

Refractive Outcomes after LASEK Procedures using the CustomVis PULZAR™ Z1 Solid State Laser

Sunil Shah

Phillip J Buckhurst, James S Wolffsohn, David Baker

The authors have no financial interest in the subject matter of this poster

The CustomVis PULZAR™ Z1 laser



- ▶ 213 nm wavelength solid-state laser
- ▶ Diode pumped Nd:YAG refractive laser (no gas)
- ▶ 0.6 mm quasi-Gaussian shaped flying spot
- ▶ 300 Hz repetition rate

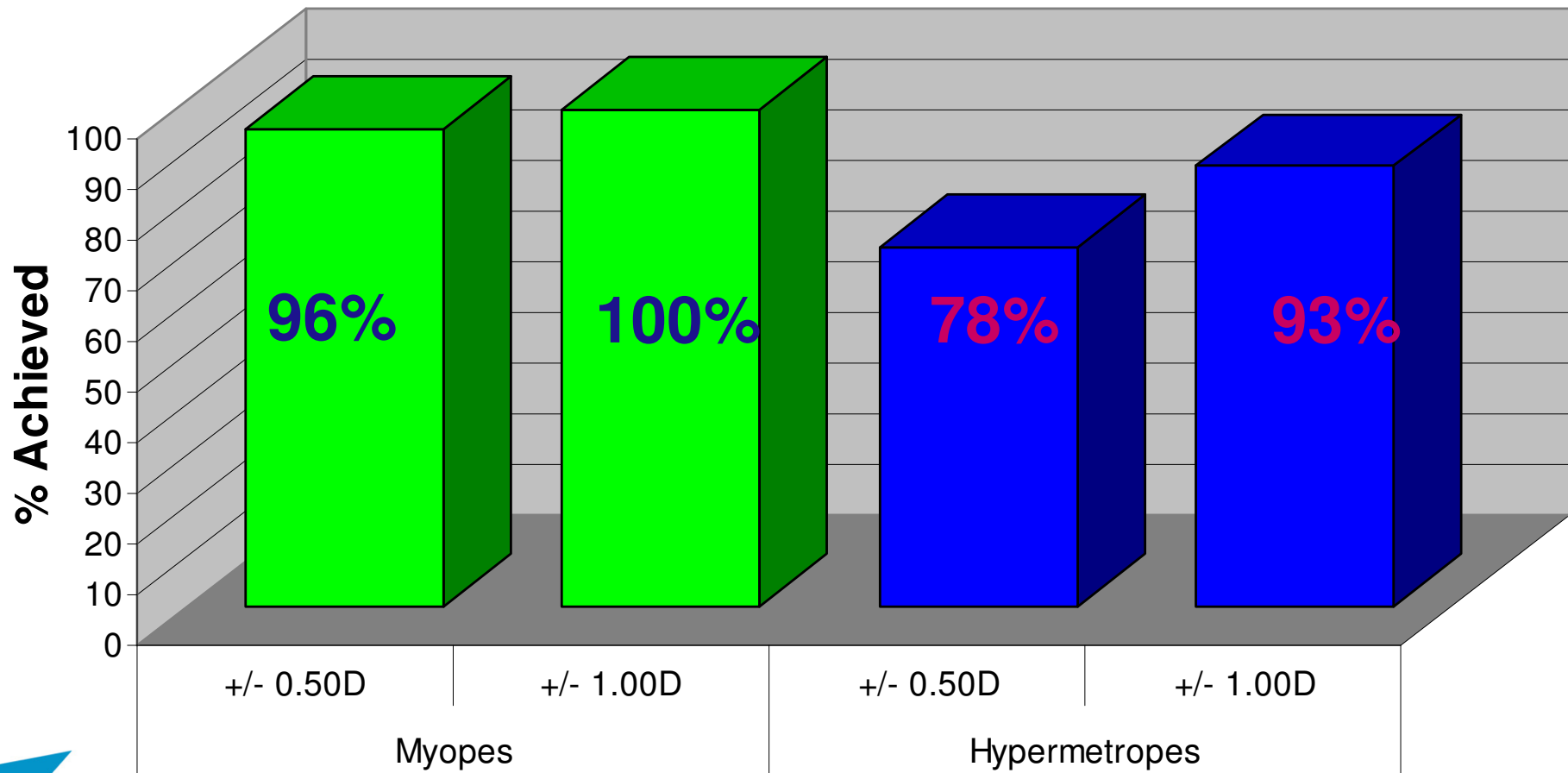
Patient Population n = 244 eyes

	Myopes	Hyperopes
Number of eyes	180	64
Mean sphere (range)	-3.59 ± 1.93 D (-0.75 to -10.50 D)	$+2.78 \pm 1.21$ D (+0.75 to +6.00 D)
Mean cylinder (range)	1.05 ± 1.05 D (0 to 5.00 D)	0.72 ± 1.47 D (0 to 4.00 D)
Follow up	3 months	3 months

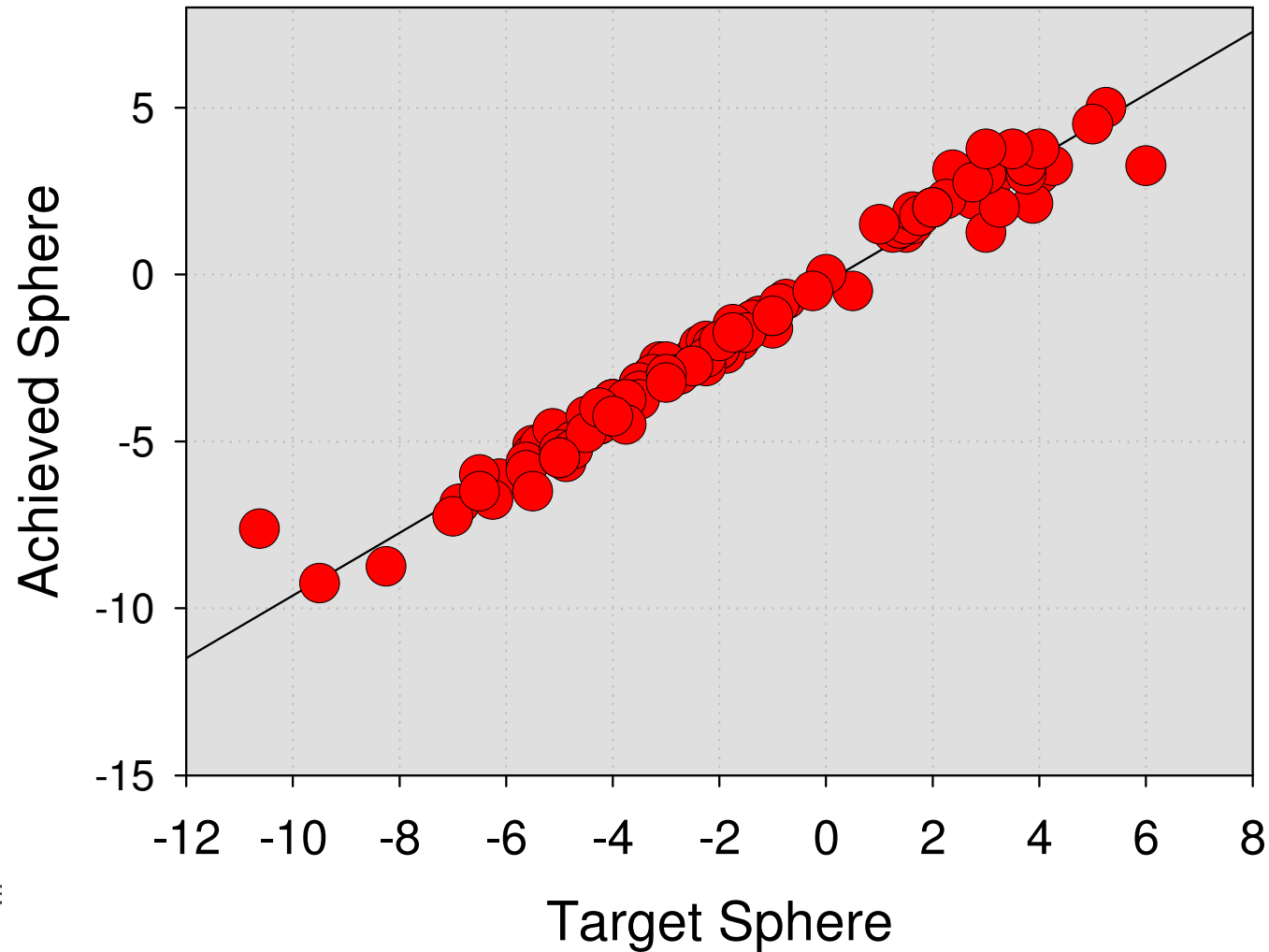
3 month visit

- ▶ Uncorrected visual acuity (UCVA)
- ▶ Refraction
- ▶ Best corrected visual acuity (BCVA)
- ▶ Aberrometry

Accuracy



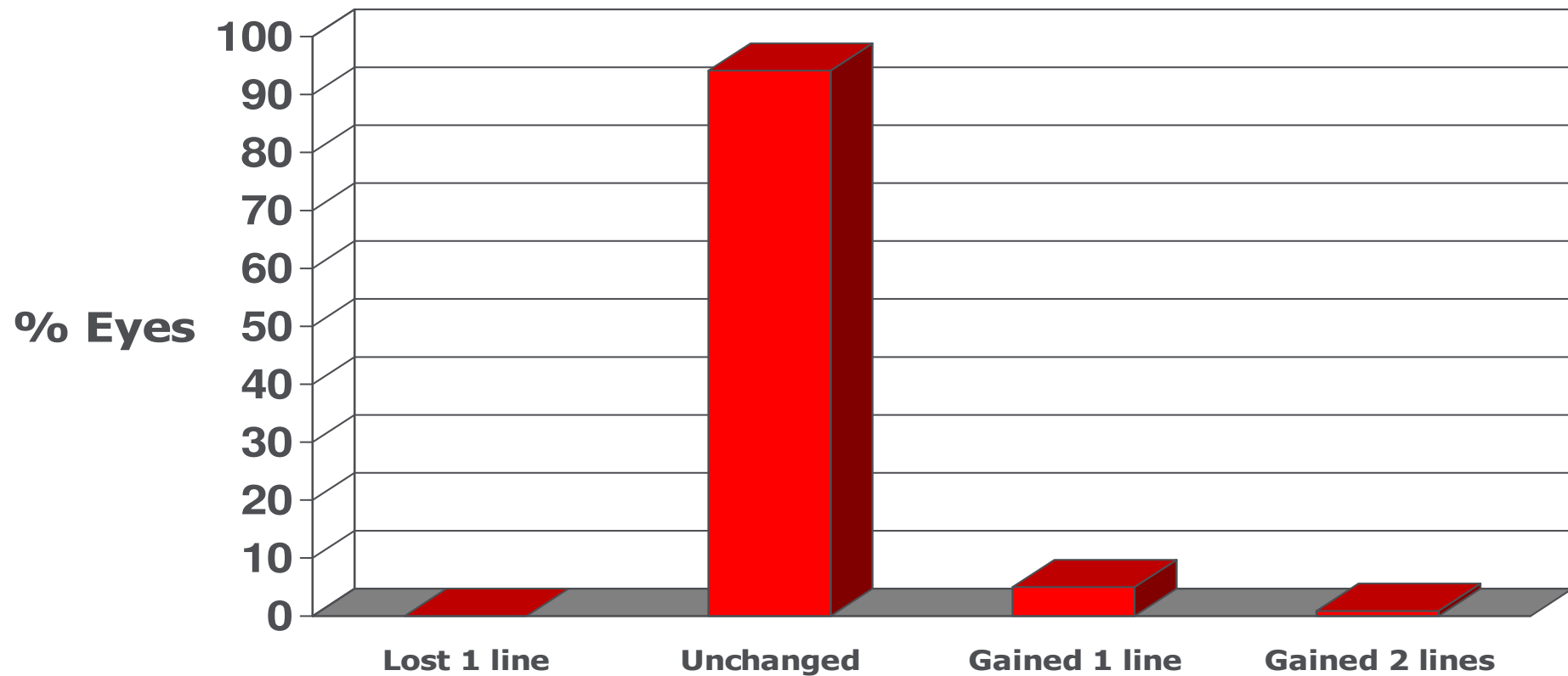
Refractive performance



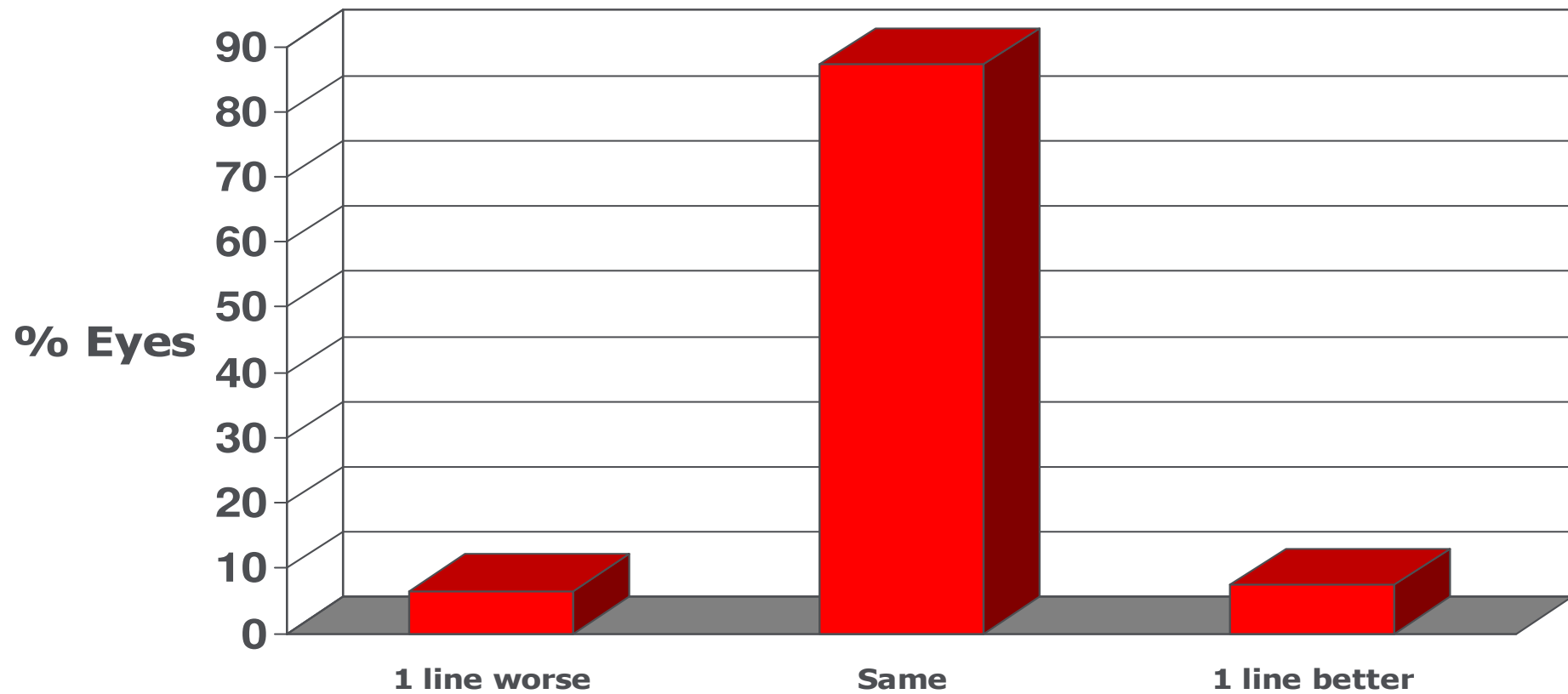
Post-operative higher order aberrations changed slightly following LASEK

	Change in higher order aberrations	
	Myopes	Hyperopes
Total	+0.061 ± 0.054	+0.054 ± 0.077
Coma	+0.053 ± 0.119	+0.028 ± 0.055
Spherical	+0.029 ± 0.064	+0.002 ± 0.042
Trefoil	+0.002 ± 0.068	+0.034 ± 0.066

Safety: change in BCVA following surgery



Pre-operative BCVA *versus* post-operative UCVA



Conclusions

- ▶ These results show that the CustomVis PULZAR™ Z1 solid state laser is a safe, reliable and effective tool for laser refractive surgery.

Refractive Outcomes after LASEK Procedures using the CustomVis PULZAR™ Z1 Solid State Laser

Sunil Shah

Phillip J Buckhurst, James S Wolffsohn, David Baker

The authors have no financial interest in the subject matter of this poster