

# COURSE SYLLABUS

20/100

**T**

**H E**

20/70

**S U N**

20/50

**C O A S T**

20/40

**S E M I N A R**

20/25

**F O R O P T O M E T R Y**

20/20

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**A P R I L 2 5 - 2 6 , 2 0 2 6**



## Saturday April 25

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- 7:45 am - 8:15 am**      **Registration**  
**Exhibit Hall Open**  
**Continental breakfast** - sponsored by *St. Luke's Cataract and Laser Institute*
- 8:15 am - 9:55 am**      **Advances in Cornea, Cataract, Refractive and Glaucoma Surgery (2, TQ, COPE: 103831-GO)**  
Neel R. Desai, M.D. and Priti Panchal, O.D.
- 9:55 am - 10:40 am**      **Break**  
**Exhibit Hall Open**
- 10:40 am - 12:20 pm**      **Amblyopia Management for Primary Care O.D.s (1, COPE: 103274-FV)**  
**Acquired Brain Injury: What the O.D. Needs to Know (1, COPE: 103273-FV)**  
Richard Sorkin, O.D.
- 12:20 pm - 1:10 pm**      **Lunch** - sponsored by *Retina Vitreous Associates of Florida*  
**Exhibit Hall Open**
- 1:10 pm - 1:20 pm**      **Lighthouse of Pinellas Update**
- 1:20 pm - 1:30 pm**      **FOA Update**
- 1:30 pm - 3:10 pm**      **Pharmaceutical Update - Innovations and Insights for Eye Care (2, TQ, COPE: 103324-PH)**  
Greg Caldwell, O.D.
- 3:10 pm - 3:30 pm**      **Break**
- 3:30 pm - 5:10 pm**      **Latest Advances in Eye Care Technology - Innovations in Early Detection and Management (2, TQ, COPE:103700-GO)**  
Greg Caldwell, O.D.

## Sunday April 26

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- 7:30 am - 8:00 am**      **Registration**  
**Continental breakfast** - sponsored by *the POA*
- 8:00 am - 9:40 am**      **Grand Rounds - Improving Eye Care and Outcomes for Patients (2, TQ, COPE: 103866-TD)**  
Greg Caldwell, O.D.
- 9:40 am - 10:00 am**      **Break**
- 10:00 am - 11:40 am**      **Prevention of Medical Errors (2, COPE: 102834-EJ)**  
Alice Sterling, O.D.
- 11:40 am - 12:00 pm**      **Lunch** - sponsored by *LENZ Therapeutics*
- 12:00 pm - 1:40 pm**      **Florida Jurisprudence (2, COPE: 101024-EJ)**  
Alice Sterling, O.D.



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### Functional Testing in DR Enhances Risk Assessment

- Adding function testing improves risk assessment and helps separate those patients most at risk from minimal risk
- Patients with both structural and functional abnormalities are 11 times more likely to need treatment when 2 or more tests show abnormality

**Risk Assessment of DR Patients (1 Yr)**

| Category                                       | % of DR Patients Needing Treatment |
|------------------------------------------------|------------------------------------|
| Structural Abnormalities                       | 19%                                |
| Structural + Functional Abnormalities          | 34%                                |
| Structural Abnormalities + Functionally Normal | 3%                                 |

Bigoñ et al., Enhancing Risk Assessment in Patients with DR by Combining Measures of Retinal Function & Structure

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### Diabetic Eye Exam- What's Your Diagnosis?

Case courtesy of Becky Verma, OD

**Patient A**

- 77 y/o Indian female
- Type 2 Diabetes
- OD 20/50 with sig cataracts NS 2+ and Cortical 2+
- OS 20/30 with NSNS 2+ and Cortical 1+
- No retinopathy; No macular changes on OCT**

**Patient B**

- 72 y/o Indian male
- Type 2 Diabetes
- 20/25 OU
- NS1+ Cataracts OU
- No retinopathy; No macular changes on OCT**

**Patient A**

- Mild acquired color deficiency OU.

**Patient B**

- Significant acquired color deficiency OU. Pt started on NuRetin

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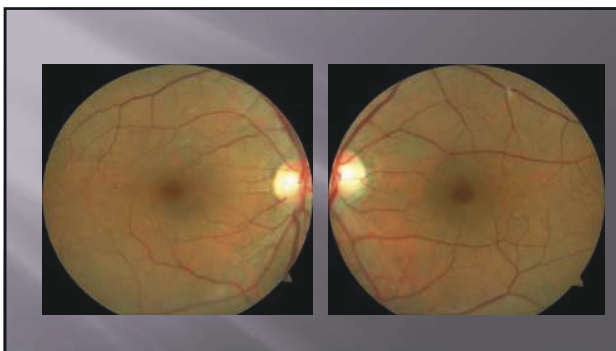
### Patient Referred for VA Loss

Courtesy of Neo Lightner, OD, PhD

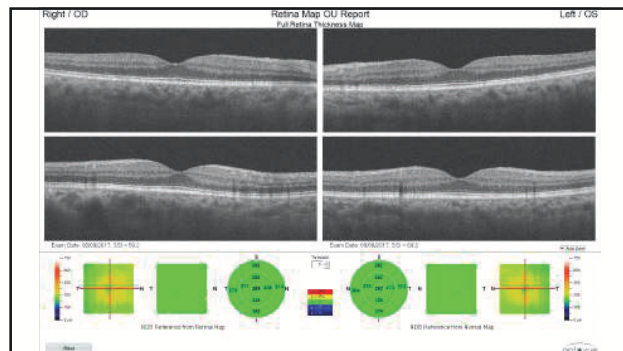
- 63 yo F
- VA:
  - OD: 20/50
  - OS: 20/50
- (+) DM, HTN,
- (+) Hyperlipidemia
- Last A1C (8/7/23) = 11.0

| Description                                                 |
|-------------------------------------------------------------|
| Atorvastatin 0.5 tablets PO Daily                           |
| gabapentin 1.0 tablets PO Daily                             |
| Organosolvent 1.0 tablets PO qm                             |
| Fluoretholone 1.0 tablets PO Daily                          |
| gabapentin 300 MG per 6 ML Oral Solution 0.5 tablets PO bid |
| Glipizide 1.0 tablets PO bid                                |
| gabapentin 1.0 tablets PO qm                                |
| Lumigan 0.5 tablets PO Daily                                |
| metaxalone 1.0 tablets PO Daily                             |
| Meloxicam 0.5 tablets PO bid                                |
| Aspirin 81 MG Oral Tablet 1.0 tablets PO Daily              |
| Pantoprazole 30 tablets 1.0 tablets PO Daily                |
| gabapentin 5 MG Oral Tablet 1.0 tablets PO Daily            |
| gabapentin 1.0 tablets PO Daily                             |

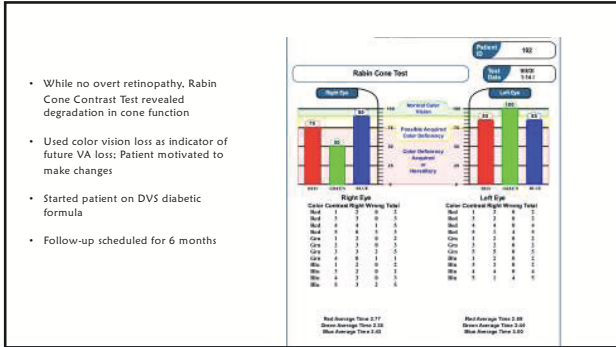
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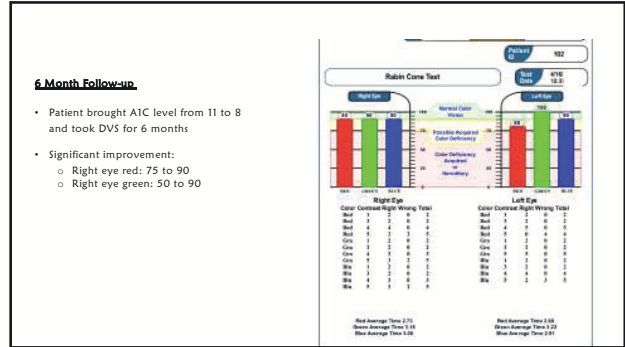
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### Rabin Cone Contrast Test

- Completes the comprehensive exam
- Early detection
- Progression
- Can see improvements with your treatments
- Nutritional therapies indeed play a role in management of AMD, diabetes, and glaucoma

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### FAA Policy Change Affects Optometry

**Rabin Cone Contrast Test 1 of 3 required color vision tests for FAA Pilots**

- Optometrists can administer FAA color vision tests
- Most Aviation Medical Examiner's do NOT have the Rabin Cone Contrast Test
- Most FAA color vision exams using the Rabin CCT can be billed to insurance

**What you need to know**

- Pilots must pass 1 of the required color vision tests effective Jan 1<sup>st</sup>, 2025
  - All new pilots- Class 1, 2, and 3
  - Pilots seeking to upgrade their Class status
  - Pilots with a medical condition, or taking a medication, know to affect color vision must be PERIODICALLY tested. Pilot should refer to their Letter of Authorization.
- The Rabin Cone Contrast Test can be taken if a pilot fails any OTHER approved test

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### Preferential Hyperacuity Perimetry (PHP)

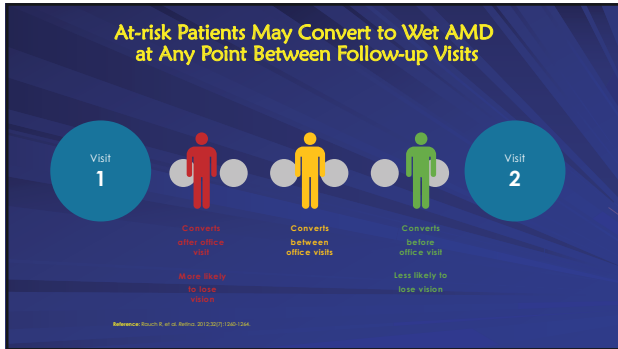
Monitoring Dry AMD to Wet AMD

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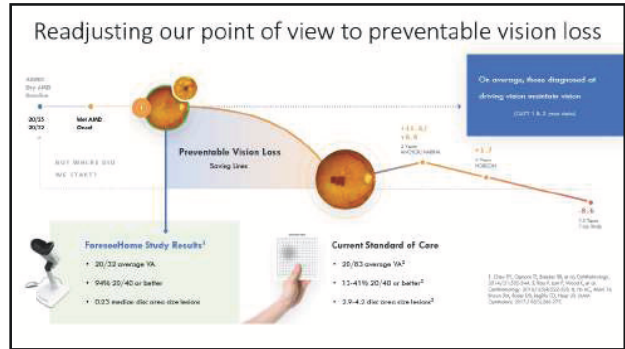
### Notal Vision - ForeseeHome® product overview

- Uses Preferential Hyperacuity Perimetry (PHP)
- 6,000+ actively testing patients
- 600+ active prescribers
- Proven efficacy with level 1 evidence

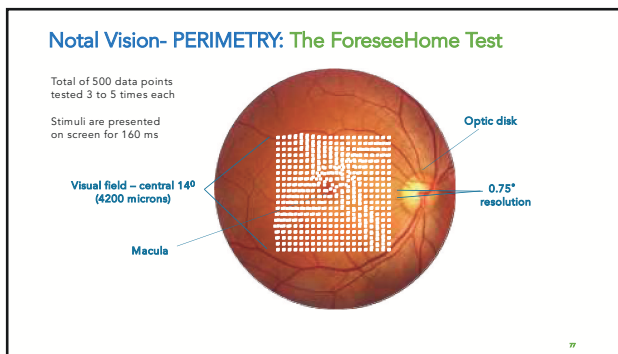
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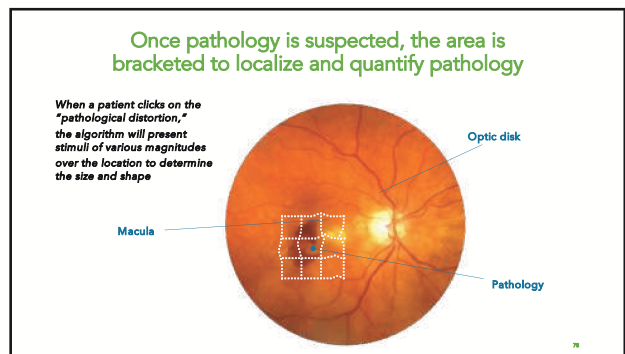
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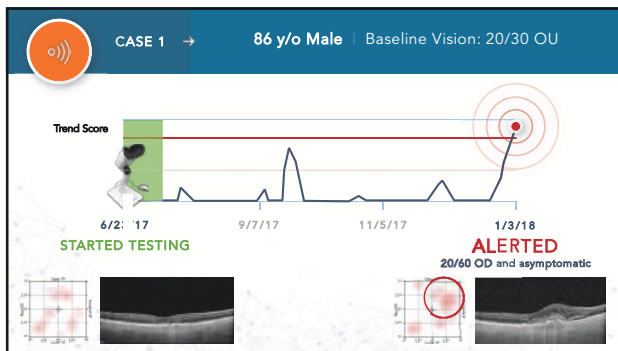
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**Key Concepts**  
Elasticity, Viscosity, & Damping

Good Shock Absorber (damping) vs. Bad Shock Absorber (no damping)

Spring: Elasticity (Return Energy) vs. Shock Absorber: Viscosity (Dissipate Energy)

**The Spring is not the problem here. Its the Bad Shock Absorber (damper) that cannot dissipate the energy and delivers a harsh ride**

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**Hysteresis**  
What it is -- What it is NOT

Hysteresis characterizes the response to application and removal of force in materials that dissipate a portion of applied energy

- Not a new concept (term defined in 1890)
- 13,000+ medical publications on hysteresis in a variety of fields?

**Corneal Hysteresis (CH)**  
Reflects cornea's ability to absorb and dissipate energy

- An indication of "damping" capacity of the ocular tissue
- NOT an indication of "stiffness" or "rigidity"**

David Luce PhD 1935-2017  
Pioneered Corneal Hysteresis

**"The eye is under a constant assault"**  
Hysteresis tells us "How good of a shock absorber" the eye is.

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**Ocular Response Analyzer G3**  
Measurement Values, Range, and Interpretation

- Average Normal CH is 10.5 mmHg
- Standard dev 1.5 mmHg
- Fairly stable diurnally and with age

**Corneal Compensated IOP (IOPcc):** Closer to the "true pressure"

**Corneal Hysteresis:** Normal average 10.5  
Typical Range is 8-14 (low = risk)

**IOPcc:** "Goldmann equivalent" reference

**Waveform Score:** signal reliability (0-10)

| Right      | Left       |
|------------|------------|
| 15.7 IOPcc | 11.5 IOPcc |
| 11.5 CH    | 15.5 CH    |

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**Ocular Response Analyzer G3**  
Measurement Values, Range, and Interpretation

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**iCare Tonometer and iCare Home**

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**iCare Home**

- Allow at home IOP monitoring
- ★ Non-office hour IOP monitoring
- ★ Monitors diurnal IOP variations
- ★ Catch spikes
- ★ More than one IOP in a day
- ★ Patient can not see the IOP

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Question

Which method of IOP measure should only be used for glaucoma diagnosis, treatment, and management?

Many methods are acceptable

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Wouldn't it be great if we could measure low grade chronic inflammation in YOUR body!

Measurement of Macular Pigment

- HPLC
  - Heterochromatic flicker photometry (HFP)
  - Minimum motion photometry
- Image Based
  - Autofluorescence attenuation
  - Reflectometry
  - Resonance Raman spectroscopy (skin and eye)

High Performance Liquid Chromatography

Credit to: An Evening with Dr. Paul Bernstein

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Evidence Informed Risk Adjusted Medicine

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Measuring Carotenoids – Gives You the Patient's Over-All Antioxidant Status – In the Office – 30 Seconds

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Vulnerable to Oxidation

- Betacarotene
- Lutein
- Lycopene
- Vitamin C
- Vitamin E

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Comprehensive versus Isolate

Ocular Nutrition

Is it really any different than systemic nutrition?

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### Measuring Carotenoids – Gives You the Patient’s Over-All Antioxidant Status – In the Office – 30 Seconds

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### Reducing Oxidative Stress “Stacking the Deck in Your Favor”

67-year woman

- ★ Dry eyes
- ★ Rheumatoid Arthritis

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### 32-Year-Old Woman

- Hyperthyroid with thyroid eye disease/Graves
  - ★ Upper lid retraction and soft tissue involvement
  - ★ Synthroid PO daily
- OP and lens evaluation
  - ★ Latent red eye to O/D OU PRN
- Discussed oxidative stress and thyroid eye disease
  - ★ Discussed fish oil
  - ★ Discussed a comprehensive antioxidant support
- Patient very pleased with:
  - ★ Allopathic treatment: liothyronine, Synthroid
  - ★ Functional/nutritional support: LifePak and Optimum Omega
- Observe for progression for Tepezza consult

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### “Comprehensive Antioxidant” Support AMD, Diabetes, Thyroid, Glaucoma, Prevention, Wellness, Living...

AMD – drusen  
Once per day for “low” zinc

Evidence Informed Risk Adjusted Medicine

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### LifePak and Optimum Omega - Pharmanex

| Ingredients   | Amount  | Daily Intake |
|---------------|---------|--------------|
| LifePak 1000  | 1000 mg | 1000 mg      |
| Optimum Omega | 1000 mg | 1000 mg      |
| ...           | ...     | ...          |

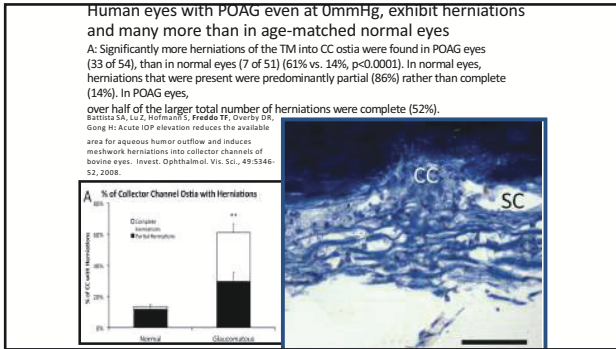
Selection  
Sourcing  
Specification  
Standardization  
Safety  
Studies

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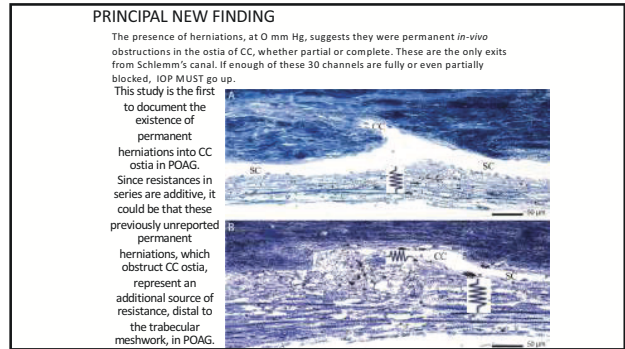
### Class Line Comparison Report

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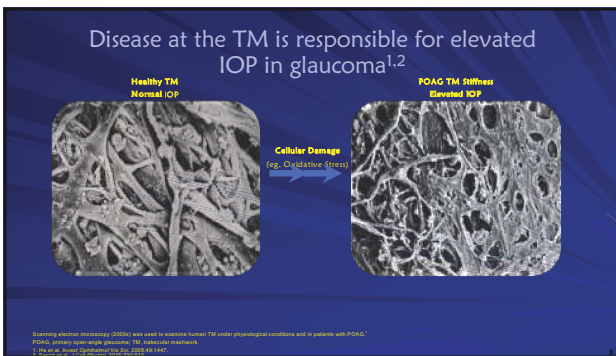




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**Interventional Glaucoma**

- Proactive approach to managing glaucoma that focuses on earlier surgical, laser, or drug-delivery treatments to reduce intraocular pressure and slow disease progression
- This approach aims to minimize reliance on long-term topical medication, potentially reducing the burden of medication compliance for patients

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**Durysta™ (Bimatoprost Implant)**

**Allergen**

- Approved May 23, 2020

**Indication:** Intracameral administration for the reduction of intraocular pressure in patients with Open Angle Glaucoma or Ocular Hypertension

**Sustained-Release, biodegradable intracameral Implant**

**Intracameral implant containing 10-mcg in the drug delivery system**

**Contraindications:**

- Active or suspected ocular or periocular infections
- Corneal endothelial cell dystrophy (e.g., Fuchs' Dystrophy)
- Prior corneal transplantation or endothelial cell transplants (e.g., Descemet's Stripping Automated Endothelial Keratoplasty [DSAEK])
- Absent or ruptured posterior lens capsule, due to the risk of implant migration into the posterior segment
- Hypersensitivity to bimatoprost or any other components of the product

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**Durysta™ (Bimatoprost Implant)**

**Warnings and Precautions**

- Corneal adverse reactions**
  - Bimatoprost implants has been associated with corneal adverse reactions and increased risk of corneal endothelial cell loss
- Iridocorneal angle:**
  - Bimatoprost implant should be used with caution in patients with narrow iridocorneal angles (Shaffer grade 1-3)
  - Anatomical obstruction (e.g. scarring) that may prohibit settling in the inferior angle
- Macular edema**
  - Bimatoprost implant should be used with caution in aphakic patients, in pseudophakic patients with a torn posterior lens capsule, or in patients with known risk factors for macular edema
- Intraocular inflammation**
- Pigmentation**
- Endophthalmitis**

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### Durysta™ (Bimatoprost Implant)

**Dosage and Administration**

- \* Bimatoprost implant is an ophthalmic drug delivery system for a single intracameral administration of a biodegradable implant
- \* Should not be readministered to an eye that received a prior bimatoprost implant

**Efficacy**

- \* Demonstrated in two Phase 3 studies
- \* IOP reduction of approximately 5 - 8 mmHg
- \* In patients with a mean baseline IOP of 24.5 mmHg

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### iDose® TR (travoprost intracameral implant) 75 mcg

**Glaukos**

- ~ Indicated for the reduction of intraocular pressure (IOP) in patients with open-angle glaucoma (OAG) or ocular hypertension (OHT)
- ~ First of its kind, long duration, anchored intracameral procedural pharmaceutical therapy
- ~ Delivers continuous prostaglandin analog therapy directly into the anterior chamber to help with long-term IOP control with proven safety and patient tolerability
- ~ Biocompatible intracameral implant preloaded in a sterile, single-dose inserter
- ~ Anchored into scleral tissue to keep implant fixed and stable
- ~ In 2 pivotal trials, iDoseTR achieved endpoint to timolol at 3 months (inferiority)
- ~ 12 months 81% of iDoseTR patients were completely free of topical medications


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### iDose® TR (travoprost intracameral implant) 75 mcg

- ~ Most commonly reported ocular adverse reactions - 2% to 6%
  - \* Increases in intraocular pressure
  - \* Iritis
  - \* Dry eye
  - \* Visual field defects
  - \* Eye pain
  - \* Ocular hyperemia
- ~ No clinically significant endothelial cell loss
- ~ No periorbital fat atrophy
- ~ No serious corneal adverse events
- ~ No DSAEK
- ~ No DMEK


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### iDose® TR (travoprost intracameral implant) 75 mcg




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### iDose® TR (travoprost intracameral implant) 75 mcg



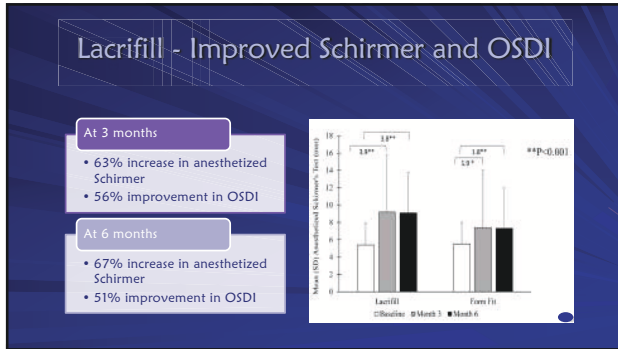
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### Lacrifill – Canalicular Plug Filler



- ~ Closure of Lacrimal Puncta using Lacrifill
- ~ Biodegradable tear duct filler for DED
  - \* Fills the canaliculus with a soft-gel filler that gradually biodegrades over several months
  - \* Increases tear volume and residence time on the ocular surface
  - \* Provides sustained relief without permanent occlusion or foreign body sensation
- ~ FDA-cleared injectable alternative to traditional punctal plugs
- ~ Rapid symptom relief in evaporative and aqueous-deficient dry eye
- ~ Prefilled syringe containing sterile hyaluronic acid gel
- ~ Long-lasting (6 months), repeatable
- ~ Eliminates risk of loss, dislodgement, infection, irritation, rubbing
- ~ Removal – Irrigate

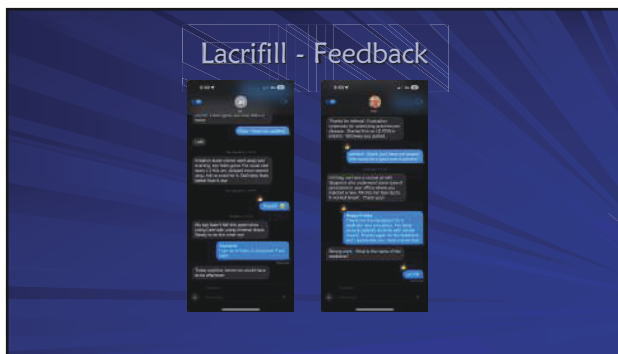
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Optometric  
Education  
Consultants

**Questions and Thank You!**

Latest Advances in Eye Care Technology

Innovations in Early Detection and Management!

Greg Caldwell, OD, FAAO

The Suncoast Seminar  
April 25-26, 2026

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