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1:30 PM–1:35 PM

Effect of Phentolamine Ophthalmic Solution on Accommodation, Visual Acuity, and Restoration of Pupillary Light Reflex in the MIRA-3 study
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Dr. Al-Mohtaseb's additional financial relationships:

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**

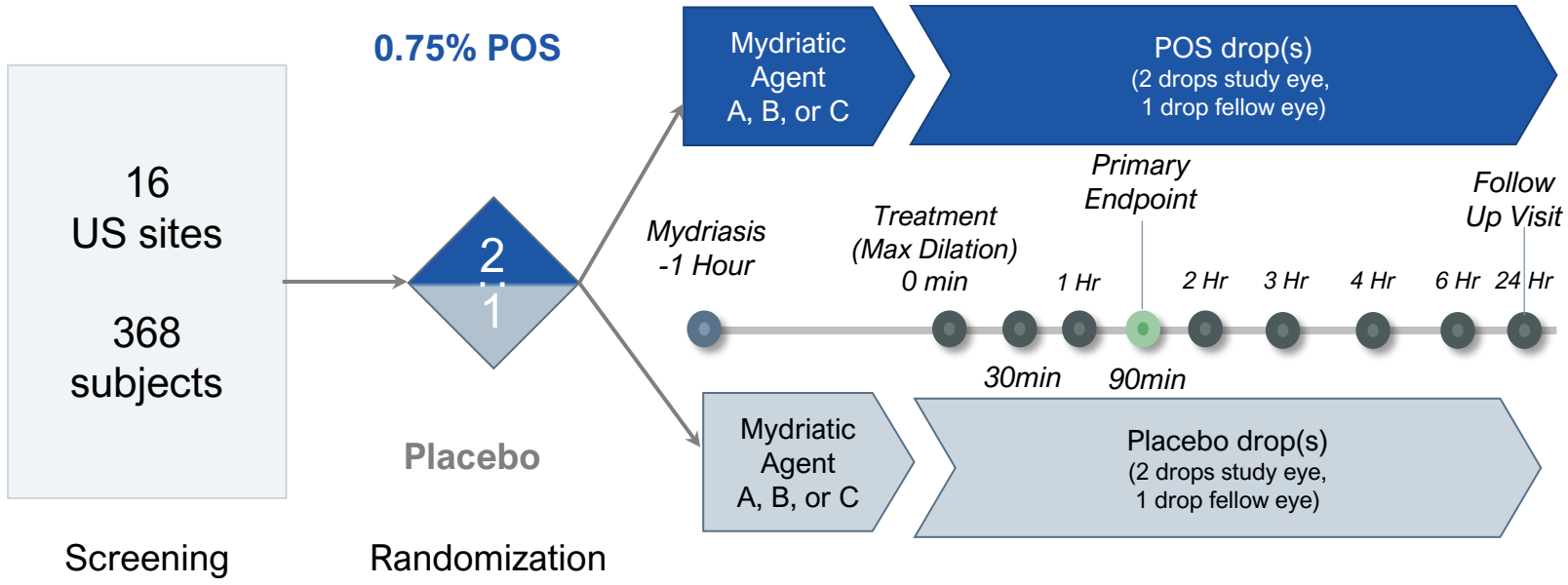
↓

Allows for 3 indications:
Reversal of Mydriasis, Presbyopia and DLD

POS is not approved by any regulatory agency. Illustration for educational purposes

MIRA-3 Phase 3 Registration Trial Design

Randomized, Double-Masked, Placebo-Controlled, Parallel, Multi-Center, One-Day Trial



Key Eligibility Criteria

Inclusion: Healthy ≥ 12 years of age

Exclusion: Clinically significant ocular trauma, surgery, or non-refractive laser treatment within the 6 months prior to screening; and recent or current evidence of ocular disease, infection or inflammation in either eye

Phase 3 Results Reported March 2022

Endpoints

Primary: % of subjects (study eye) returning to baseline (within 0.2 mm) pupil diameter (PD) at 90 min

Key Secondary:

- % of subjects returning to baseline at 0min, 30min, 1h, 90 min 2h, 3h, 4h, 6h, 24h (overall, by mydriatic agent, by iris color)
- Mean time to return to baseline PD
- Mean change in pupil diameter at all timepoints
- Distance-Corrected Near Vision
- Accommodation (Tropicamide/Paremyd)
- Safety and tolerability

Source: Mydriatic Agents 3:1:1 – A: 2.5% Phenylephrine (alpha-1 agonist), B: 1% Tropicamide (cholinergic blocker), C: 1% Hydroxyamphetamine hydrobromide and 0.25% Tropicamide (combination)

Demographics and Baseline Characteristics

Treatment and Placebo Arms Were Balanced in MIRA-3 Phase 3 Registration Trial

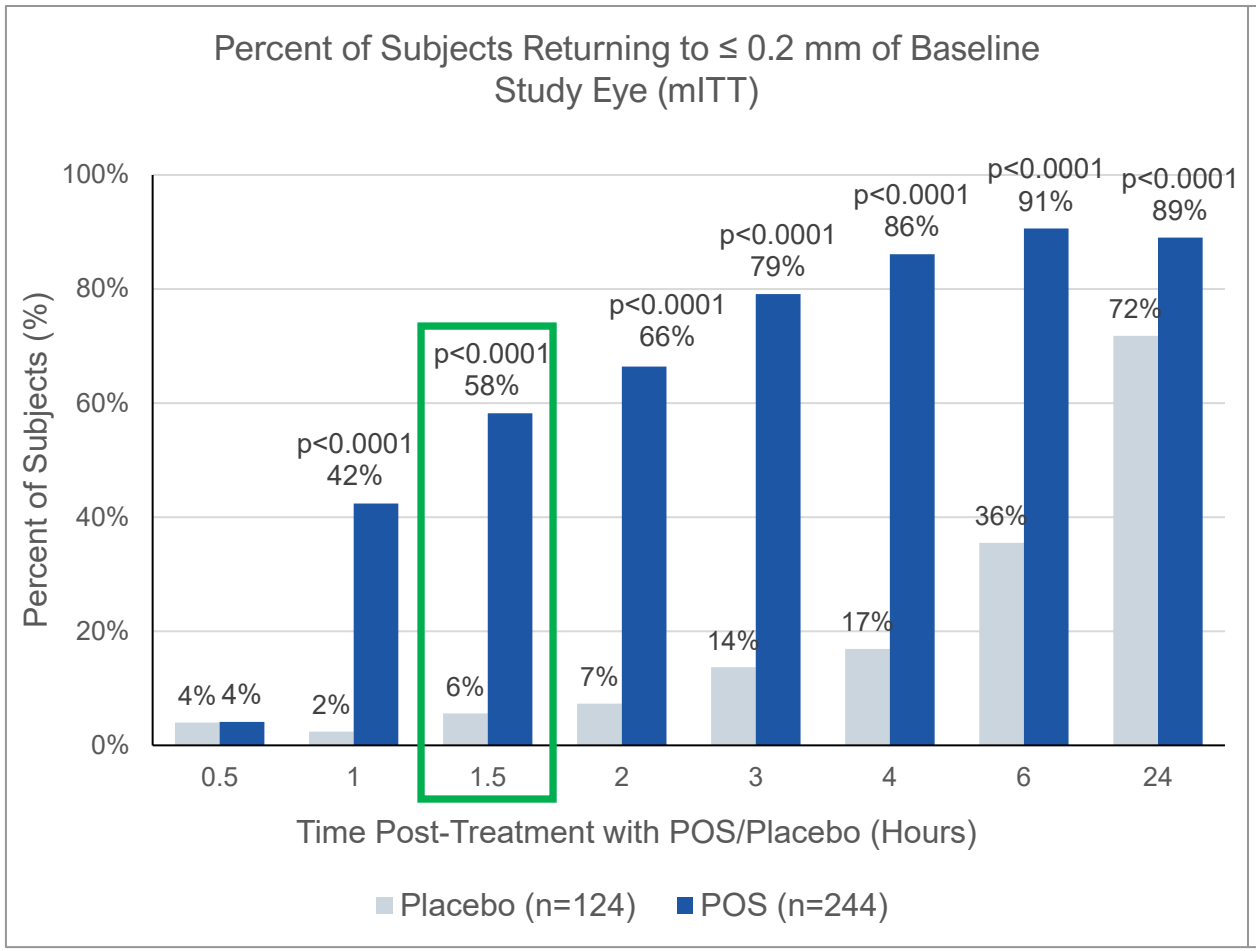
	POS (n=244)	Placebo (n=124)	Total (n=368)
Demographics			
Age (years): Mean (Range)	34 (12-80)	36 (12-80)	35 (12-80)
Sex: Male n (%) **Female** n (%)	92 (38%) 152 (62%)	59 (48%) 65 (52%)	151 (41%) 217 (59%)
Race: White n (%) **Other*** n (%)	182 (75%) 62 (25%)	93 (75%) 31 (25%)	274 (75%) 94 (25%)
Light Iris Color: n (%)	113 (46%)	58 (47%)	171 (47%)
Dark Iris Color: n (%)	131 (54%)	66 (53%)	197 (54%)
Baseline Characteristic			
Baseline Pupil Diameter Mean (mm)	5.1	4.9	5.1
Max Dilated Pupil Diameter Mean (mm)	7.2	7.1	7.2

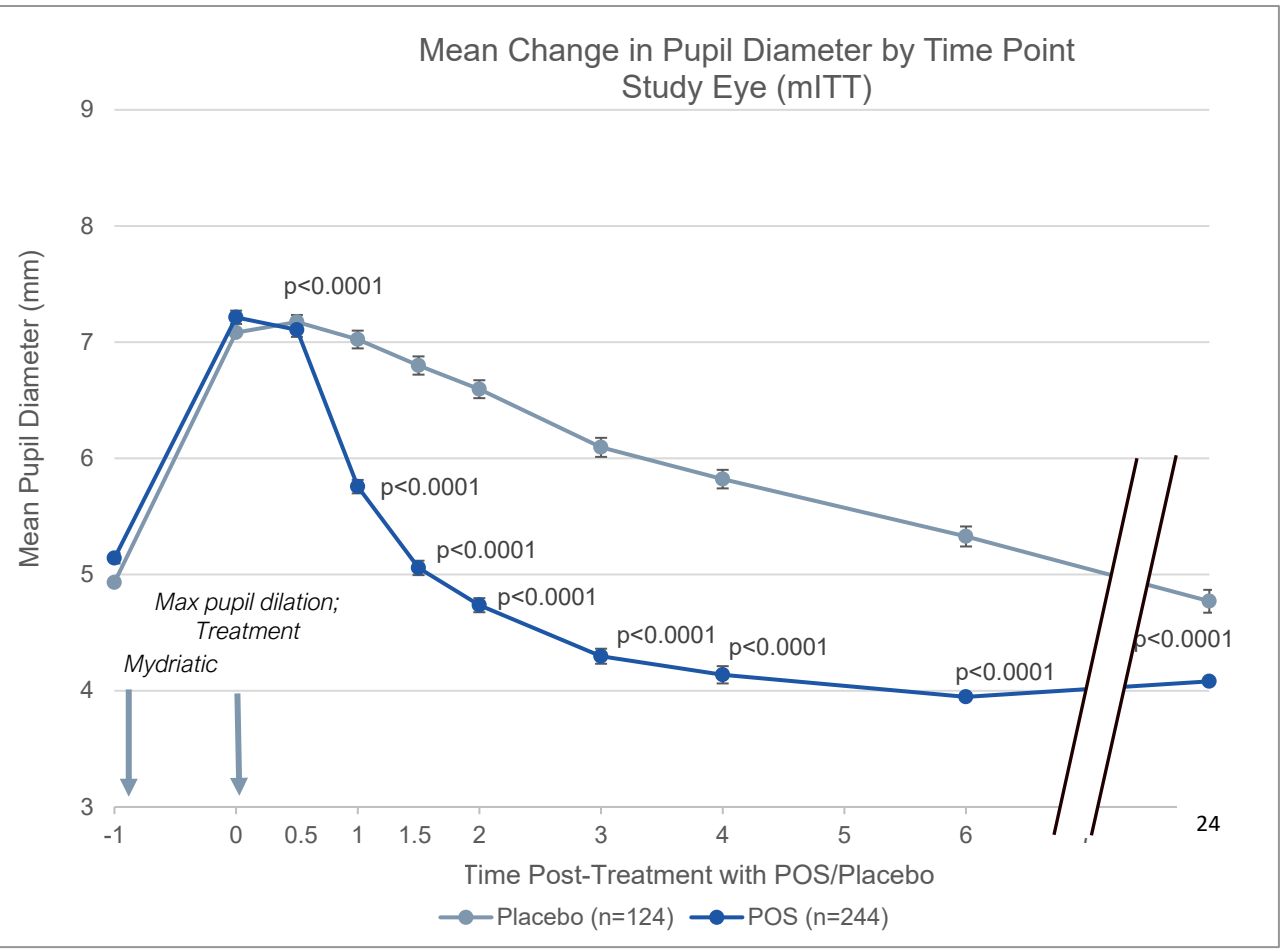
*Notes: **32 pediatric subjects 12-17years old were enrolled in the trial.***
Race is more than 100% given subjects could check more than one category.
Demographics represent all randomized population (ARP) of 368 which is the same as Safety Population and Modified-Intent-to-Treat (mITT).
Per Protocol (PP) Population is 345, excludes 23 subjects who did not dilate more than 0.2 mm 1 hour after receiving mydriatic drop.

Source: MIRA-3 Results;
*Other- African American, Asian, American Indian, Alaska Native, Native Hawaiian, Other Pacific Islander

Primary Endpoint: Percent of Subjects' Study Eye Returning to Baseline at 90 Min

Primary Endpoint Met and POS Statistically Better Than Placebo from 1 Hour to 6 Hours and 24 Hours

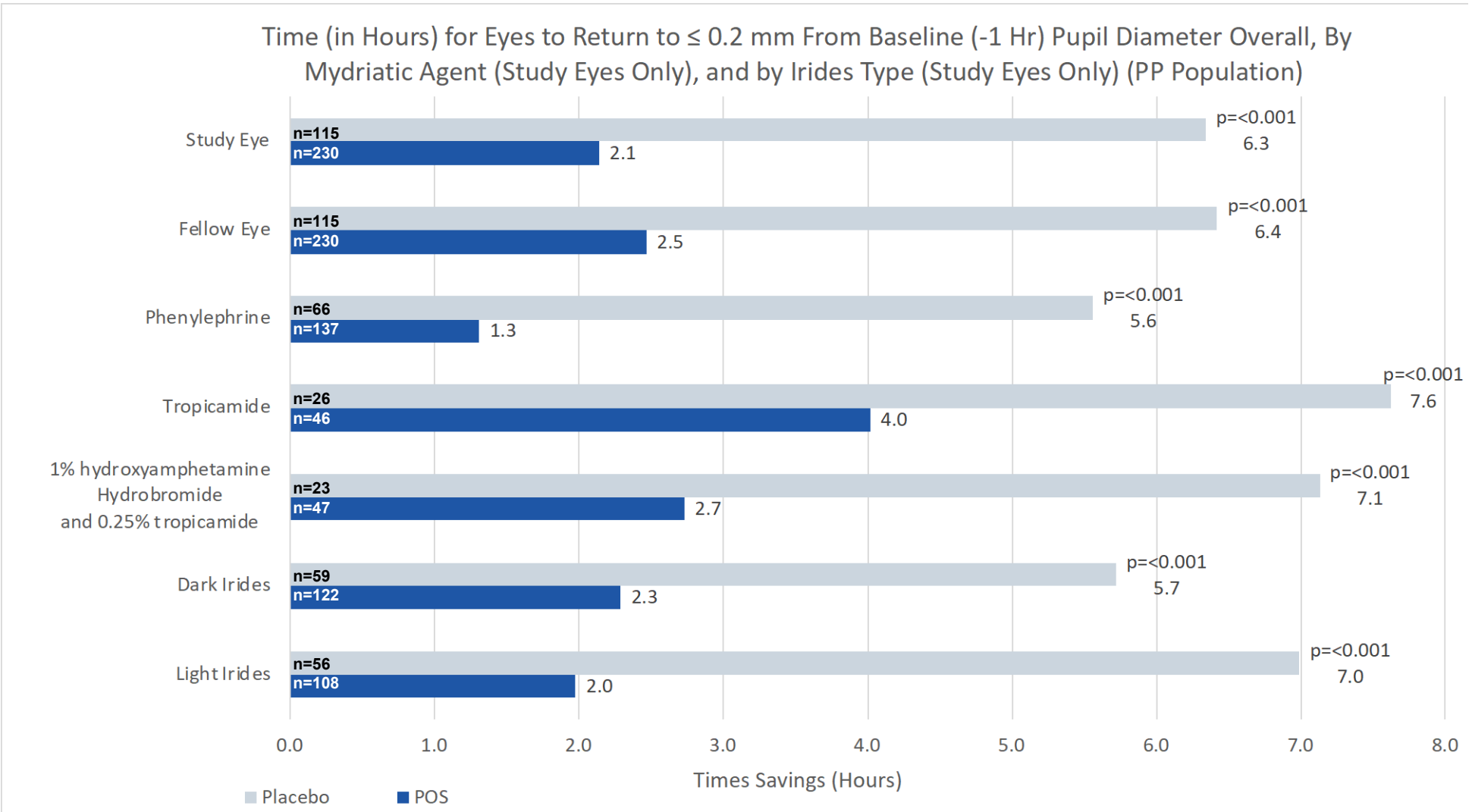




Source: MIRA-3 Results; Data include all three mydriatics (Phenylephrine, Tropicamide, 1% Hydroxyamphetamine hydrobromide and 0.25% Tropicamide (combination).

Time Savings

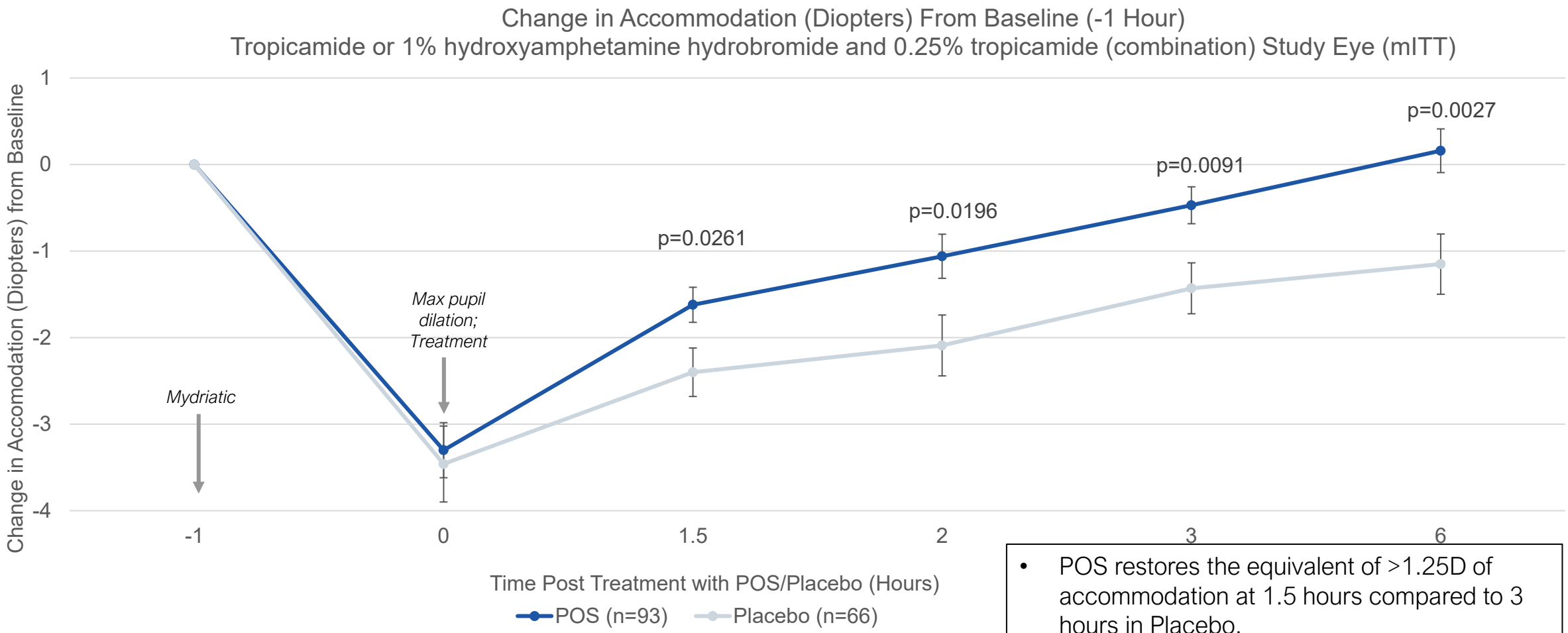
Saving of ~4 hours in time to return to normal pupil diameter



Source: MIRA-3 Results;

Mean Change in Accommodation

POS Rapidly Restores Accommodation (Diopters)

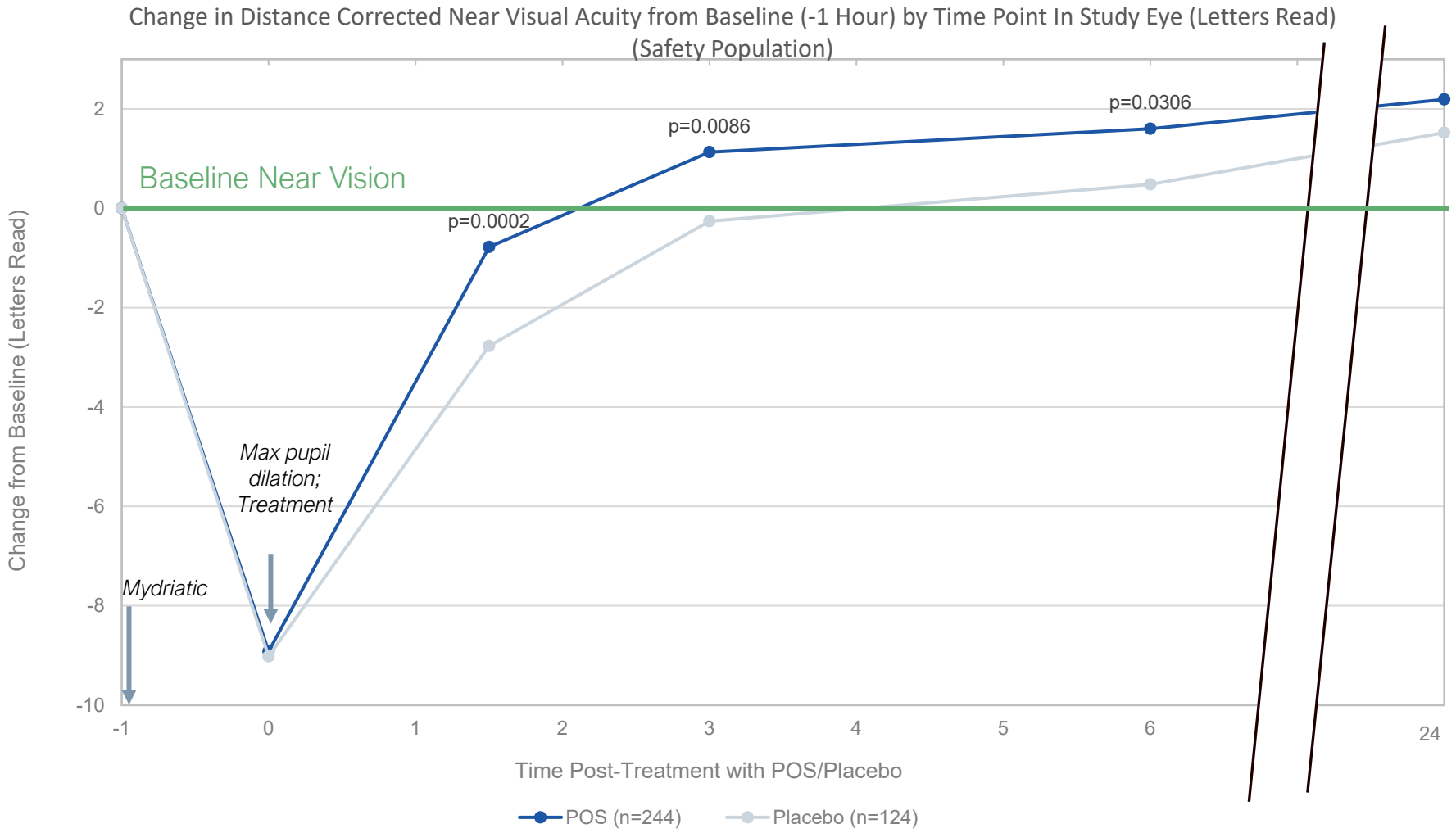


- POS restores the equivalent of >1.25D of accommodation at 1.5 hours compared to 3 hours in Placebo.
- POS restores the equivalent of ~2.50D accommodation at 2 hours vs 6 hours in Placebo.

Source: MIRA-3 Results

Maximum Pupil Dilation Results in Loss of Near Vision

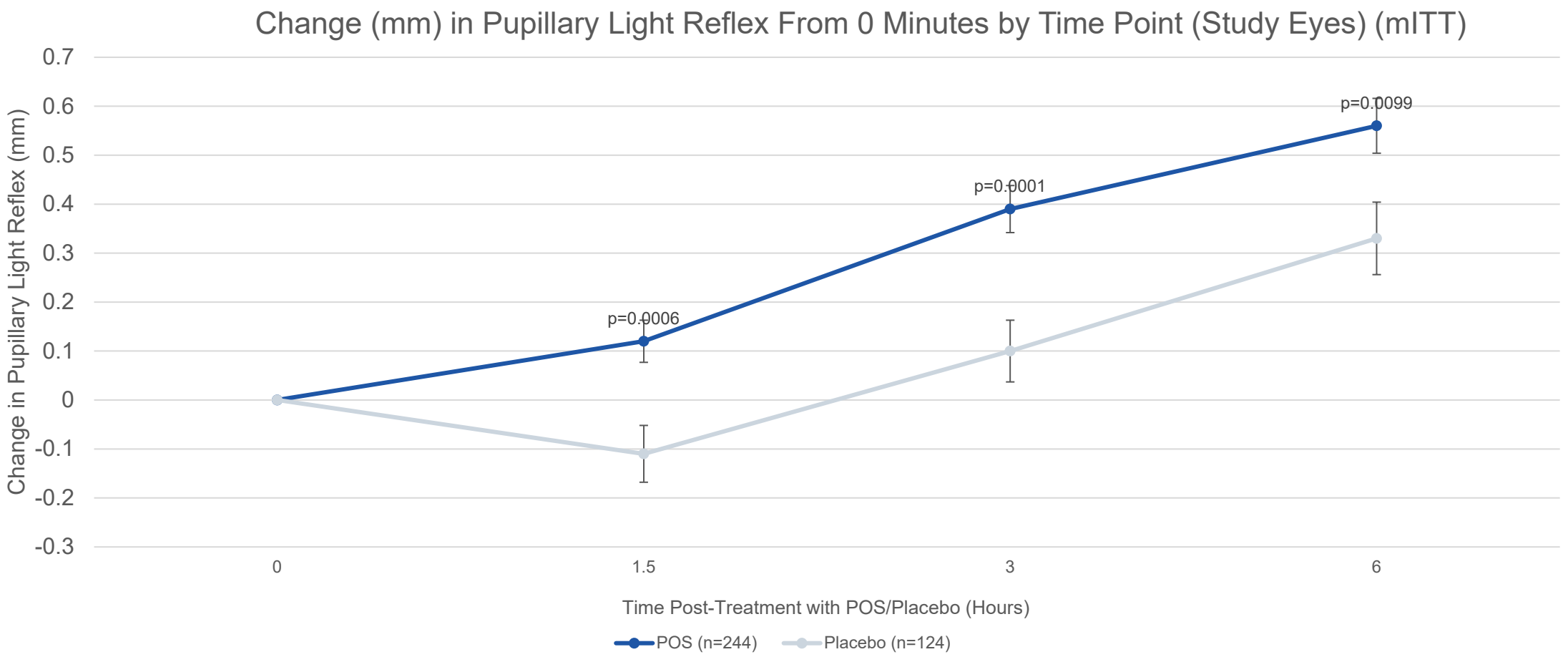
POS Returns Near Vision to Baseline Levels Faster Compared to Placebo



Source: MIRA-3 results

Pupillary Light Reflex

POS Demonstrated Statistically Significant Improvements in Pupillary Light Reflex Restoration Compared to Placebo



Source: MIRA-3 Results; Data include all three mydriatics (Phenylephrine, Tropicamide 1% hydroxyamphetamine hydrobromide and 0.25% tropicamide (combination)).

Safety Findings

POS was Well-Tolerated with a Favorable Safety Profile

- The only AE occurring in ≥ 5% of subjects treated with POS, was conjunctival hyperemia (11% POS vs. 0% placebo)
- Less than 1% of subjects reported instillation site discomfort, pain, or irritation
- No deaths, serious AEs, or withdrawals due to AEs
- All treatment related AEs were mild in severity
- No distance or near visual acuity loss
- No systemic side effects (no change in heart rate and blood pressure)
- No change in IOP

Summary

- **Met primary endpoint at 90 minutes with 58% of subjects returning to pre-dilation pupil diameter vs. 6% of placebo treated subjects ($p < 0.0001$)**
- **Saving of ~4 hours in time to return to normal pupil diameter**
- **POS rapidly restored accommodative amplitude, near vision and pupillary light reflex compared to Placebo**
- **POS demonstrated favorable safety and tolerability profile**

Ocuphire thanks all the MIRA-3 study participants, investigators and their staff!!!