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LYNX-1 Phase 3 trial: Phentolamine Ophthalmic Solution (POS) Proves Effective in Post-Lasik Patients with Dim Light Vision Disturbances

(Poster ID 91924)

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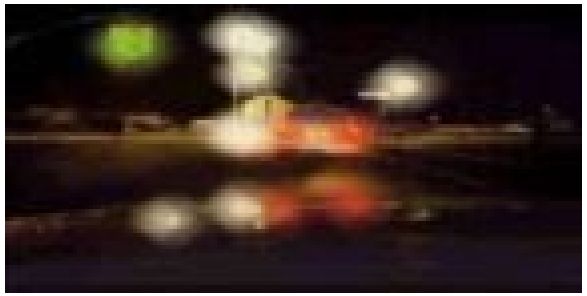
Large Unmet Need in Dim Light Vision Disturbance (DLD)

The Problem:

- Peripheral, unfocused rays of light are unmasked when pupils enlarge in dim light, causing halos/starbursts,/glare that impair vision
- These higher order aberrations and ocular scatter may be caused by LASIK surgery, IOL implants, certain types of cataracts (cortical), and natural reasons (especially dry eye and age)
- Symptoms cannot be properly corrected by glasses



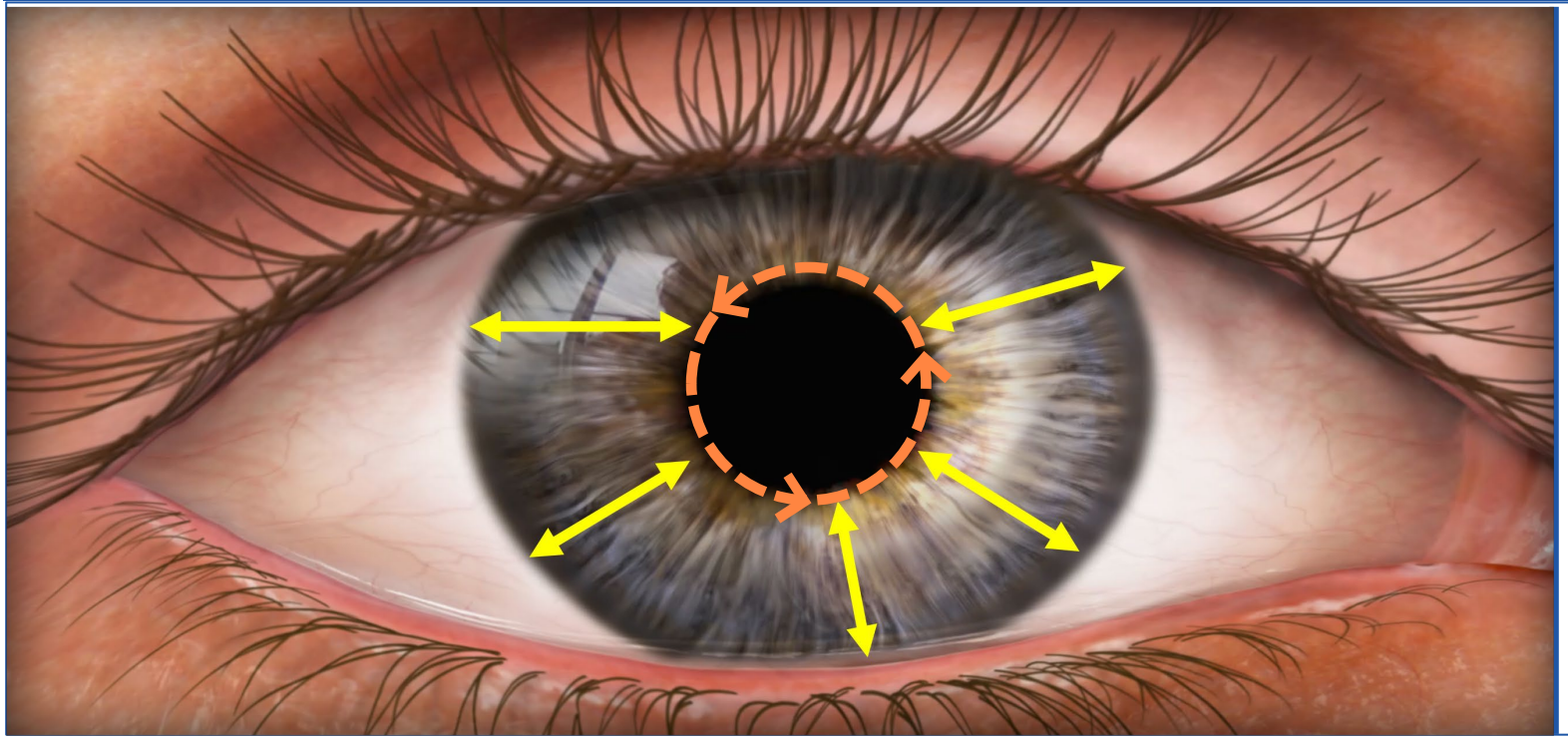
No Commercially-Available Treatment Options for Dim Light Vision Disturbances

Source: Patient-Reported Outcomes with LASIK Symptoms and Satisfaction (PROWL June 2021)

Potential Treatment Option: 0.75% Phentolamine Ophthalmic Solution

Differentiated Iris Dilator Inhibition MOA for Functional Vision Improvement

Phentolamine is the Active Ingredient in POS: a non-selective α1 Antagonist



Phentolamine blocks α1 receptors on the **Iris Dilator Muscle**

↓

Decreases pupil size (moderately) **without affecting the iris sphincter or ciliary muscles**

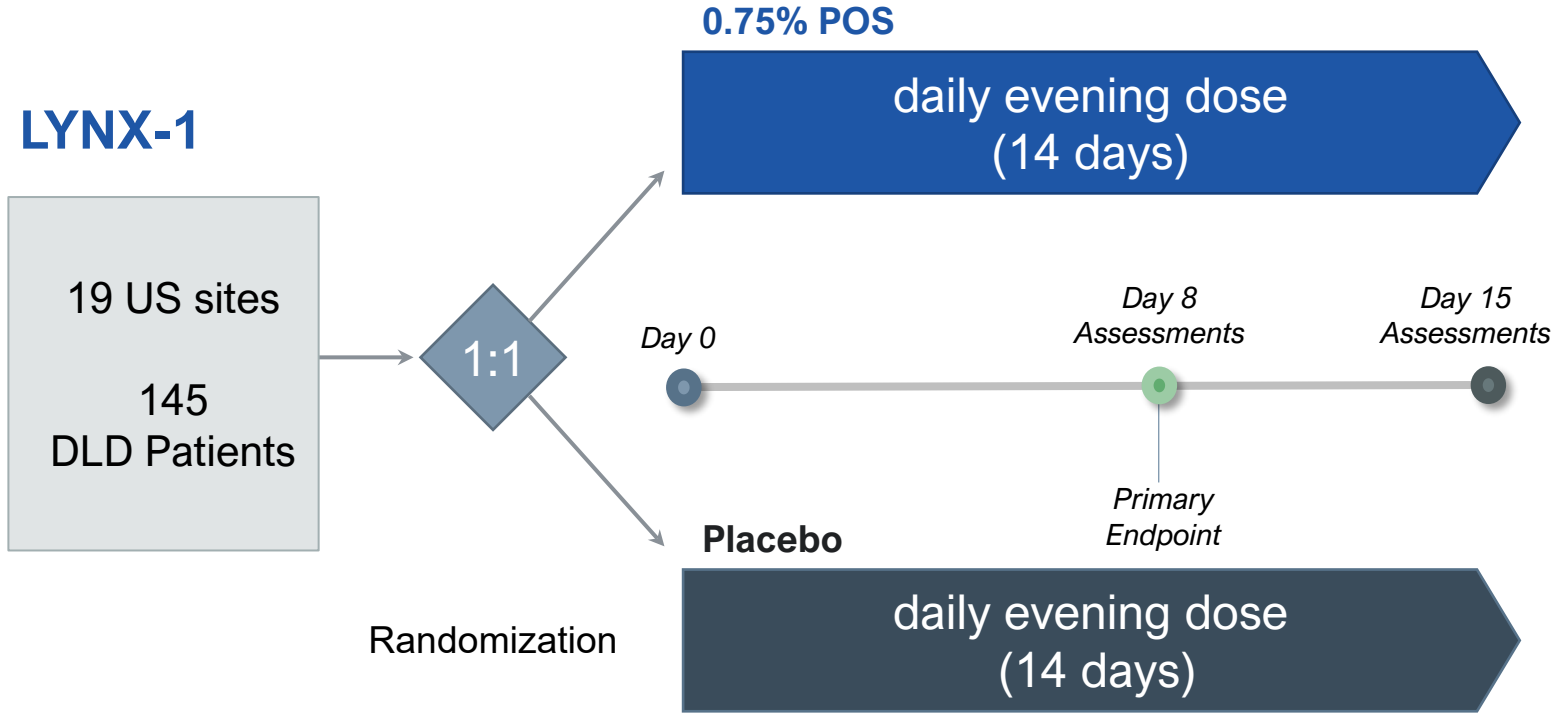
↓

Allows for 3 indications: **RM, Presbyopia and DLD**

Yellow arrows- Iris dilator muscle (alpha antagonists e.g.: Phentolamine)
Orange circle- Iris sphincter muscle (cholinergic agonists e.g.: pilocarpine, carbachol, aceclidine)

LYNX-1: DLD Phase 3 Design & Eligibility Criteria

Randomized, Double-Masked, Placebo-Controlled Multi-Center Two-Week Trial



Endpoints

Primary: % of subjects with ≥ 3 lines of improvement in mesopic low contrast best-corrected distance visual acuity (mLCVA) (Day 8)

Secondary (Days 8 & 15):

- Pupil diameter
- Visual acuity measures (distance and near)
- Safety and tolerability (redness)

Eligibility Criteria

- Males or females ≥ 18 years of age
- Subject self-reported DLD (subjects with history of multifocal IOLs, LASIK, corneal scars, and keratoconus)
- Baseline mLCVA impairment (Snellen 20/63 or worse) in at least one eye
- ≥ 10 letters improvement in mLCVA during illumination of contralateral eye with a BAT system
- Pupil diameter (PD) ≥ 5mm under mesopic conditions in at least one eye
- Subjects with no recent (6 months) ocular procedures or clinically significant ocular disease

Source: LYNX-1 Results

LYNX-1: Demographics and Baseline Characteristics

Treatment and Placebo Arms Were Well-Balanced; mLCVA Severely Impaired

	POS n=70	Placebo n=73	Total n=143
Baseline Characteristic			
Age (years): Mean (Range)	47 (19-70)	45 (19-69)	46 (19-70)
Sex: Male n (%) **Female** n (%)	9 (13%) 61 (87%)	14 (19%) 59 (81%)	23 (16%) 120 (84%)
Race: White n (%) Other* n (%)	67 (96%) 4 (5%)	65 (89%) 9 (12%)	132 (92%) 13 (9%)
Light Iris Color: n (%)	43 (61%)	44 (60%)	87 (61%)
Dark Iris Color: n (%)	27 (39%)	29 (40%)	56 (39%)
Mesopic Baseline Pupil Diameter (PD) Mean (mm)	6.1	6.1	6.1
Photopic Baseline PD Mean (mm)	4.7	4.7	4.7
Mesopic Low Contrast BCDVA letters *55 letters = 20/20*	16	17	17
Photopic Low Contrast BCDVA letters	34	34	34
Mesopic High Contrast BCDVA letters	46	46	46
Mesopic High Contrast DCNVA letters *70 letters = 20/20*	50	49	50
Patients with LASIK n (%)	14 (20%)	11 (15%)	25 (17%)

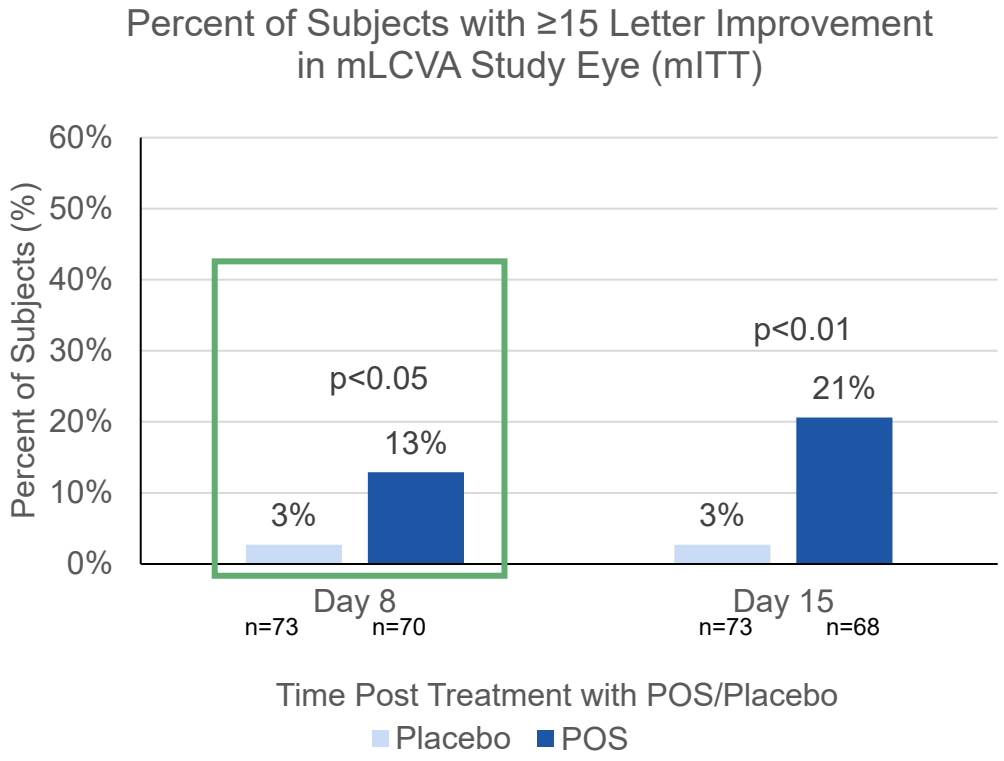
Source: LYNX-1 Results

LYNX-1: % of Subjects with ≥15 Letter Improvement in mLCVA

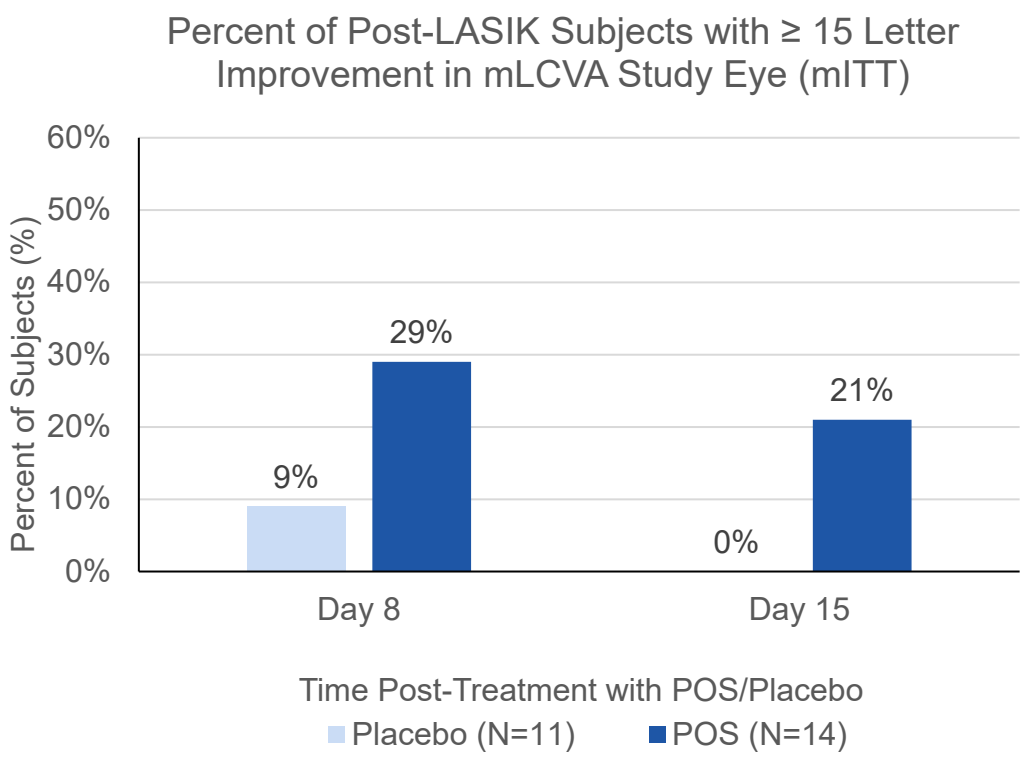
POS Met Primary Endpoint Overall and Showed Favorable Results in Post-LASIK Patients

LYNX-1 Phase 3 Trial

Overall



Post-LASIK Subjects only



Source: LYNX-1 Results

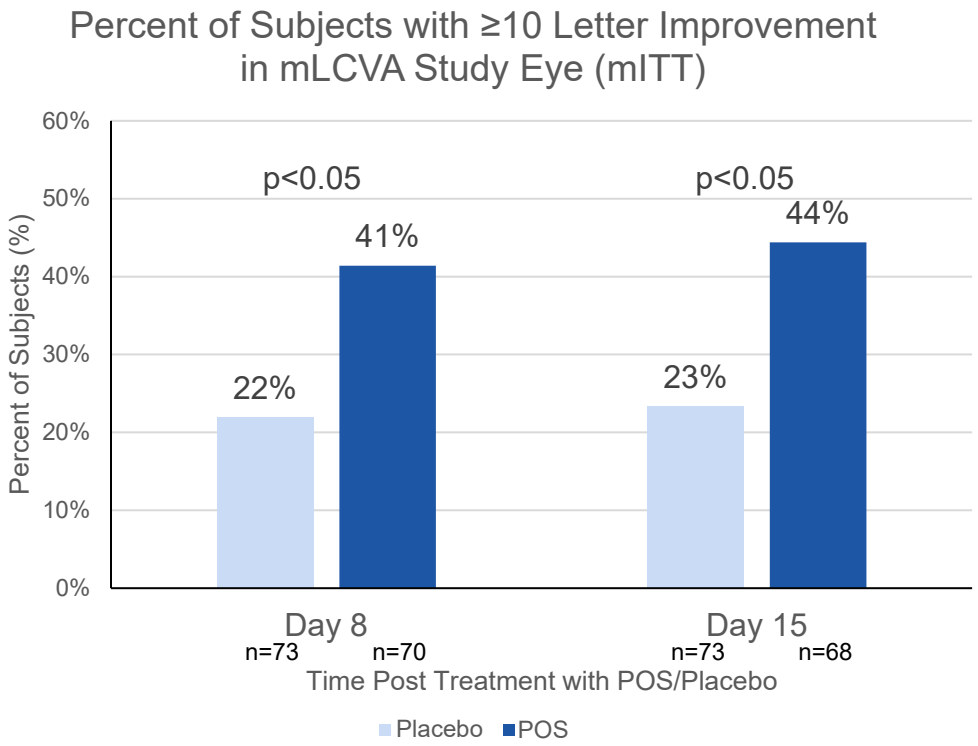
mLCVA = Mesopic Low Contrast Best-corrected Distance Visual Acuity

LYNX-1: % of Subjects with ≥10 Letter Improvement in mLCVA

POS Treatment Showed Clinically Meaningful Vision Overall with Higher Gains in Post-LASIK Patients

LYNX-1 Phase 3 Trial

Overall



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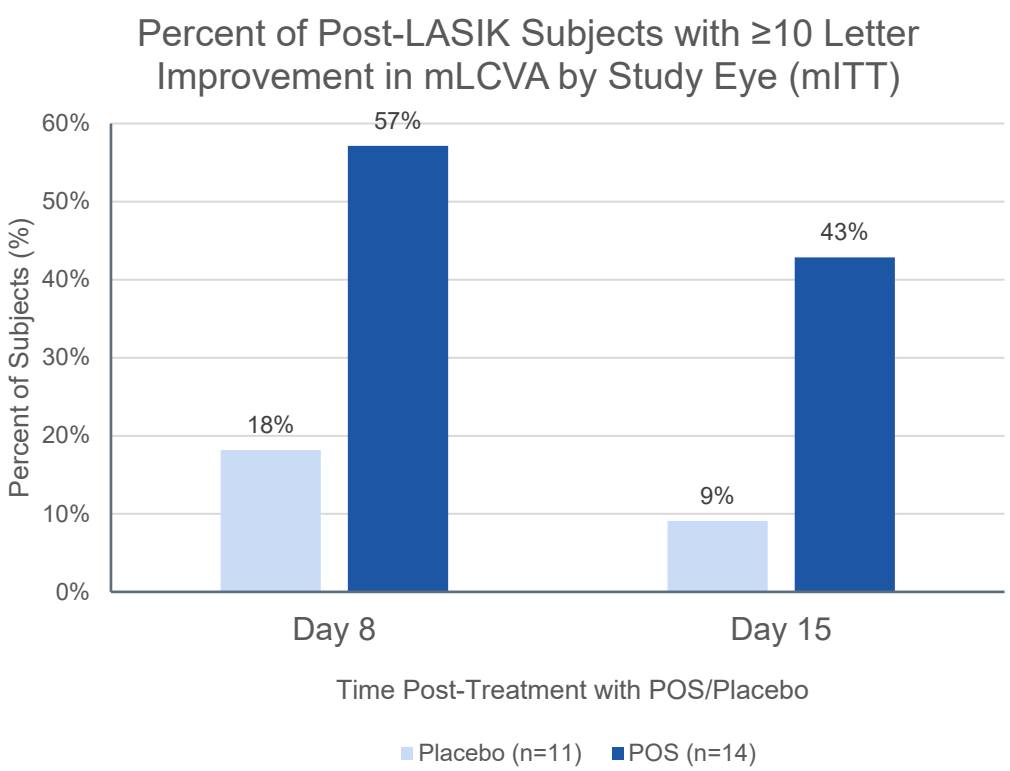

Source: LYNX-1 Results

mLCVA = Mesopic Low Contrast Best-corrected Distance Visual Acuity

LYNX-1: Phase 3 Efficacy and Safety Summary

Data Supports a Favorable Safety Profile with POS Efficacy for DLD Indication

Efficacy

- Met primary endpoint at Day 8 with 13% of subjects gaining 15 or more ETDRS letters of mesopic low contrast distance visual acuity vs. 3% on placebo ($p < 0.05$)
- POS's 15 letter efficacy increased after 14 days of evening dosing, with 21% responders compared to 3% on placebo ($p<0.01$)
- POS statistically significantly reduced pupil diameter by a mean of 1.1 mm on Day 8 and Day 15
- Significant improvements in low contrast distance vision under photopic conditions were also observed
- Efficacy was seen with light and dark irides
- POS demonstrated benefit in mesopic high contrast near vision

Safety

- No serious AEs
- AEs occurring in >5% of POS treated subjects included: Instillation site irritation (9% vs 0% placebo), Installation site pain (13% vs 0% placebo), Dysgeusia (11% vs 0% placebo) and conjunctival hyperemia (9% vs 3% placebo)
- 84% of the AEs considered related to POS were mild
- No statistical difference in morning in conjunctival hyperemia* between treatment arms with evening dosing at Day 8 and Day 15
- No change in IOP

Source: LYNX-1 Results *Conjunctival hyperemia was graded with a Cornea and Contact Lens Research Unit (CCLRU) card 4-point grading scale

Key Takeaways

- POS showed a statistically significant and clinical meaningful 15 letter (3 line) and 10 letter (2 line) improvement in mesopic low contrast distance visual acuity (mLCVA) at days 8 and 15 compared to placebo in overall dim light disturbance (DLD) cohort
- POS showed similar clinical meaningful results with post-LASIK patients with dim light disturbances
- POS has demonstrated a favorable safety and tolerability profile
- Patients with high levels of higher order aberrations and large pupils under mesopic lighting may especially benefit from POS treatment for dim light vision disturbances
- These positive LYNX-1 Phase 3 data in DLD support a second Phase 3 for potential NDA submission
- With no treatment options, POS has the potential to be the first Rx eye drop for millions of patients suffering from halos, glares, starbursts and other dim light vision disturbances

Source: LYNX-1 Results

We thank all the LYNX-1 study participants, investigators and their staff !!!

Dr. Marguerite McDonald

LYNX-1 Clinical Trial Sponsor is Ocuphire Pharma
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