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Presbyopia The next frontier

Presbyopia correction : You Need

Perfect balance



Reproduceability

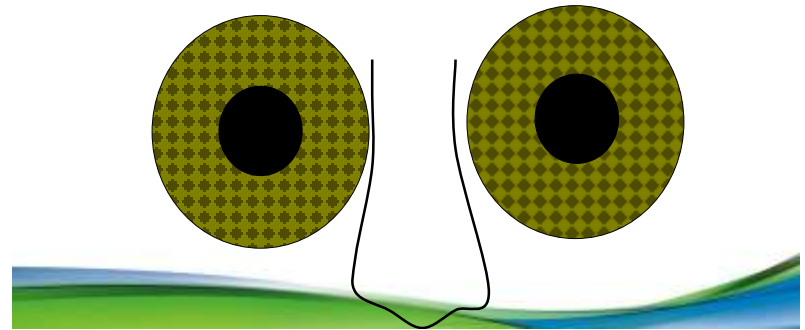


You Can Run ...
But you Can't hide !!!!



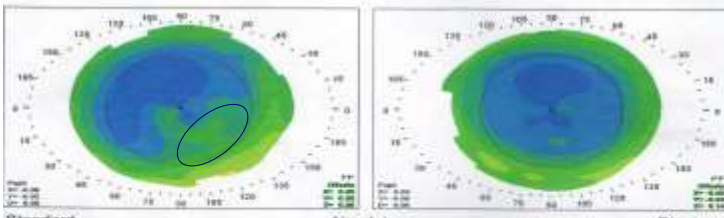
Facts Near Reflex

- Esotropia
- Lens Accomodation
- Miosis and Centroid pupil shift



Rt Eye Presbyopic treatment

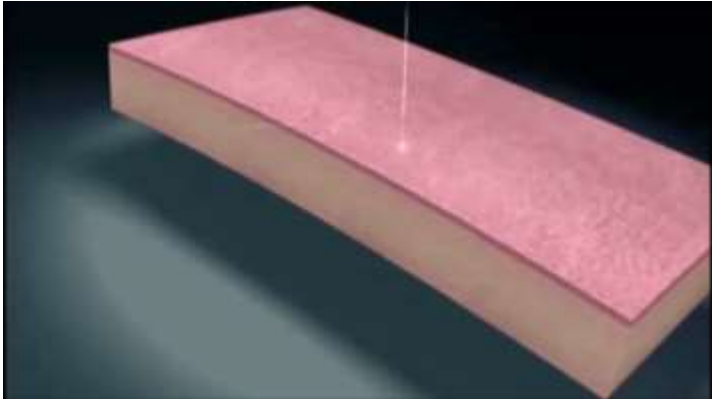
Husain, Eman ID#: 161251	OD Sex: F	Husain, Eman ID#: 161251	OS Sex: F
Date: 9/26/2005 5:40:48 PM	Exam 1	Date: 9/26/2005 5:41:05 PM	Exam 2
K1c: 37.49 @ 178° K2: 36.52 @ 89° Mink: 36.40 @ 120° SFR: 0.64 PVA: 20/25-20/30 SAI: 1.00	AveK: 37.08 Cyl: 0.37	K1c: 37.21 @ 178° K2: 36.49 @ 89° Mink: 36.14 @ 120° SFR: 0.61 PVA: 20/20-20/25 SAI: 0.72	AveK: 36.85 Cyl: 0.72



Regression ... But still are not presbyopes ???



Intra-Cor

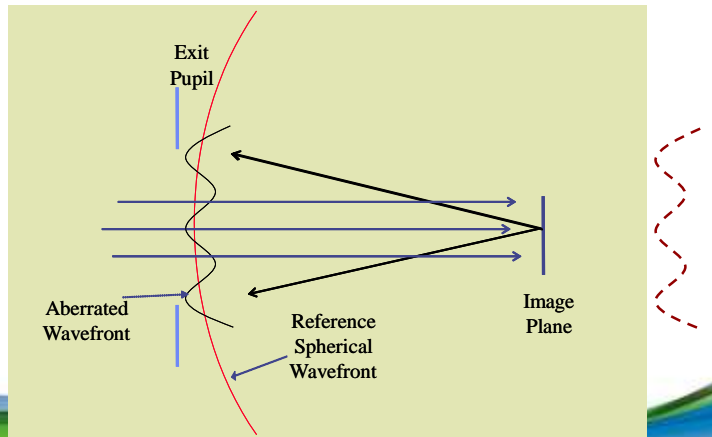


Also Still not presbyopes



Wavefront ????

Vertical Coma



I was afraid to change !!!!!

Old ... but very satisfied

In my humble clinic



Different approaches

Presbyopic Patient	Spectacles	Contact Lens	Multifocal IOL	Monovision	Corneal Inlay	SUPRACOR
Wants to be mostly spectacle-free	✗	✓	✓	✓	✓	✓
Can't tolerate contacts	✗	✗	✓	✓	✓	✓
Wants to avoid lens removal		✗	✗	✓	✓	✓
Can't tolerate monovision				✗	✗	✓
Wants contrast and depth						✓
Wants minimal surgery						✓
Wants excellent near & intermediate vision						✓



Excimer Treatment for Presbyopia

SUPRACOR

Progressive Varifocal Design

- far, intermediate, & near vision



Bilateral Treatment

- Bilateral ablation profile for enhanced depth of field and contrast



Vari-focality .. ??????

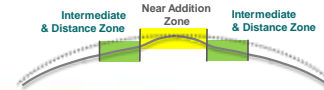
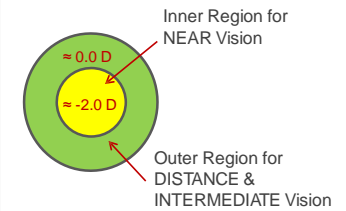
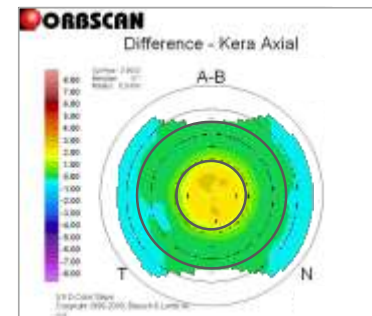
Multi-focality Vs. Vari-focality

Smooth transition from distance to near

- Absence of steps which could decrease the contrast sensitivity.
- Better Intermediate vision
- The treatment is bilateral and almost symmetric.

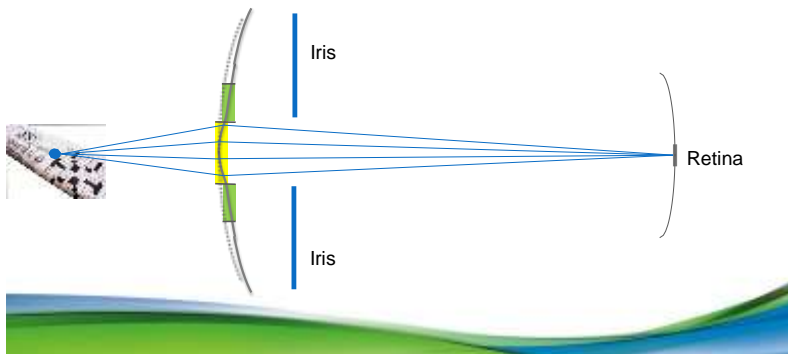
13

Different zone



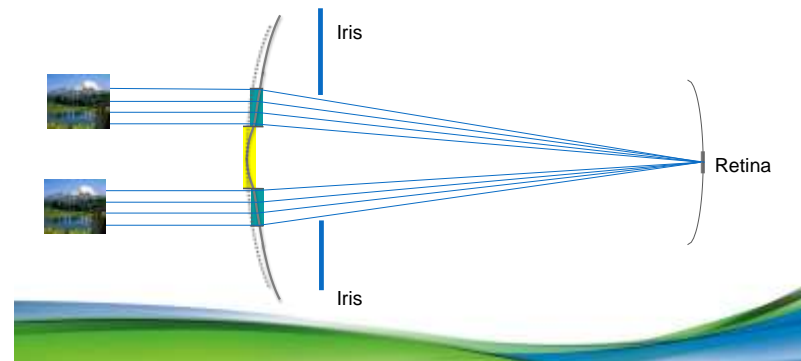
Reading and Near Vision

When reading, the pupil contracts and light primarily passes through the central cornea (Near Addition Zone), where it is focused on the retina.



Distance and Intermediate Vision

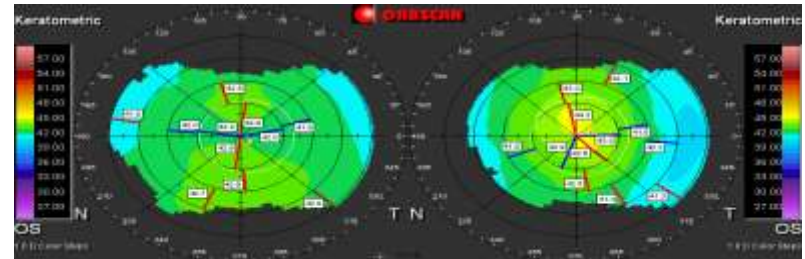
When viewing further in the distance, the iris opens a little and light passes through the outer part of the cornea which is designed to focus parallel light on the retina → good distance vision.



I am always reluctant !!!!!



Near Emetropia



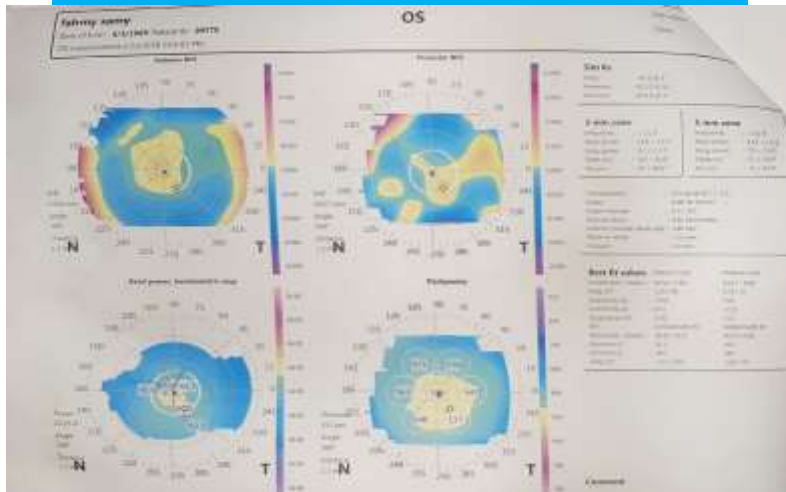
OS pre-OP data:

Refraction: +0,75 / +0,50 / 15
 ADD+1.75
 UVCA monocular: 0.6 (Far)
 J8 (Near)
 UVCA binocular:
 0.7(far)
 J7 (Near)

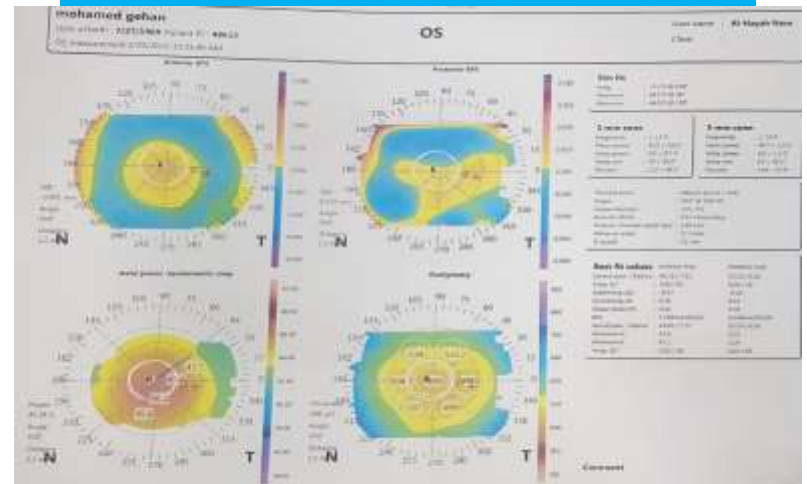
OS 1 M post-OP data:

Refraction: -0,5 / -0,25 / 110
 UVCA monocular: 0.8 (Far)
 J2 (Near)
 UVCA binocular:
 1.0 (Far)
 J2 (Near)

Hyperopia



Myopic Astigmatism



Inclusion Criteria

- From -8D to +4D MRSE
Best cases between -5 & -2 and between +0.75D & +3.5D
- K-readings (between 41.0D & 45.0D)
- Maximum Astigmat 2D for Hyperopia, < 4D in myopia
- Mechanical / Femto-laser flaps = diameter \geq 9mm
- Angle Kappa < 10°
- **Pupil size > 3mm in photopic,**
- **Pupil size < 6mm in mesopic conditions**

Dry eye **No**



Personality & Demand

Meticulous



Easy-going



Protocol Mild+Regular

The Varifocal profile is bilaterally applied, but the varifocality amount is limited on purpose on the dominant eye

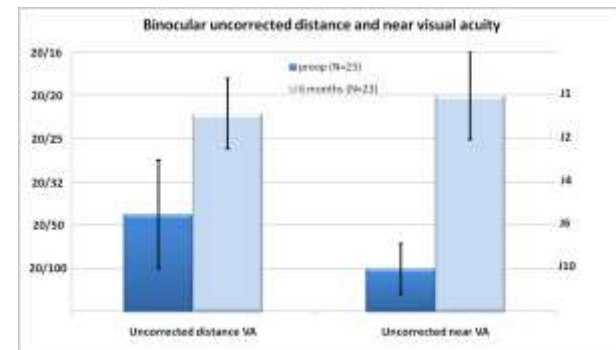


SUPRACOR : Enhancement Options

Add: Additional SUPRACOR after primary SUPRACOR if near vision effect was not achieved or has regressed

Reverse: Wave front-guided treatment to remove or "un-do" the SUPRACOR steepening and restore good distance vision

Study 23 patients : Binocular visual acuity for distance and near



Couching with Same instrument !!!!

