

Understanding Existing and Emerging IOL Technologies – What Does Your Patient Really Need?

Bobby Saenz, O.D., M.S., F.A.A.O



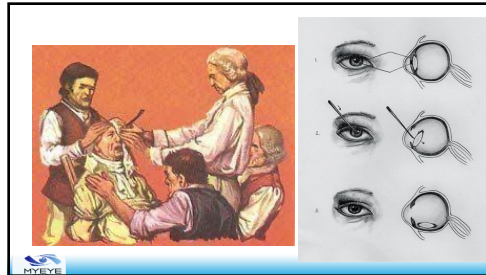
1

Disclosures

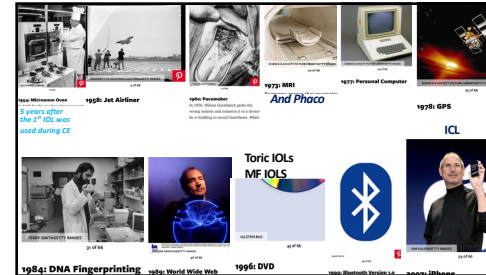
Company	Role	Received
Biotissue	Consultant/lecturer	Honoraria
Carl Zeiss Meditec	Consultant/lecturer	Honoraria
Johnson & Johnson	Consultant/lecturer	Honoraria
LensAR	Consultant	Honoraria
Lumenis	Consultant	Honoraria
myOcuach	Founder	Honoraria
Novartis	Consultant	Honoraria
Glaukos/Glaukos corneal health	Consultant/lecturer	Honoraria
Ocular Therapeutix	Consultant/Research	Honoraria/Research Support
Sight Sciences	Consultant/Lecturer/Research	Honoraria/Research Support
Quidel	Consultant	Honoraria



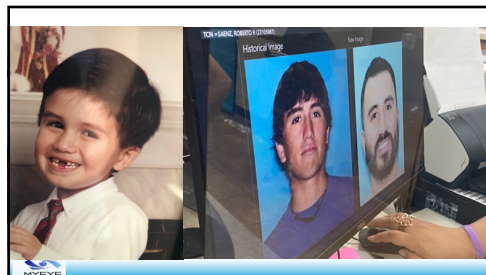
2



3



4



5

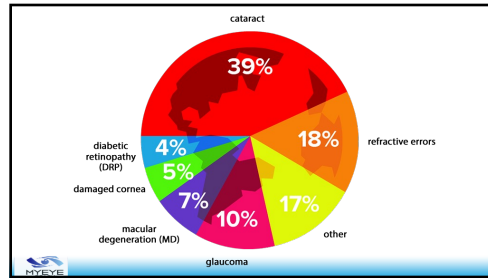
Cutting Edge Co-Management

- 1747 – First ECCE
- 1949 – 1st IOL
- 1967 – Phacoemulsification
- 1980s – IOLs commonly used
- 1995 – PRK
- 1997 Multifocal IOL
- 1998 Toric IOL
- 1999 LASIK
- 2005 ICL
- 2010 Lensix
- 2016 SMILE & Cross-Linking
- 2016 Symphony Toric
- 2017 toric ICL
- 2019 Panoptix (trifocal IOL)

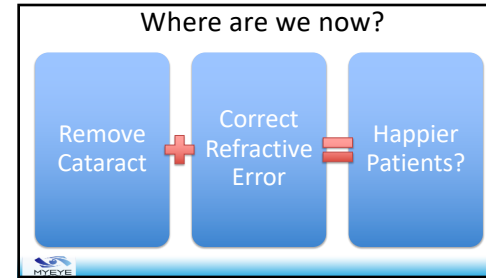


Co-management was on the conceptual cutting edge, and at the time was an "answer to one-way referrals," as the article in 2014 stated.

6



7



8

IOL options

- Monofocal/toric monofocal
- Monovision
- Accommodating IOLs
- **Extended Depth of Focus**
 - Symfony/Symfony Toric (d)
 - Vivuity
 - Eyhance
 - Light Adjustable Lens?
 - SBL-3
- Multifocal Lenses
 - IC-8 IOL
 - ZK800/ZL800
- **TRIFOALS!**
 - Panoptix
 - Synergy

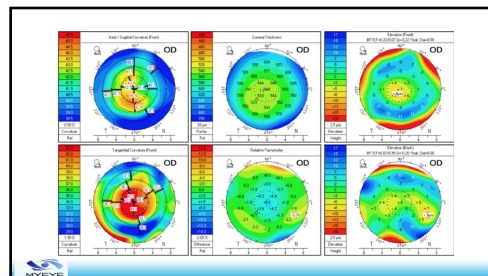
9

Extended Depth of Focus

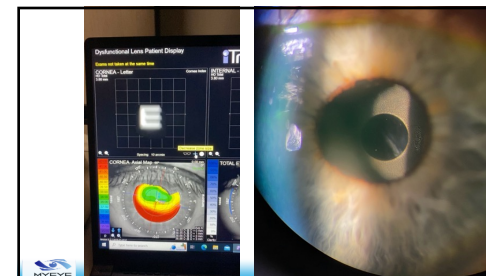
Smaller Pupil Size

Spherical Aberrations

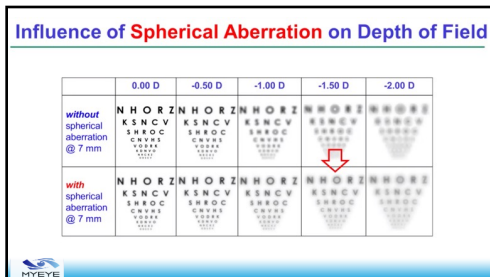
10



11



12

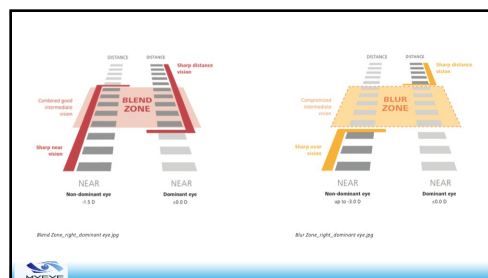


13

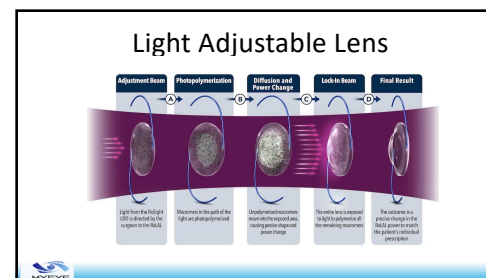
Extended Depth of Focus Lens**

- Past/NOW – Symphony - Diffractive
- NEW – Vivity 1.5 D add
- NEW – Eyhance 1.3D add
- NEW – ONLY TRUE EDOF: IC-8 (pinhole IOL)
- NEW – Clearview 3
- NEW – Light Adjustable Lens

14



15



16

THE LIGHT ADJUSTABLE LENS

Light Delivery Device

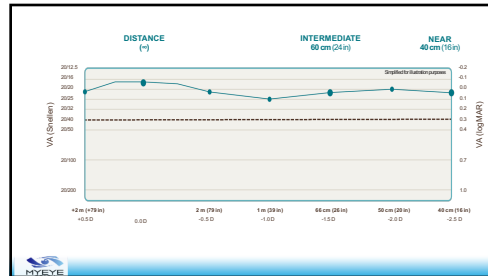
- UV light projection system
- Anterior segment biomicroscope, projection screen, electronic control and a UV source
- Focused through a lens on the cornea
- Can treat -2.00D to +2.00D sphere and -0.50DC to -2.00DC

17

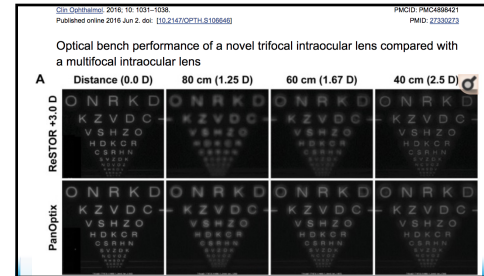
Newest 4 Presbyopic Lenses

	Add Power	Halo/Glare	Distance	Intermediate	Near
Penoptix (trifocal)	2.17 and 3.25	Moderate	>20/20	>20/25	>20/25
Synergy	1.50 and 4.00	Moderate	20/20-2	>20/25	>20/20
Vivity (EDOF)	1.53	Low	>20/20	>20/32	>20/50
Eyhance (EDOF)	1.3	Low			

18



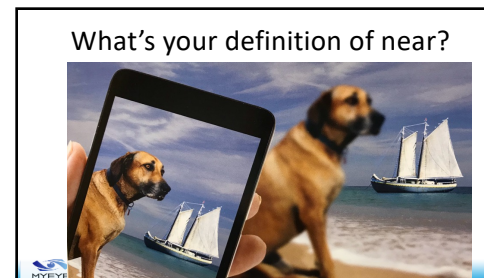
19



20



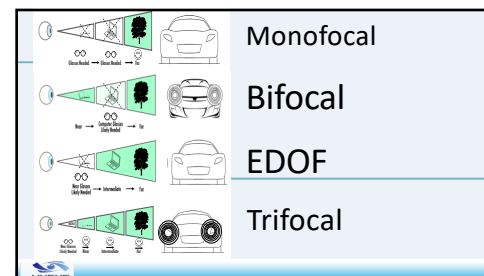
21



22



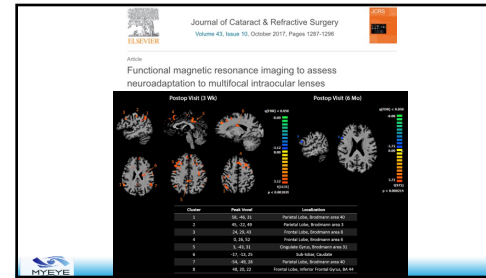
23



24



25



26

Case #1: 64 y/o retired realtor

- H/p +2.50 successful monovision CL's x 20 years
- Complains of decreased reading vision and over all blur OU
- Does not want to wear any glasses and would like to stop contacts
- 2+ NS OU PH 20/30 OU
- Topo and OCT Normal with 0.5D of WTR Corneal cyl OU

27

Results

- Day 1: 20/20 OD and J2 OS
- Mrx: plano -0.50 x 060 20/20 +1
- Mrx: -2.00 sphere 20/20 +2

28

Unhappy	
Meh	
Happy	
Very Happy	

29

A) Unhappy
B) Meh
C) Happy
D) Very Happy

Pt is **EXTREMELY ANGRY** about ... near vision

30

Demonstrated an additional +0.50 of
add power OD



31



32

LASIK enhancement performed for
+0.50 OD

- Pt went from Extremely Angry to Extremely Happy
- Over 1/2 Diopter
- Seriously...

33

Cataract Case 2: 62yo
+1.00 – 3.00 x 180

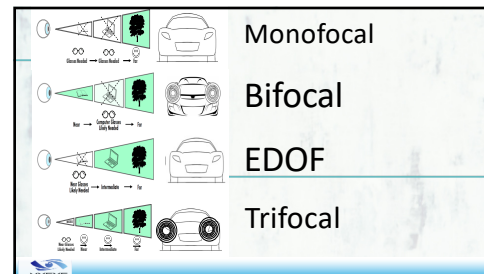
- DVA 20/30
- NVA 20/30
- NS 2-3+
- Cornea Cyl 1.00D
- OD "Can you just leave them the way they are?"

34

Night time Truck Driver

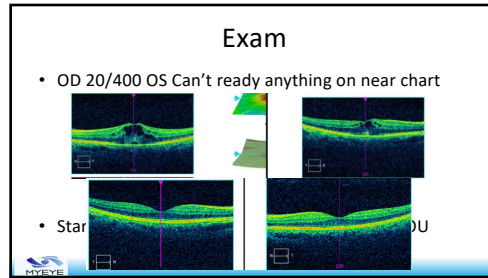
- Diagnosed with cancer on nose
- Has beginnings of cataracts
- NS 2+
- Wants to not wear glasses at all, since glasses run on that area.
- Best option for this patient?

35



36

42



43

So let's come back to the question:

What does your patient really need?

44

1. Retired teacher
2. Architect
3. Truck Driver
4. Amblyope

45

NO TEXTING WHILE WALKING

- Americans check their smartphones 8 billion times per day
- 46x/day 2015
- 96x/day now
- 672x/week
- 34,944x/year

46

Every second of every day someone 65+ years of age falls in the US²⁹

What is the potential visual impact toward falls among older adults?

Poor visual acuity, contrast sensitivity, and depth perception are risk factors for falls.^{16,18,19,30} Monovision can be particularly disruptive for older patients when navigating their environment.²⁴

PC-IOLs may avoid the need for full-time glasses, providing **better depth perception** and reduced fall risk when compared to spectacle use³¹

\$9,780 is the average direct cost of a non-fatal fall (fatal fall injury is \$26,340)³²

47

Happy Daddy

48



49

The need.

- Who are they?
 - Myopic
 - Hyperopic
 - Mixed Astigmatism
- What are they wanting to REASONABLY accomplish?
- Why did they pick the target?

**WHO.
WHAT.
WHY.**

50

If you were having cataract surgery tomorrow, what lens would you pick?

51

This may be hard to hear..... But not everyone is you.

So we just educate everyone.... And let them decide.

And remind them after... it was their decision. 😊

52

Degnesh


- Degnesh Dena is a 25 year-old blind woman living in Sodo Wolaita, Ethiopia. When she was a child, her village gave her the nickname "Gedebru", which means "unlucky woman", as her mother had died during her birth. She grew up with her father, stepmother, and 2 step-sisters, but was unable to continue her education after grade 10 due to family and economical problems.
- In order to support herself, she travelled to the country of Yemen to be a maid in 2016. Unfortunately, after working for 6 months, she began to notice her eyesight deteriorating. Initially due to severe nearsightedness. As she was no longer able to work due to her poor sight, her employer deported her back to Ethiopia without any payment.
- Returning to her village, Degnesh began to lose hope and entered a period of depression over the next five years. As her vision continued to worsen, she attempted suicide several times. Her father took her to a health center but he found that any potential eye surgery for Degnesh was beyond his financial capacity.
- Miraculously, he heard about our cataract outreach from a village leader and was referred to the HCP-supported cataract outreach at Sodo Wolaita hospital, our first in both that region of Ethiopia as well as our first large-scale surgical intervention since the beginning of the COVID-19 pandemic.
- Degnesh was very nervous during her surgeries but felt excitement at the possibility of getting her vision back.

53




54

Everyone deserves to see



Degnesh
And this mom too
– 45 year old with
eight children
– Bilateral cataracts



55