





## Early results after myopic refractive surgery with CustomVis Pulzar Laser System



Pallikaris I, Tsiklis NS, Kymionis GD, Kounis G, Katsanevaki V, Astyrakakis N

10TH ESCRS WINTER REFRACTIVE SURGERY MEETING, Monte Carlo, Monaco, 2006



## Purpose - Methods

- To determine the safety and efficacy of performing refractive surgery with CustomVis Pulzar Laser System.
- We evaluate prospectively five LASIK (10 eyes), three PRK (5 eyes) and four EpiLasik patients (8 eyes) after the correction of low to moderate myopia (mean  $-3,84 \pm 1,35$  D, range  $-2$ D to  $-7$ D) or compound myopic astigmatism (mean  $-0,92 \pm 0,59$  D, range  $-0,5$ D to  $-2,5$ D) with CustomVis Pulzar Laser System.
- Manifest refraction, uncorrected visual acuity (UCVA), best spectacle-corrected visual acuity (BSCVA) and patients' satisfaction (from 0 to 5 scale) were studied



## Results (1)

- None of the included eyes has intraoperative, early or late postoperative complications.
- At the 3m post-op all eyes were within 1.0 diopters (D) of emmetropia while 61% were within 0.5 D of emmetropia.
- On a scale of 1 to 5 for current overall satisfaction, all the patients (100%) were considered to be satisfied with the results (scored 5)

The scatter plot displays the relationship between the diopters attempted and the diopters achieved. The x-axis is labeled 'Attempted (D)' and ranges from -2.00 to 8.00. The y-axis is labeled 'Achieved (D)' and ranges from -2.00 to 8.00. A series of blue data points shows a strong positive linear correlation, with a regression line drawn through them. The regression equation is  $y = 0.7419x - 0.6574$  and the coefficient of determination is  $R^2 = 0.9567$ .

## Results (2)

### Visual outcome

- The mean UCVA was significantly improved from counting finger to 20/32 or better in all eyes while 13 eyes (56%) had UCVA 20/20 at the 3 months post-op.
- Best spectacle-corrected visual acuity (BSCVA) remained unchanged or improved in all eyes. Specifically, 16 eyes (69%) remained unchanged while 7 eyes (31%) gained 1 line of BSCVA. All eyes had BSCVA of  $\geq 20/25$ , with 87% being  $\geq 20/20$ .

## Conclusion

- Refractive surgery with **CustomVis Pulzar Laser System** seems be a safe procedure to treat patients with myopia with or without myopic astigmatism
- Further studies, including **more patients** are necessary to determine the **long-term safety and stability of outcomes**.

