavelight topo-guided software (topo or oculink)**
- **(75% cylinder, some or all sphere limited by cornea thickness up to 50 microns, OZ at least 5mm)**
- **MMC 0.02% for 30 sec**

- **2-Then UVA CCL 3mW/cm² for 30 minutes with riboflavin 0.1% drops**
- **Follow-up 18-36 months**

Study design

325 KCN cases were evaluated for UCVA, BSCVA,

refraction, keratometry (K), topography, endothelium and clarity.

115 eyes (group A) had tPRK at least 6 months following CCL,

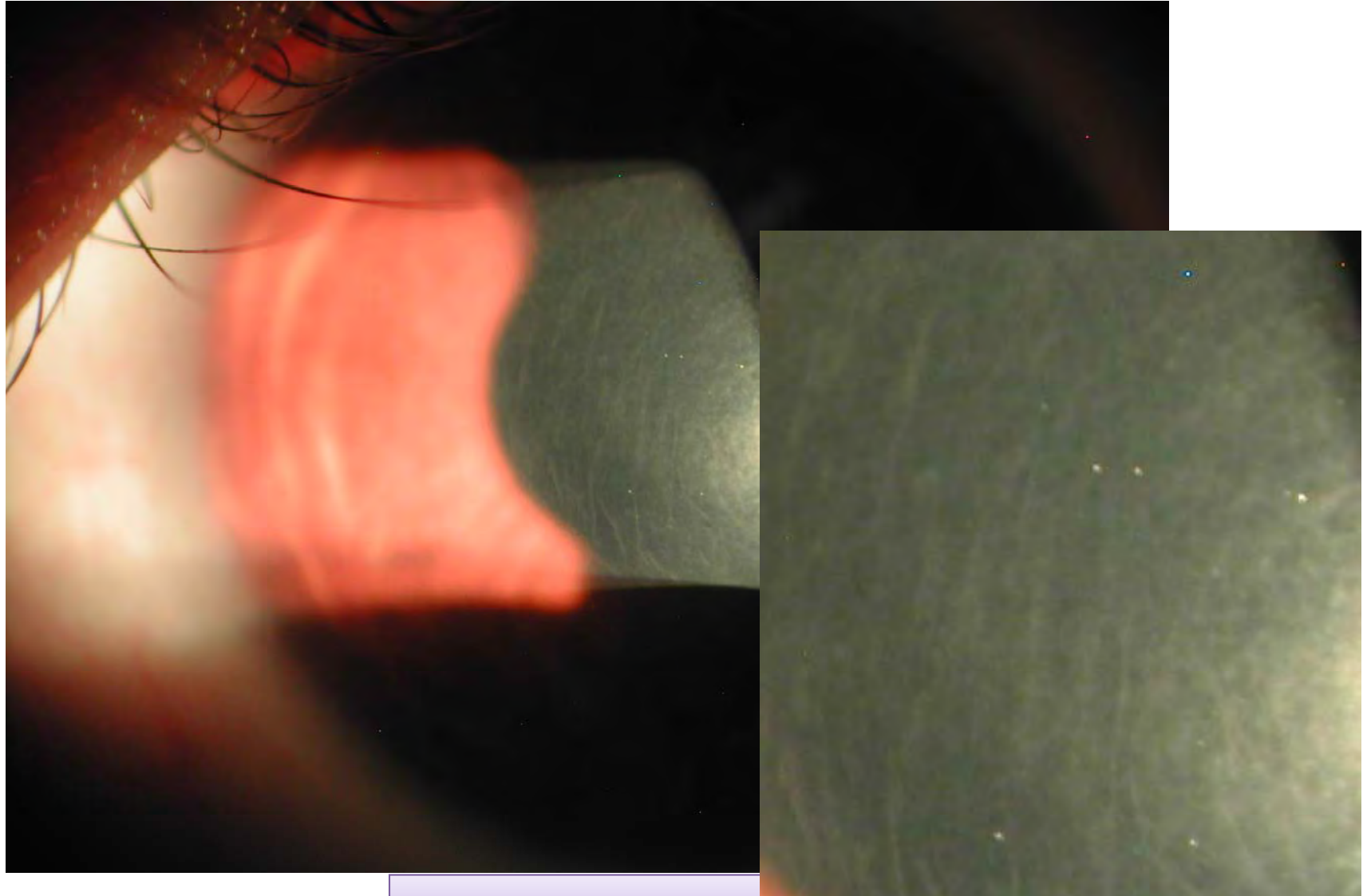
200 eyes (group B) had first tPRK combined with CCL.

Mean follow-up was 26 months.

Results

- Group A (had tPRK at least 6 months following CCL): The mean improvement of UCVA was 0.12 to 0.41, BSCVA 0.42 to 0.68.
- Group B (had first tPRK combined with CCL): UCVA 0.11 to 0.5, BSCVA: 0.41 to 0.78.
- Statistically group B did better in all fields evaluated.

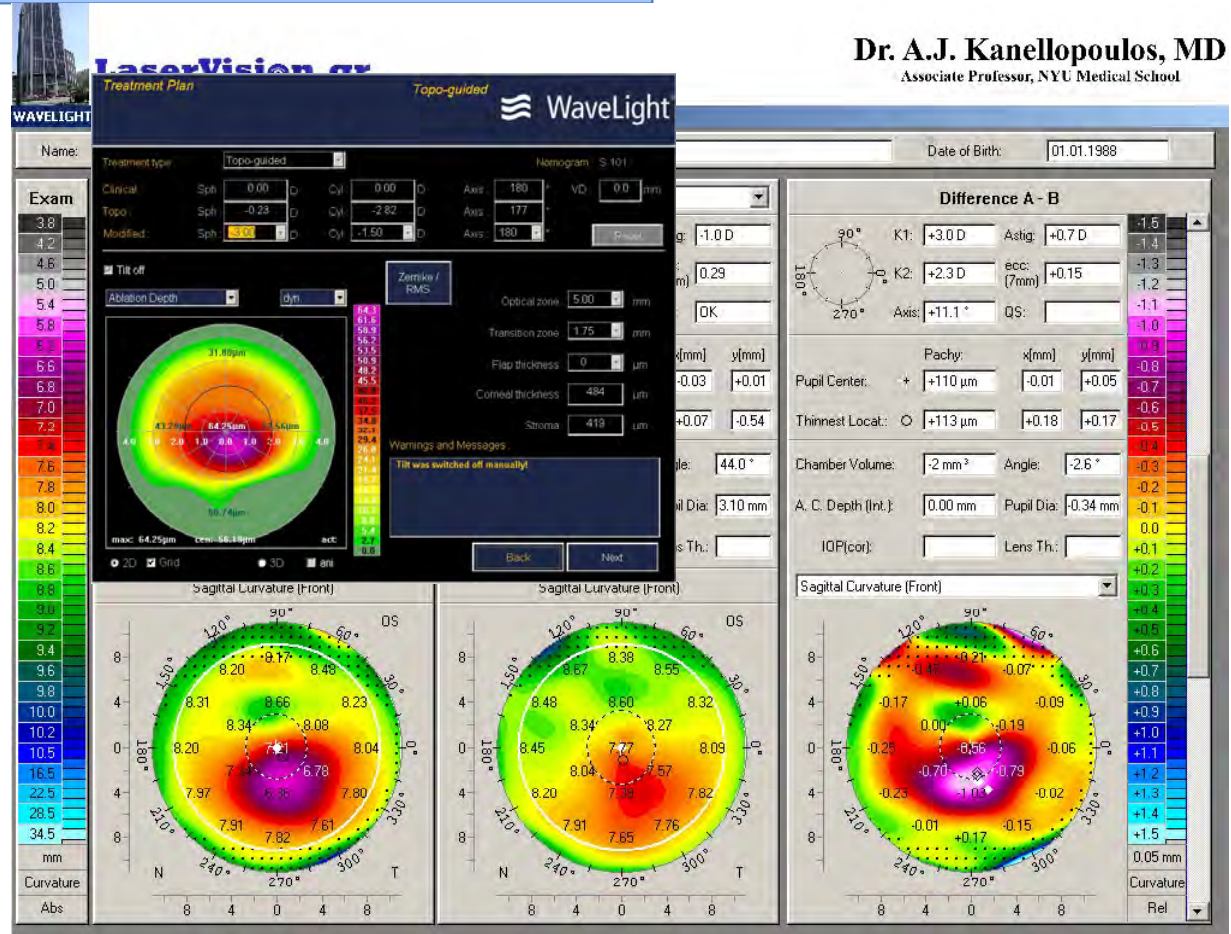
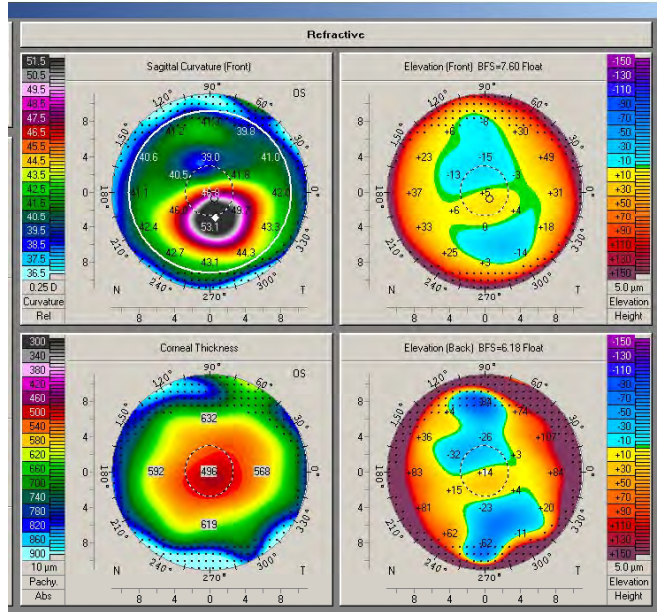
Clinical signs of CCL



A 24 y/o
 Pre: UCVA 20/200
 -4.5 -1.50 X 180 20/30
 2 months post: UCVA 20/20
 -0.25 -0.75 X34

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 Associate Professor, NYU Medical School

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 Associate Professor, NYU Medical School



Conclusions:

- In this study we showed that UVA CCL following a limited topo-guided PRK may be a safe treatment to stabilize KCN and post-LASIK ectasia.
- Visual rehabilitation has been very gratifying
- Most treatments delivered more than planned > need for underscoring nomogram
- Our therapeutic goal has not been emmetropia, but normalization of the cornea and improvement in BSCVA

Conclusions:

Sequential tPRK and CCL appear to be superior to the rehabilitation of KCN.

The advantages in pre-treating with the topoguided PRK are:

- 1- just one procedure
- 2-less PRK associated scarring
- 3-No need to remove cross-linked cornea

- This technique may prevent PK as a necessary option and may have wide application
- Longer follow-up and further studies are necessary

Thank you

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