Keys for Successful Aspheric Hyperopic LASIK Correction

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The paths of light through the eye

Aspheric: omni-focal

Graphic courtesy of George Dai
Simulated outcomes: monofocal correction

Distance  Intermediate  Near

Photo courtesy of George Dai
Simulated outcomes: omnifocal correction

Distance
Intermediate
Near

Photo courtesy of George Dai
Baseline characteristics

• 66 eyes of 33 hyperopic presbyopic subjects

• Pre-op refractions
  - Sphere: +1.77 D ± 0.56 (range +0.75 to +3.50 D)
  - Cylinder: +0.41 D ± 0.34 (range 0.00 to +1.50 D)

• Age: 55.11 ± 4.56

• DCNVA: J5 ± 1

• 59% female
VISX® aspherical treatment design

CustomVue

CustomVue + Presbyopia

Presbyopia Ablation

+2.00+0.50x125

IR n=23, no IR n = 27
Safety

Mesopic CS within normal limits
BCVA 20/20+1±1 line, no eye worse than 20/25

60 eyes @ 6M
50 eyes @ 12M
Effectiveness

Δ DCNVA

75% improved by 2 or more lines
Δ DCNVA = 2.7 ± 1.7 lines, max 6 lines
Effectiveness

93% success (J3 & 20/25) @ 6 M
100% success @ 12 M, 72% J1 & 20/25
Post-op overall satisfaction

- Pre-op Rx* (>+1.00D)
- Pre-op Distance Corrected Near VA (DCNVA)* (J3 or worse)

*ordinal logistic regression, p<0.05
Post-op intermediate and near satisfaction

- **SA** - increased
- **Coma/Trefoil** - minimized
- **MRSE** - minimized
- **DCNVA** - improved

* ordinal logistic regression, p<0.05
Summary

• Patient selection:
  – DCNVA (J3 or worse)
  – MRSE (>+1.00D)

• Patient satisfaction with near vision:
  – Minimal residual MRSE
  – Better post-op DCNVA
    • Increased asphericity
Thank You