



Comparison of visual outcomes of Topo guided and Wave front optimized LASIK: A contralateral eye study

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Introduction

- WFO ablation produces an aspherical ablation profile, by applying a pre calculated spherical aberration treatment protocol.
- T-CAT is the latest platform for refractive surgery
- TCAT attempts to maintain corneal asphericity while neutralizing abnormalities.

Advantages of T-CAT

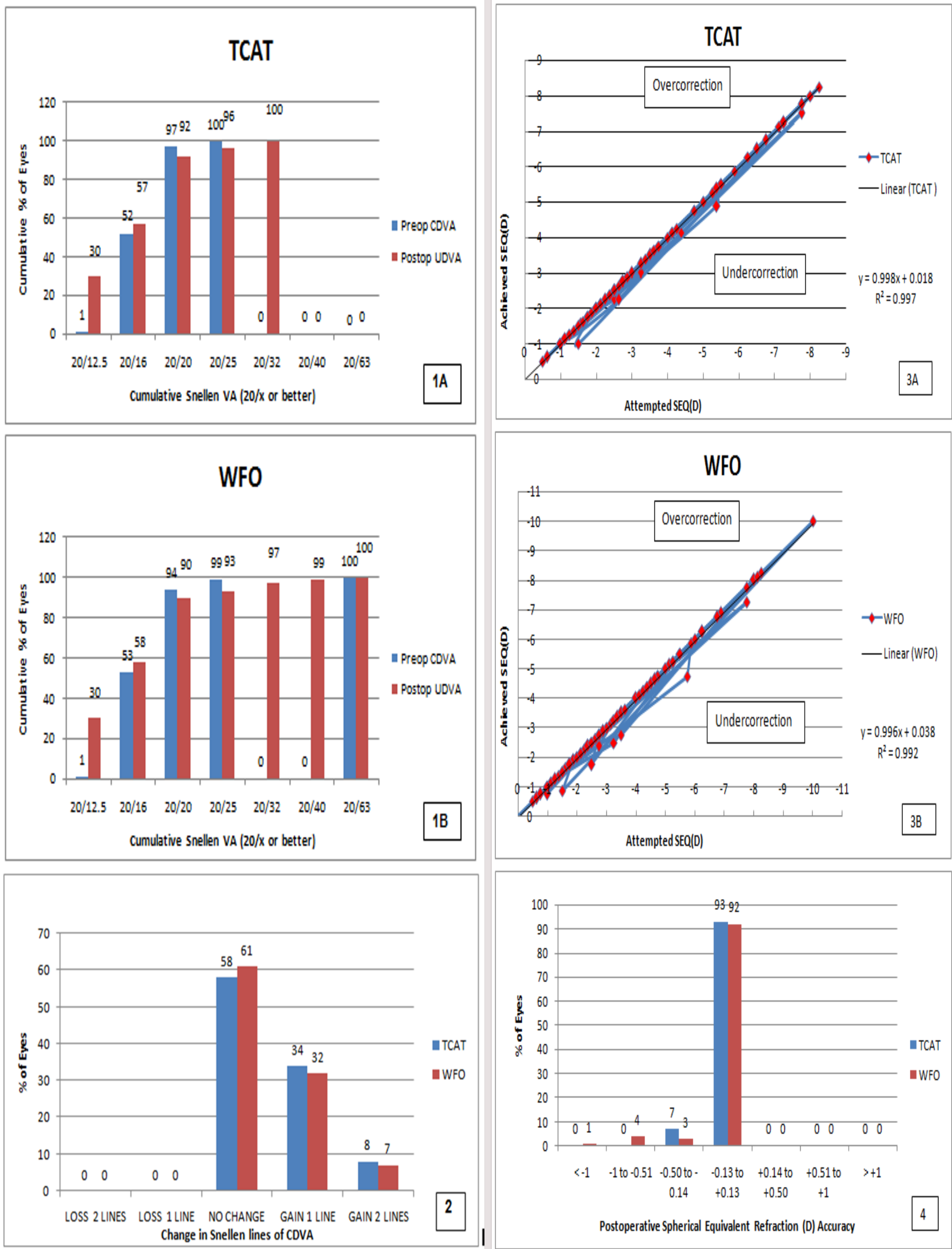
- Static
- Reproducible
- More peripheral data
- Based on cornea where most aberrations are created
- More measurement points



Methods

- 200 eyes of 100 consecutive patients in this contralateral eye study.
- Topography data from Vario topolyzer (Wavelight, Erlagen, Germany) .
- Pachymetric data from the Oculyzer II (Wavelight).
- Flaps, fashioned using the VisuMax femtosecond laser (Carl Zeiss Meditec, Jena, Germany), with 100 μ thickness.
- Ablation with excimer laser (EX 500 Wavelight).

Results



Intragroup HOAs				
HOAs	Procedure	Preoperative (mean ± SD)	Postoperative (mean ± SD)	P ^a value
Trefoil	T-CAT	0.010 ± 0.165	-0.005 ± 0.211	0.6072
	WFO	-0.006 ± 0.155	0.006 ± 0.180	0.6252
Horizontal	T-CAT	-0.027 ± 0.314	-0.196 ± 0.462	0.0075^a
	WFO	0.046 ± 0.341	-0.065 ± 0.574	0.1357
Vertical	T-CAT	-0.054 ± 0.286	-0.363 ± 0.584	0.0001^a
	WFO	-0.035 ± 0.309	-0.290 ± 0.602	0.001^a
Spherical aberrations	T-CAT	1.150 ± 0.218	1.948 ± 0.602	0.0001^a
	WFO	1.160 ± 0.214	1.938 ± 0.642	0.0001^a

Conclusion

- T-CAT and WFO were both equally effective and safe
- T-CAT with better gain of lines
- Lesser induction of HOAs in T-CAT

Literature Cited

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Disclosure

Authors of this presentation do not have any disclosure concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation:

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