

Cataract Surgery and Premium IOL Pharmacology

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Patient Education

- Determine Interest
- Determine Wants
- Determine Needs
- Personality Check



EDUCATE. DON'T SELL!!!

There Will Be Compromises!!

- Halos at Night
- Computer Use
- Reading in Dim Light
- Contrast Sensitivity



There is no fountain of youth!!

Personality Check

Easy Going

Perfectionist




Personality Check

- Recognize that their psychological makeup may affect their perception of the surgical outcome.



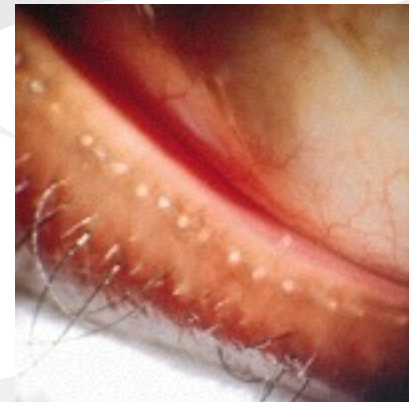
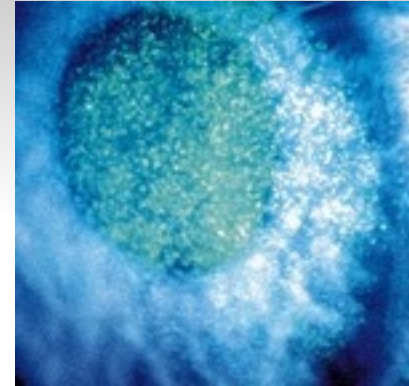
Manage Expectations

- “You may still need glasses for the following activities”:
 - Fine print
 - Computers
 - Low light
 - Night driving
- 
- A decorative graphic consisting of several thick, light gray, wavy lines that flow from the bottom left towards the right side of the slide, creating a sense of movement and depth.

**Remember:
Always under promise,
over deliver.**

Pre-Op

- Aggressively treat **ALL** ocular surface disease
- Need a **perfect cornea**

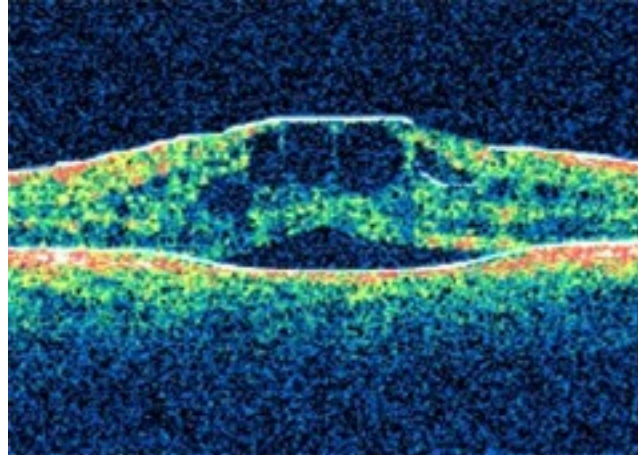


Aggressively Treat OSD

- Artificial tears
- Punctal plugs
- Cyclosporin
- Lid hygiene
- Hot compresses
- Omega three FA
 - 1000mg/day
- Doxycycline
 - 50mg bid x 6 weeks
- Azithromycin
 - “drop and rub”

Pre-Op

- CME prophylaxis with NSAID
 - Start 2 weeks pre-op and continue 6 weeks post-op

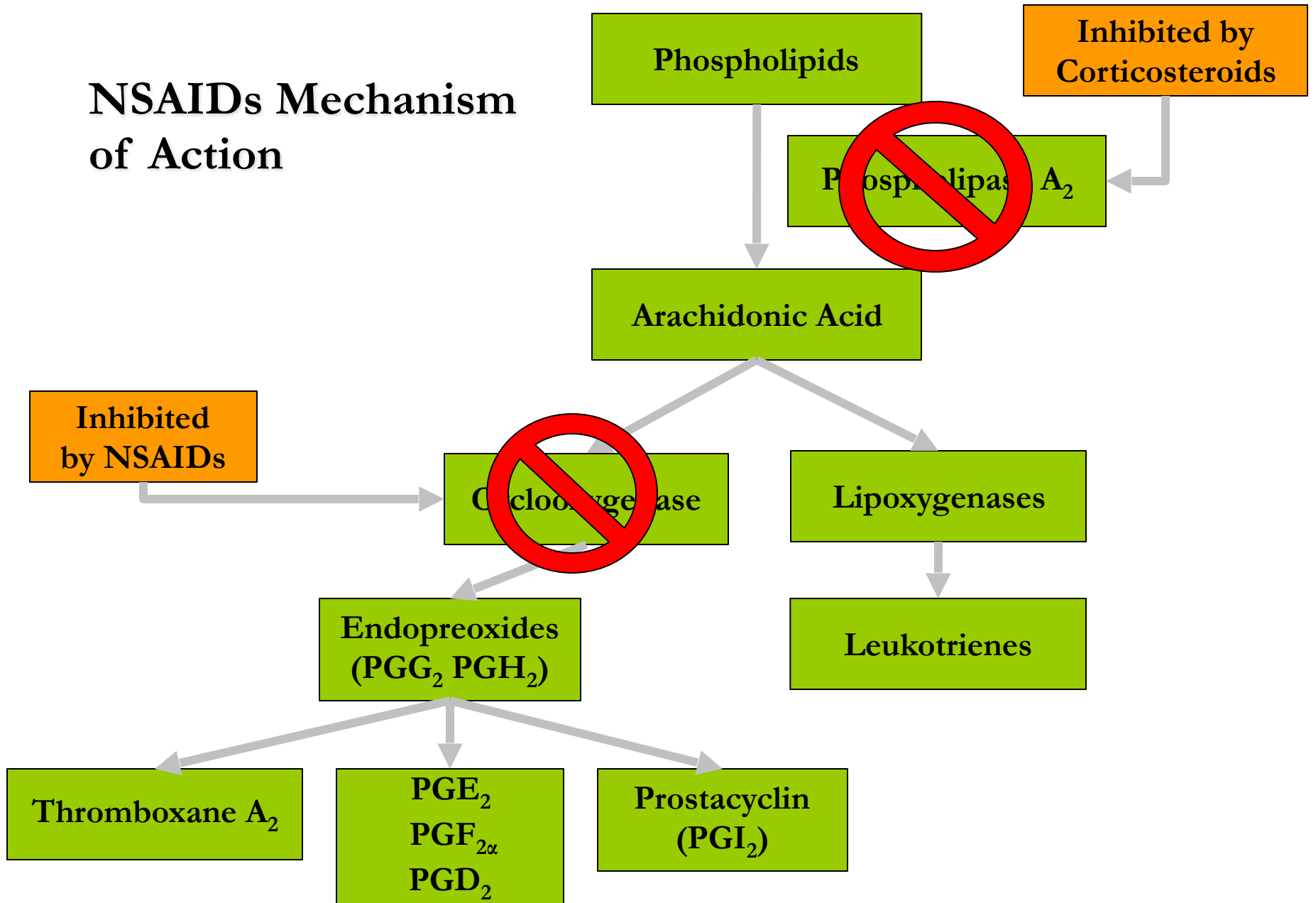


Available NSAIDs

- Ilevro
- Prolensa
- Bromday
- Nevenac
- Acular
- Voltaren



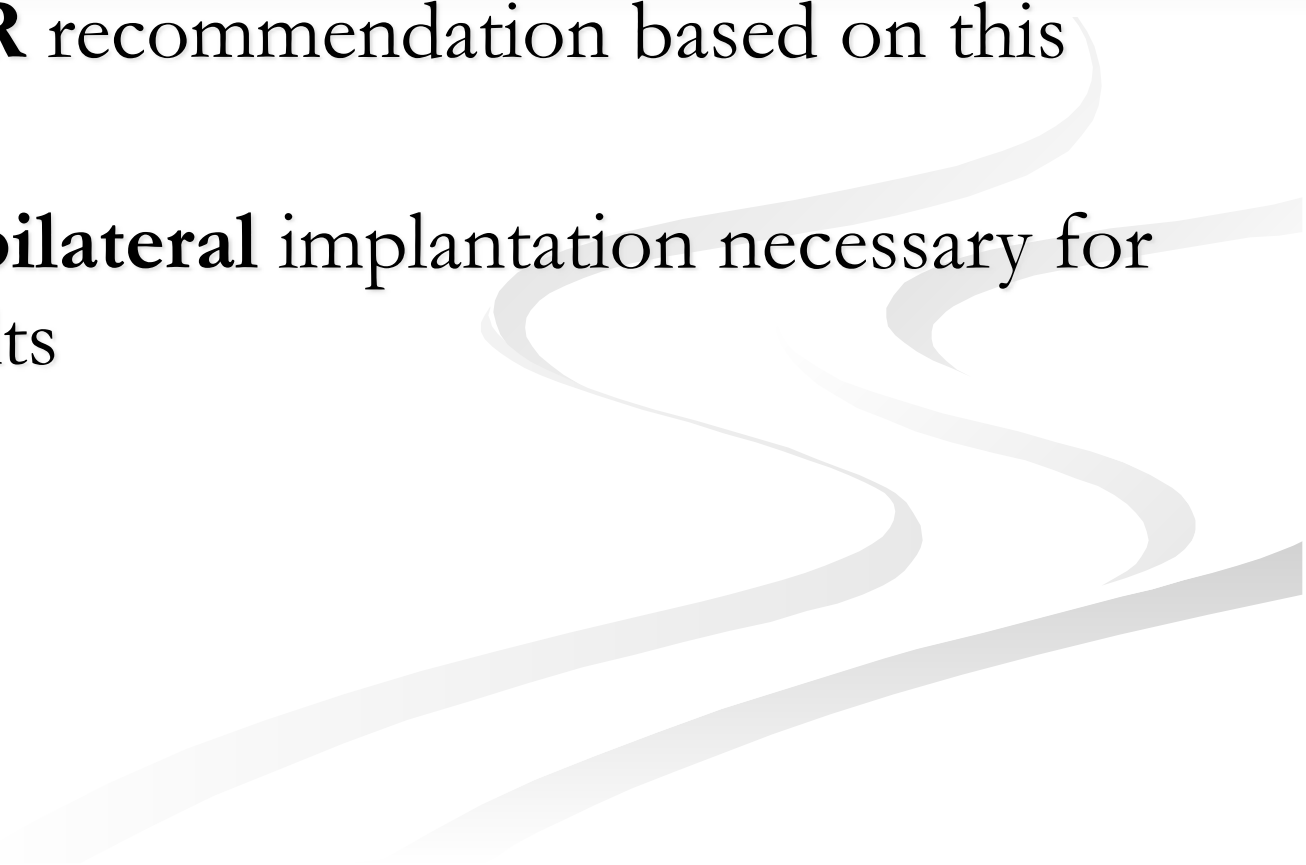
NSAIDs Mechanism of Action



Patients **NOT** Good Candidates for Premium IOLs

- Patients with severe ocular surface disease
- Patients with macular disease
- Patients with a history of ocular inflammation
- Patients with unrealistic expectations
- Perfectionists (Engineers)
- Patients who require perfect night vision
- Myopic patients who read sc

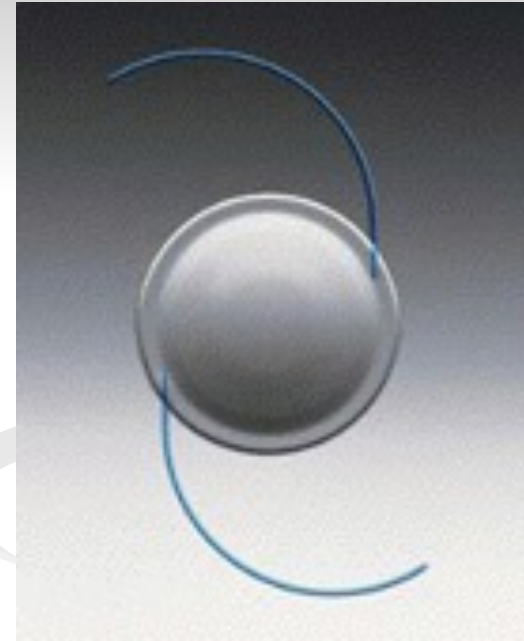
IOL selection

- You have a **profile** of patient's wants, needs, and expectations
 - Offer **YOUR** recommendation based on this profile
 - Tell patient **bilateral** implantation necessary for optimal results
- 

Rezoom

- Refractive
- Larger pupils (younger)
- Distance good

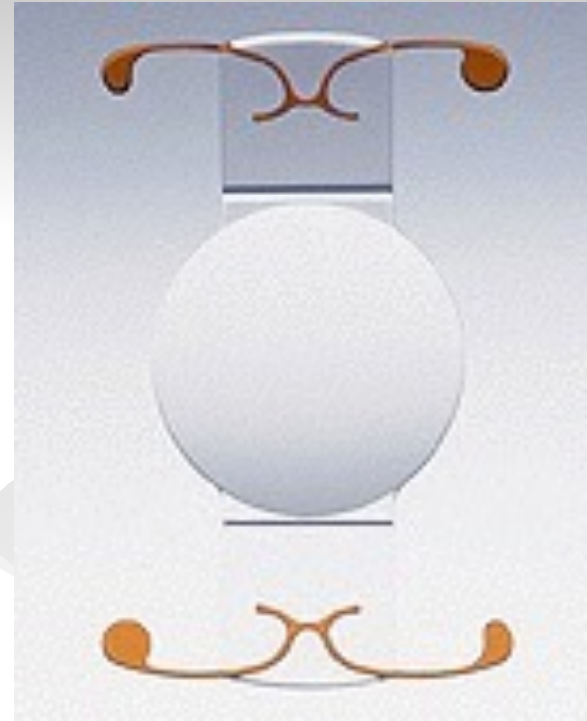
- Computer poor
- Small print poor
- Glare/Halos at night



Crystalens

- Accommodating
- Less nighttime symptoms
- Good distance
- Good Computer

- Poor near
- Unpredictable/changing refractive error (late myopic shift, Z syndrome)



Tecnis

- Diffractive
- Aspheric
- Pupil independent
- Distance good
- Near good

- Computer not good
- Halos at night



Restor 4.0

- Apodized Diffractive/
Refractive
 - Small pupil for reading
 - Distance good/”hazy”
 - Small print good
-
- Intermediate/Computer
poor
 - Halos at night

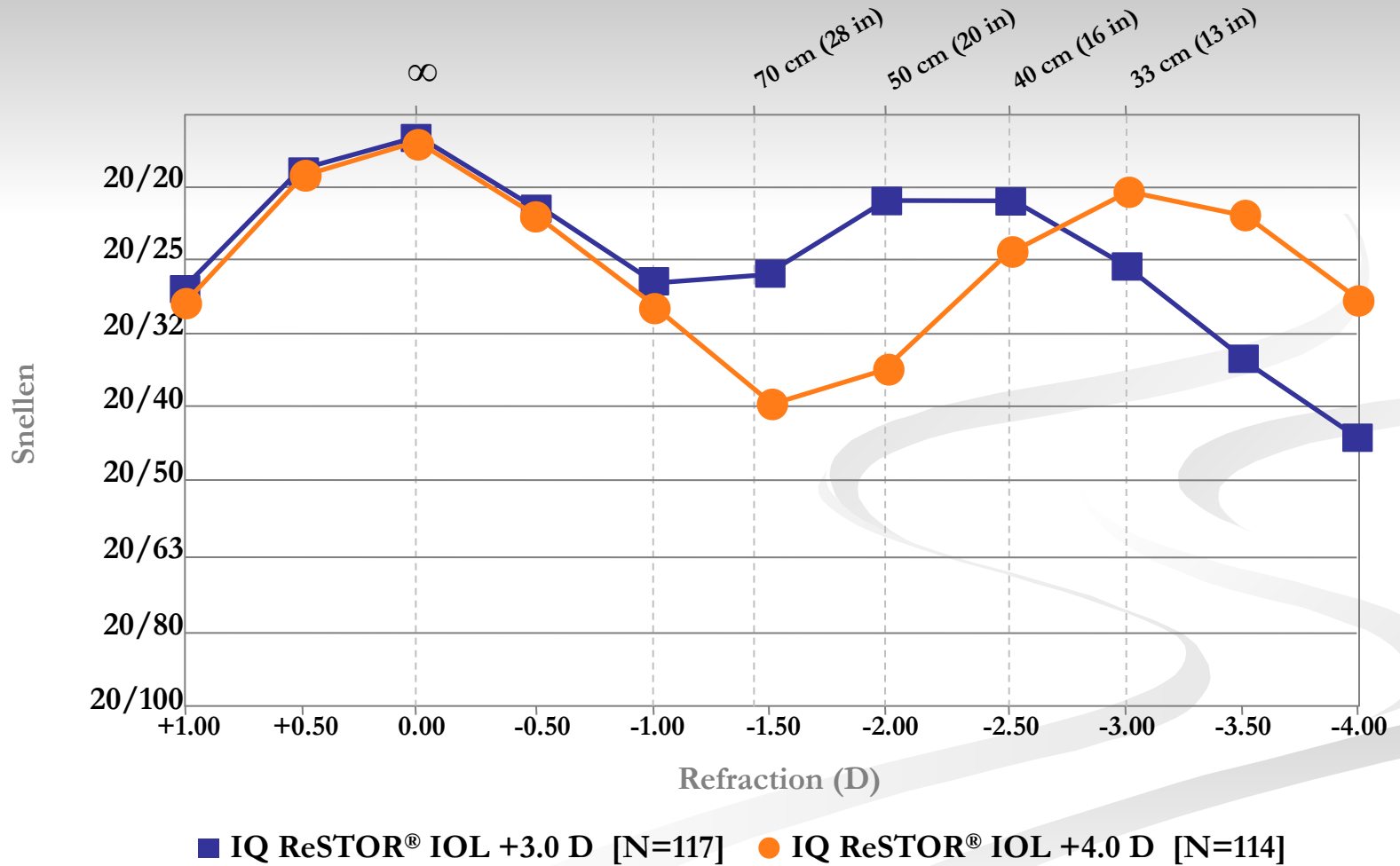


Restor IQ 3.0

- Better refractive predictability
- Better intermediate
- No near compromise
- Better distance
- Less halos



Binocular Defocus Curve



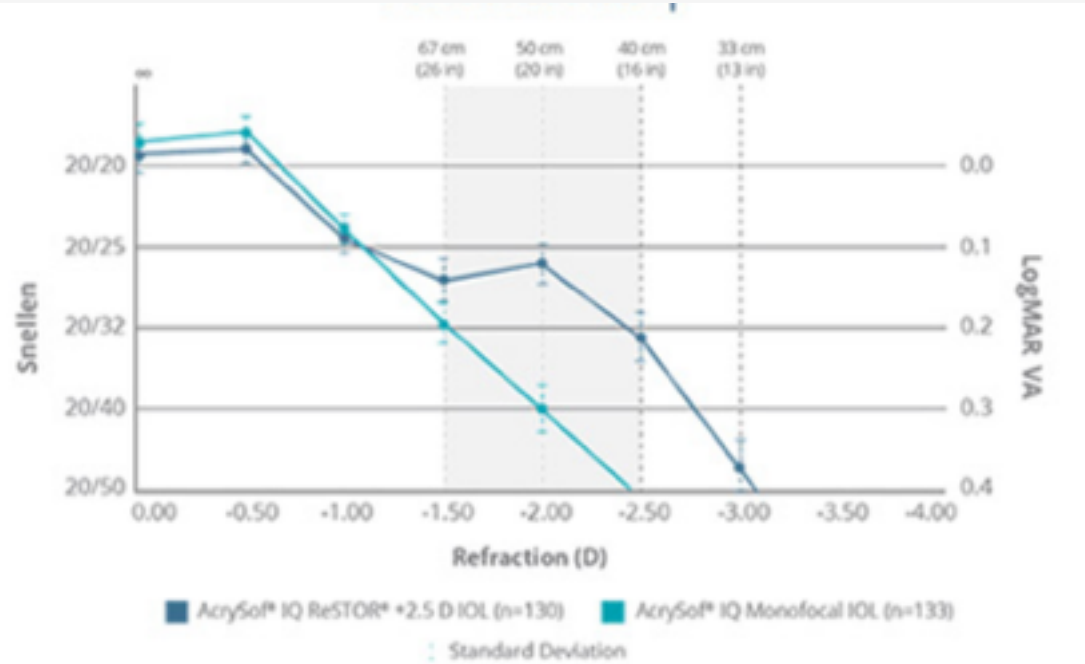
Extended Depth of Focus (EDF) IOLs

- Emphasize sharp distance
- “Extend” to intermediate
- Poor near - patients still require readers



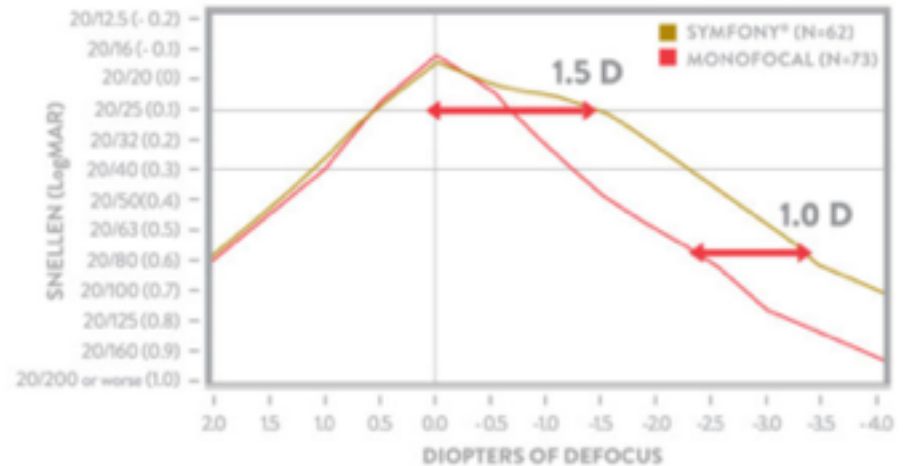
ReStor IQ +2.5

- No distance compromise
- More range than monofocal
- “Golfer lens”
- Requires readers



TECNIS Symphony

- Diffractive w Achromatic technology
- High-quality distance
- “Elongates” focus
- Comes in toric
- Some require readers



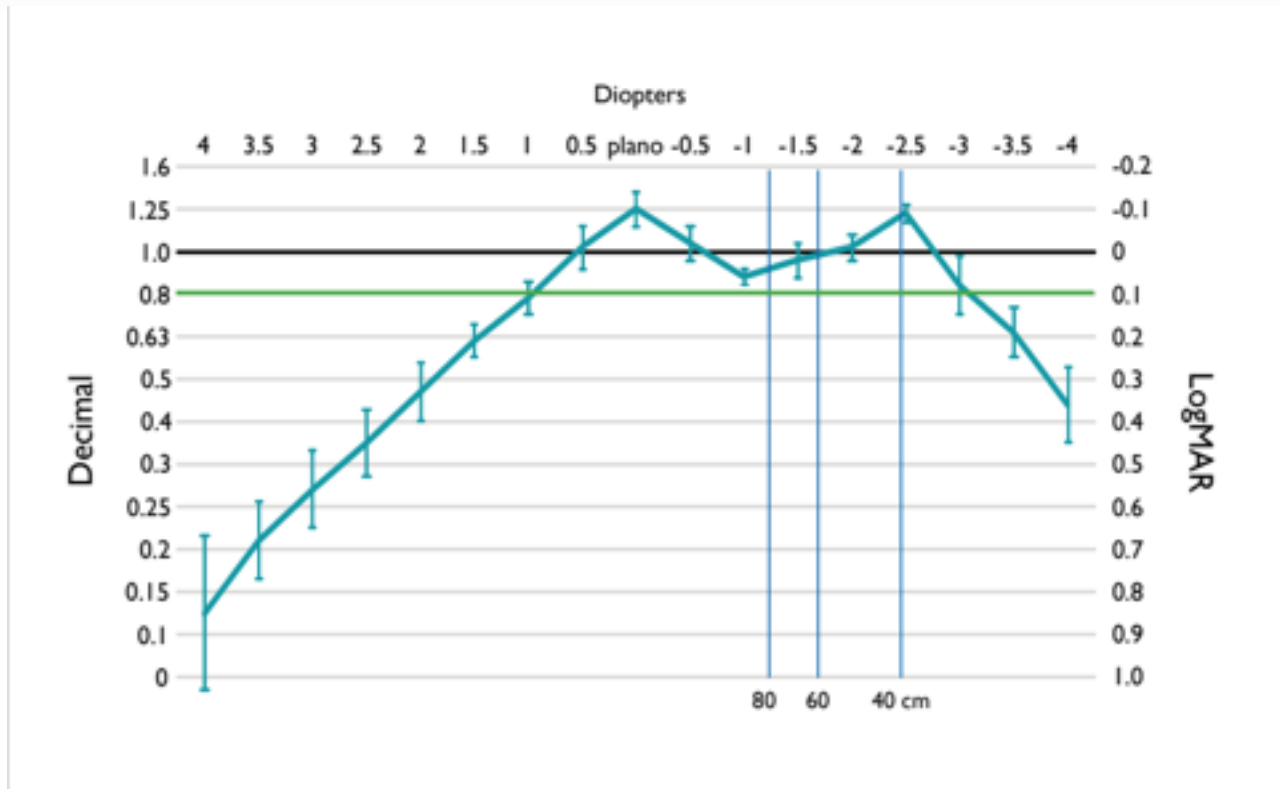
Mix and Match Restor/Tecnis/Symfony

- Attempt to provide all 3 zones of vision



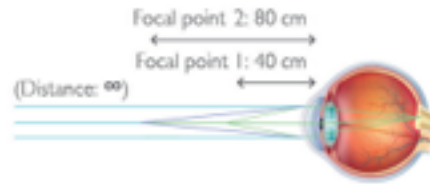
PanOptix Trifocal IOL

- Near, Intermediate, Distance
- Quadrafocal w ENLIGHTEN technology



Traditional trifocal IOLs

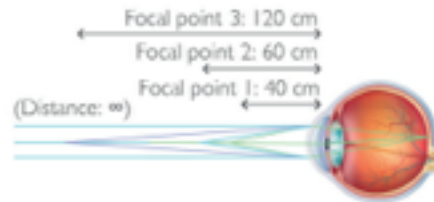
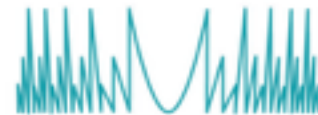
Base curve + two step heights



Two step heights = two add powers/focal points in addition to distance.
Due to the nature of diffractive orders, when there are three focal distances, the intermediate focal point must be 2 x near: (Distance: ∞, intermediate at 80 cm and near at 40 cm).

Quadrifocal IOLs

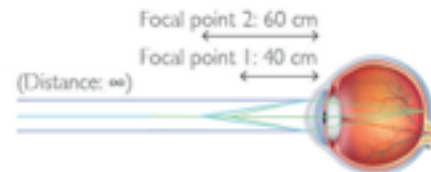
Base curve + three step heights



Three step heights = three add powers/ three focal points (plus distance from base curve). Due to the diffractive principle, when there are four focal distances, the first intermediate focal point must be 1.5 x near, and the second intermediate focal point must be 3 x near (Distance: ∞, extended intermediate at 120 cm, preferred intermediate at 60 cm, and near at 40 cm).

ENLIGHTEN™ Optical Technology

Base curve + two step heights
(Third step height redistributed)



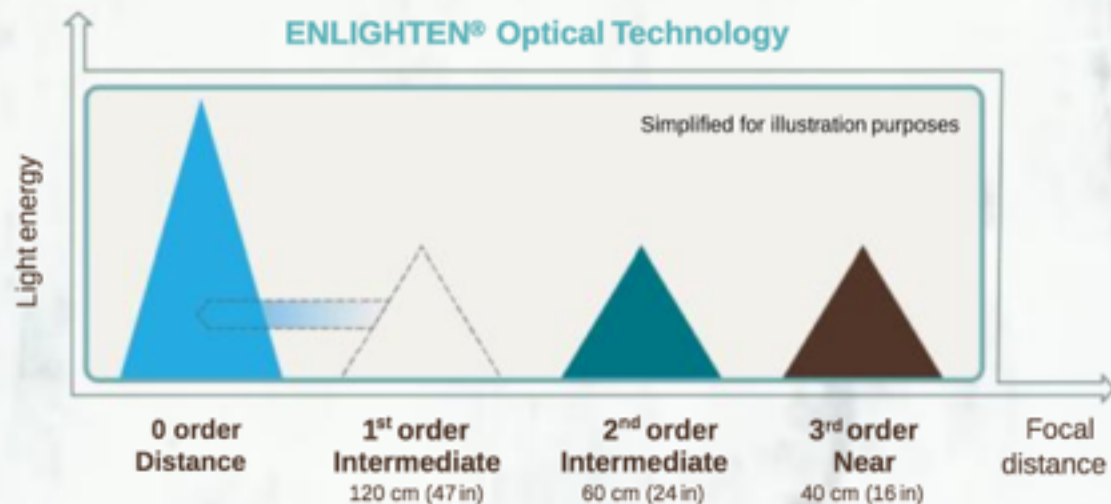
The quadrifocal design is manipulated so that the extended intermediate focal point (120 cm) is redistributed to the distance focal point for amplified performance. This results in two add powers/two focal points (plus distance from base curve). Light is still split three way: (Distance: ∞

MULTIFOCAL PERFORMANCE REIMAGINED

The PanOptix® IOL is equipped with advanced **ENLIGHTEN®** Optical Technology — a proprietary design that optimizes intermediate without compromising exceptional near and distance vision.

To create **ENLIGHTEN®** Optical Technology, we first created an additional focal point at 120 cm.

Then, we redirected the new 1st order intermediate focal point's light energy to distance.



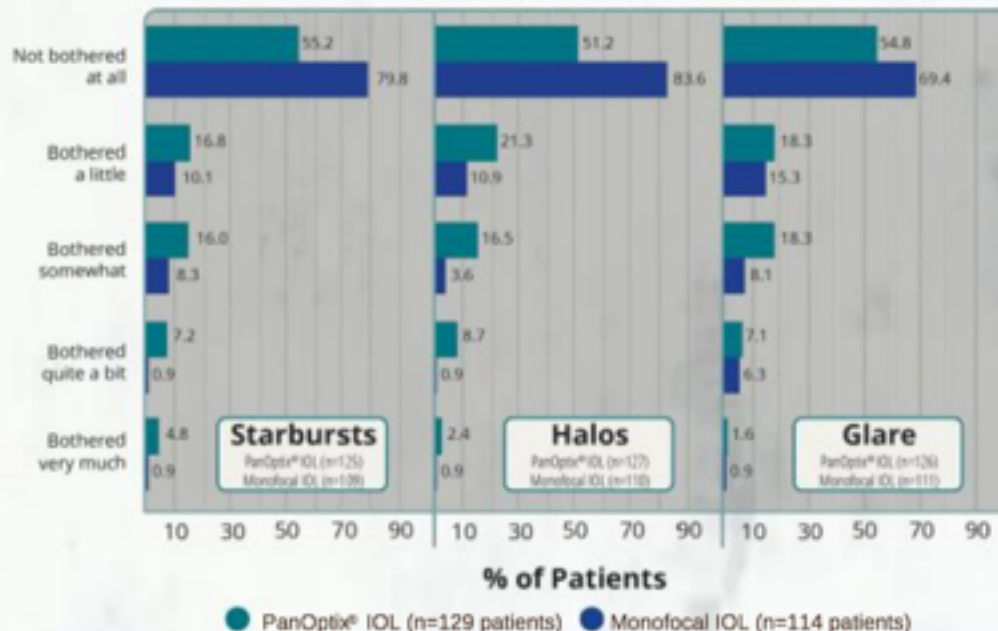
PATIENT-REPORTED VISUAL DISTURBANCES²

Results from a **patient-prompted** and **validated** QUID questionnaire at 6 months when asked: "In the past 7 days, how much were you bothered with starbursts, halos and glare?"

Most bothersome visual disturbances.
Percent of patients bothered very much by:

- **4.8%** by Starbursts (n=125)
- **2.4%** by Halos (n=127)
- **1.6%** by Glare (n=126)

Ratings of How Much Patients Were Bothered by Visual Symptoms at 6 Months



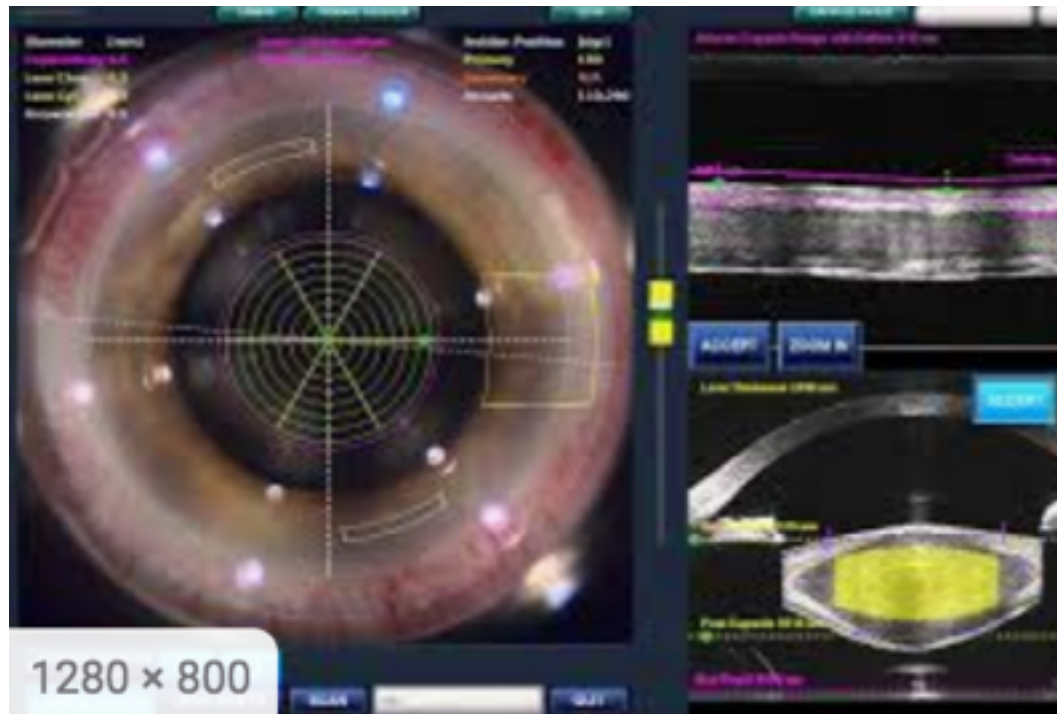
Emmetropia a MUST

- Accurate biometry
 - LENSTAR LS 900
- Topography
- Hill-RBF calculator
 - uses AI for pattern recognition
 - self validating
 - “learns” over time



Have a Plan for Astigmatism

- Check topography
- $< 1D$ cylinder plan LRI (LenSx laser)
- $> 1D$ cylinder use Toric



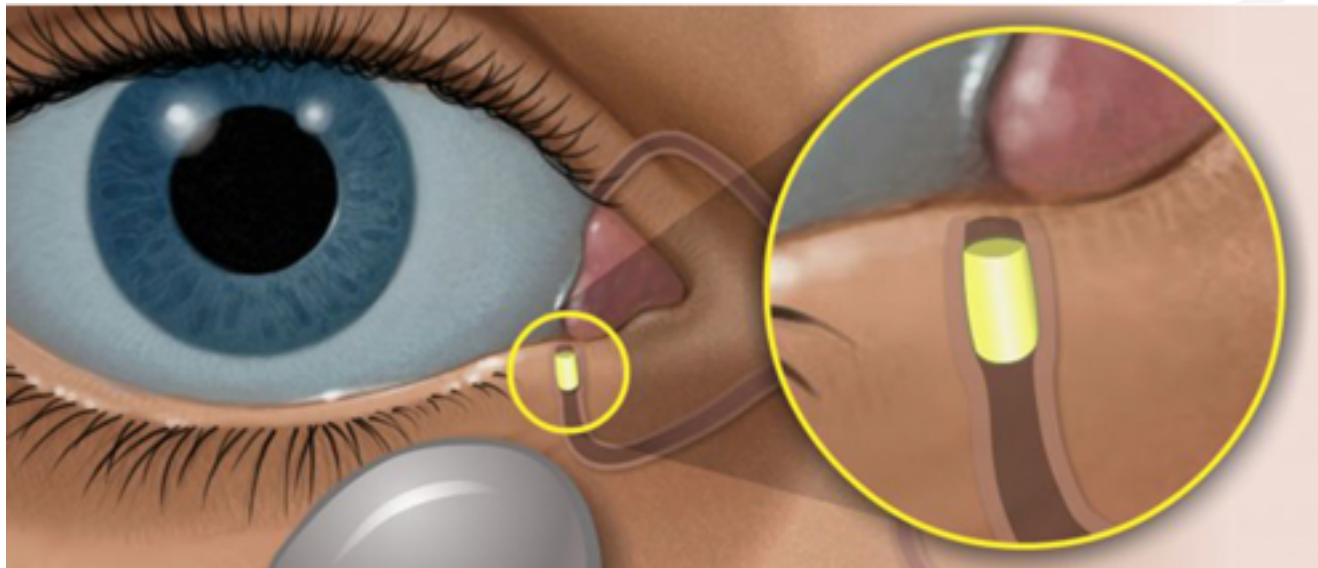
Make Sure You Use a Potent Steroid



- Reduces discomfort
- Reduces inflammation
- Reduces PC haze
- Rapid visual recovery

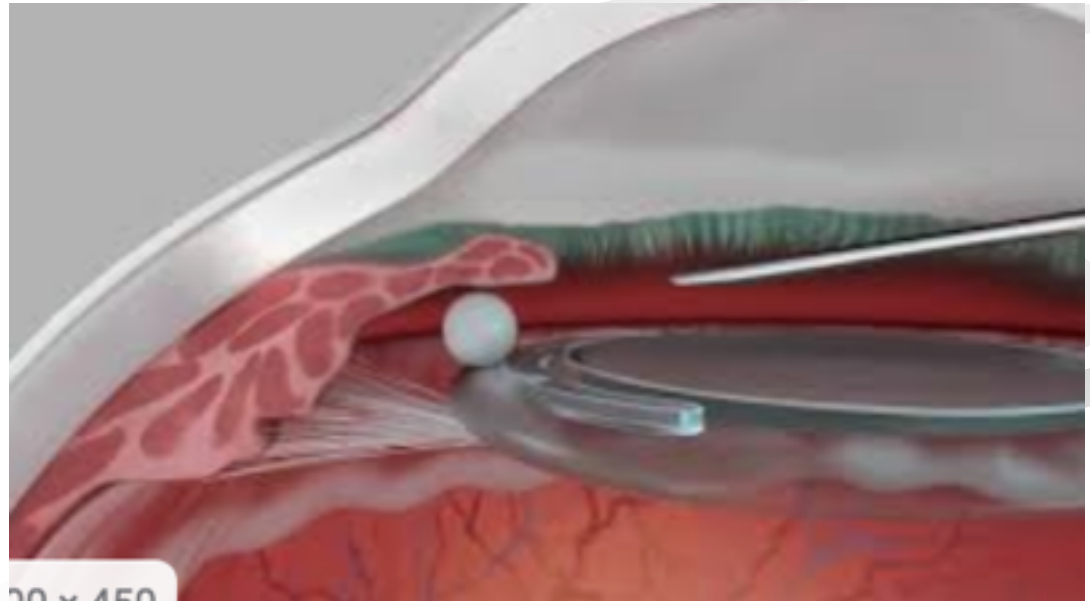
Dextenza

- 0.4 mg dexamethasone
- punctal insert
- releases for 30 days



Dexycu

- Verisome drug delivery
- dexamethasone
- biodegradable extended release
- similar to Ozurdex



Post-Op

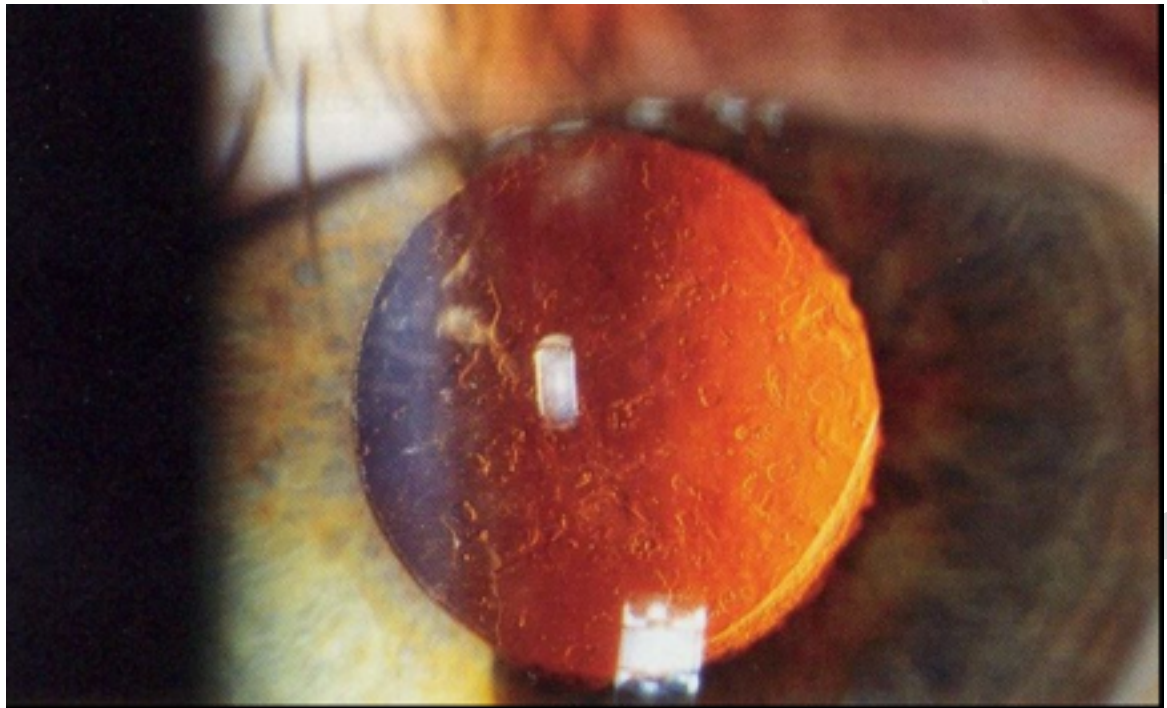
- Need *time* to allow neuroadaptation
 - Wait 3 months before any enhancements if within 1D of intended target
 - Nighttime symptoms will diminish
 - Reading will improve



Halos at Night?

Check the 4 Cs

- Capsular Haze
- Cylinder – near always affected more than distance
- CME
- Corneal surface



Post-Op

- YAG PC haze or stria
 - The loss of contrast sensitivity and the glare created by a multifocal IOL is made worse by any capsular opacity
- Night driving glasses
- Alphagan for halos
- +1.25 for computer



Post-Op

- Enhancements – Must be comfortable w LVC
 - PRK if OSD, EBMD, previous LASIK
 - LASIK if younger, quicker recovery desired



**Thank you for your
attention.**