Delivering Innovation to the Eye

EYP-1901 DAVIO Study Interim Results

November 13, 2021

EyePoint® PHARMACEUTICALS

Forward looking statements

Various statements made in this presentation are forward-looking, within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, and are inherently subject to risks, uncertainties and potentially inaccurate assumptions. All statements that address activities, events or developments that we intend, expect, plan or believe may occur in the future, including but not limited to statements about our expectations regarding the potential benefits of our partnerships and strategic alliances with other companies, as well as the timing and clinical development of our product candidates, including EYP-1901; the potential for EYP-1901 as a vital, novel twice-yearly treatment for wet age-related macular degeneration, diabetic retinopathy and retinal vein occlusion; and our longer term financial and business goals and expectations, are forward-looking statements. Some of the factors that could cause actual results to differ materially from the anticipated results or other expectations expressed, anticipated or implied in our forward-looking statements are risks and uncertainties inherent in our business including, without limitation: the effectiveness and timeliness of clinical trials, and the usefulness of the data; the timeliness of regulatory approvals; the extent to which COVID-19 impacts our business; our ability to achieve profitable operations and access to needed capital; fluctuations in our operating results; our ability to successfully produce sufficient commercial quantities of YUTIQ® and DEXYCU® and to successfully commercialize YUTIQ and DEXYCU in the U.S.; our ability to sustain and enhance an effective commercial infrastructure and enter into and maintain commercial agreements for YUTIQ and DEXYCU; the development of our YUTIQ line extension shorter-duration treatment for non-infectious uveitis affecting the posterior segment of the eye; the success of current and future license agreements, including our agreements with Ocumension Therapeutics and Equinox Science; termination or breach of current license agreements, including our agreements with Ocumension Therapeutics and Equinox Science; our dependence on contract research organizations, co-promotion partners, and other outside vendors and service providers; effects of competition and other developments affecting sales of products; market acceptance of products; effects of guidelines, recommendations and studies; protection of intellectual property and avoiding intellectual property infringement; retention of key personnel; product liability; industry consolidation; compliance with environmental laws; manufacturing risks; risks and costs of international business operations; volatility of our stock price; possible dilution; absence of dividends; and other factors described in our filings with the Securities and Exchange Commission. We cannot guarantee that the results and other expectations expressed, anticipated or implied in any forward-looking statement will be realized. A variety of factors, including these risks, could cause our actual results and other expectations to differ materially from the anticipated results or other expectations expressed, anticipated or implied in our forward-looking statements. Should known or unknown risks materialize, or should underlying assumptions prove inaccurate, actual results could differ materially from past results and those anticipated, estimated or projected in the forward-looking statements. You should bear this in mind as you consider any forward-looking statements. Our forward-looking statements speak only as of the dates on which they are made. We do not undertake any obligation to publicly update or revise our forward-looking statements even if experience or future changes makes it clear that any projected results expressed or implied in such statements will not be realized.

COMPANY OVERVIEW

Pipeline leveraging proven Durasert® technology *

Compelling pipeline focused on retinal disease

- EYP-1901 - advancing into phase 2 trials for wet AMD, diabetic retinopathy (DR), and retinal vein occlusion (RVO) after positive phase 1 top line results
- YUTIQ50 – potential six month treatment for posterior uveitis entering phase 3 to support SNDA filing
- Additional molecules and MOA under evaluation

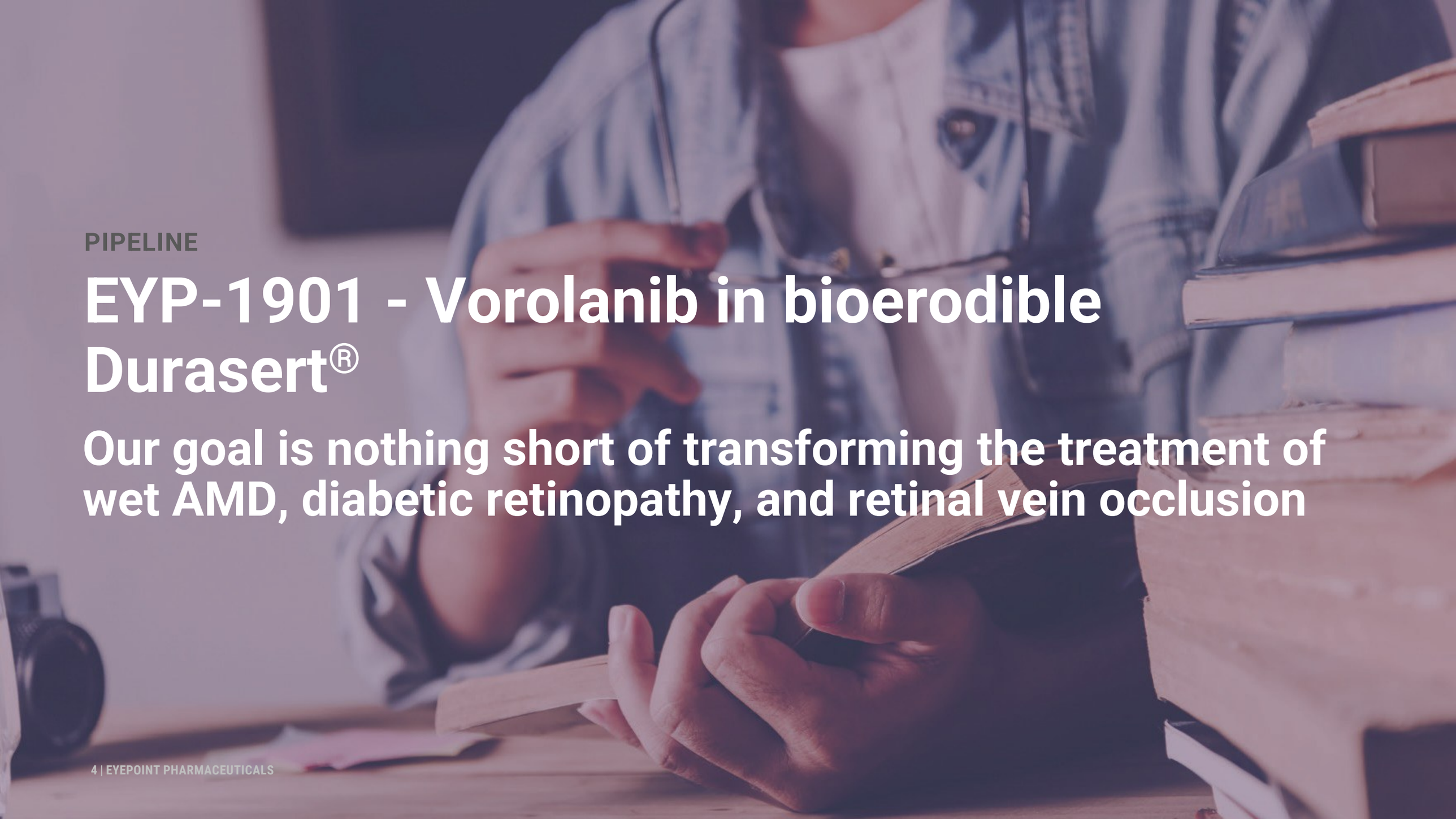
Durasert® - proven intravitreal (IVT) drug delivery platform

- Sustained local drug delivery
- Constant (zero-order kinetics), stable release of drug in the eye over weeks, months or years
- Safely administered to thousands of patients' eyes across four FDA approved products

Commercial franchises - YUTIQ® and DEXYCU®

- 2021 net product revenues improving as COVID-19 restrictions eased across the U.S.

*non-erodible



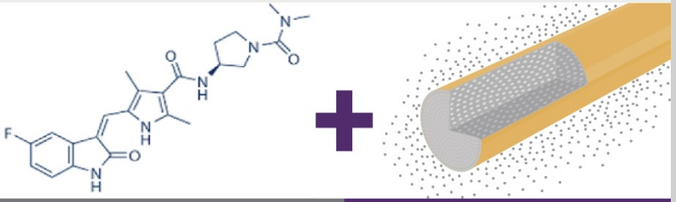
PIPELINE

EYP-1901 - Vorolanib in bioerodible Durasert®

Our goal is nothing short of transforming the treatment of wet AMD, diabetic retinopathy, and retinal vein occlusion

PIPELINE

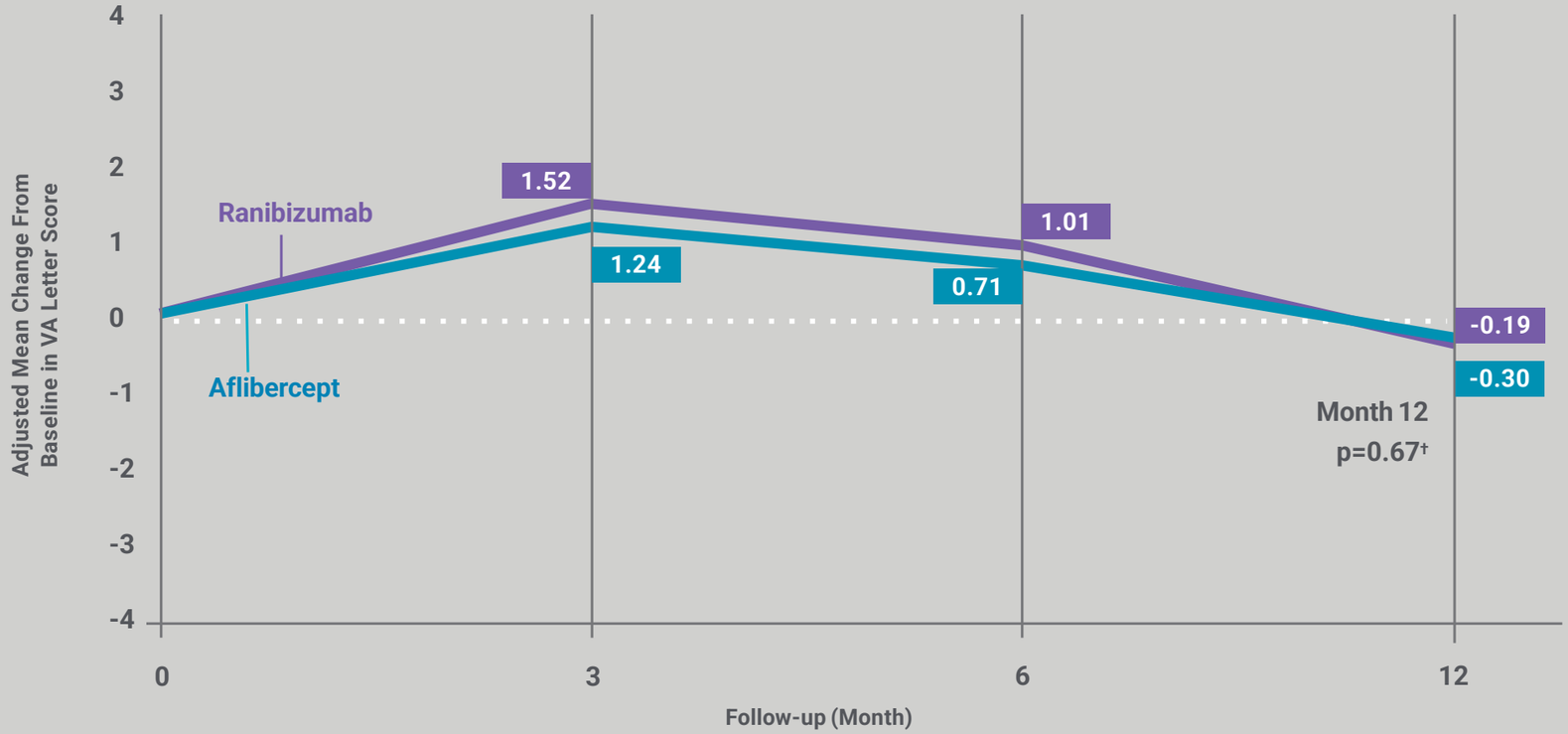
EYP-1901



VOROLANIB | DURASERT

Real world need... today's wet AMD treatments still result in vision loss over time

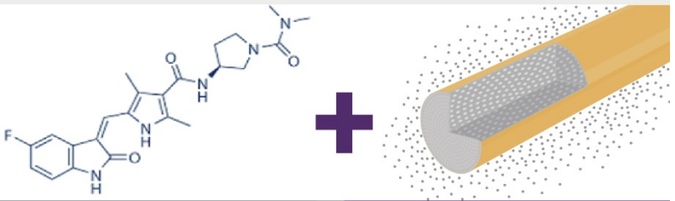
RETROSPECTIVE STUDY OF 3350 RANIBIZUMAB AND 4300 AFLIBERCEPT TREATMENT-NAIVE EYES WITH WET AMD



Lotery et al., Eye (2017) 31, 1697–1706

PIPELINE

EYP-1901



VOROLANIB | DURASERT

Real World Reality – Even One Missed Injection Can Mean Loss of Vision

AMERICAN ACADEMY OF OPHTHALMOLOGY®

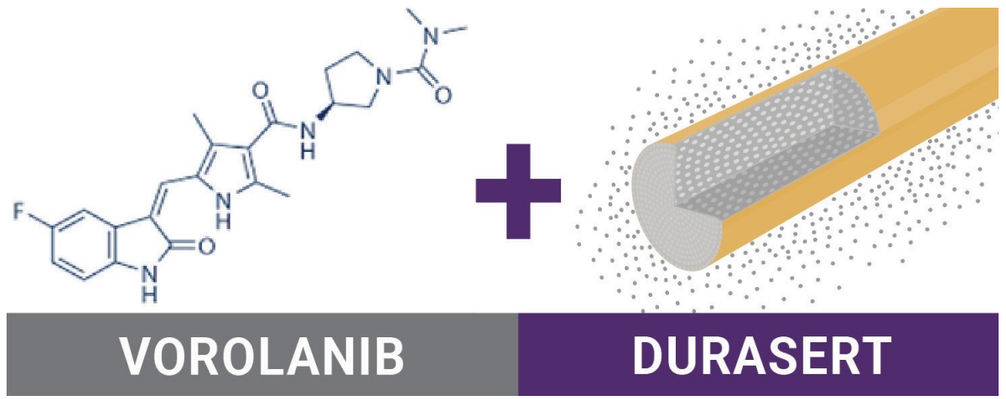
The Effect of Delay in Care among Patients Requiring Intravitreal Injections

Weilin Song, BS,[1] Rishi P. Singh, MD,[2] Aleksandra V. Rachitskaya, MD[3]

- Study evaluated 1,041 pts getting intravitreal anti-VEGF therapies
- 60% went to scheduled follow up - 40% did not
- Conclusion: With frequent injections required for current standard of care, a delay in care of only 5.34 weeks resulted in visual loss
- Sustained release options may give practitioners and patients improved outcomes

EYP-1901 – A Novel Approach to Wet AMD Therapy

Vorolanib in Durasert® (bioerodible)

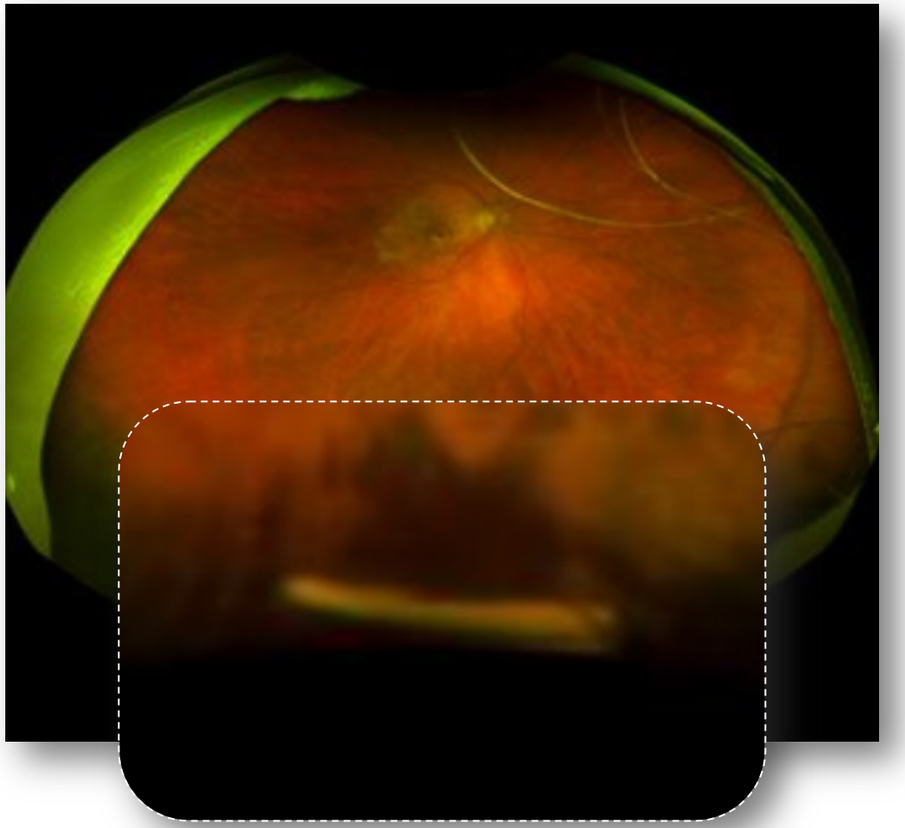


Vorolanib

- Receptor-binding, small molecule tyrosine kinase inhibitor (TKI)
- Activity against all isoforms of VEGF and PDGF
- Oral vorolanib previously studied in a wet AMD ph1 and ph2 programs[1,2]
  - Strong efficacy signal but systemic toxicity halted the ph2 study
  - **No ocular toxicity noted**

1. Jackson et al. JAMA Ophthalmol 2017
2. Cohen MN et al. Br J Ophthalmol. 2021

EYP-1901 – A Novel Approach to Wet AMD Therapy
Vorolanib in Bioerodible Durasert®



EYP-1901 insert at month 5 post-injection

Bioerodible Durasert® Platform: injectable, sustained-delivery system

Similar to YUTIQ®, Retisert®, and Vitrasert®

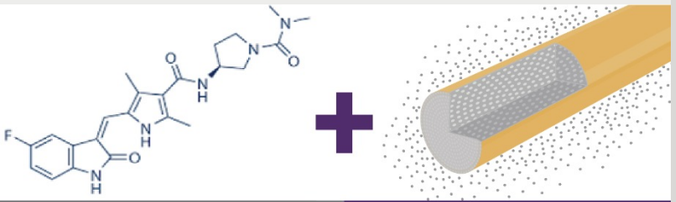
- Main difference:
  No polyimide shell ➡ Bioerodible

Drug release dynamics

- Initial burst near the surface of implant
- Constant, zero-order kinetic release rate for months

PIPELINE

EYP-1901

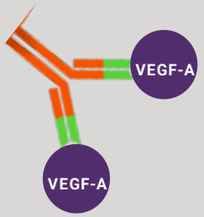


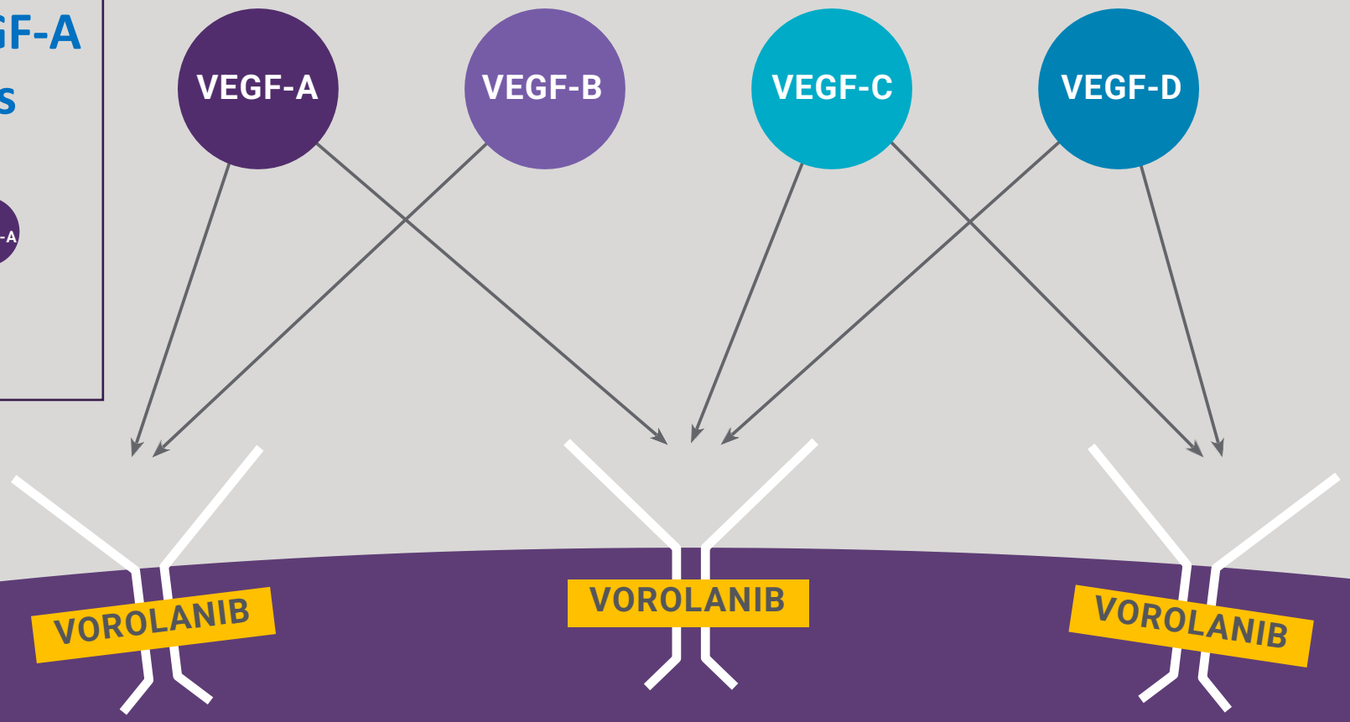
VOROLANIB | DURASERT

Effective blocking of VEGFR Prevents Exudation and Loss of Vision

VEGF SIGNALING PATHWAYS

Other Anti-VEGF-A therapies





EYP-1901 phase 1 trial interim results

DAVIO: EYP-1901 Durasert and Vorolanib in Ophthalmology

Phase 1 Study Interim Data Summary

All objectives successfully met

SAFETY

Positive safety data:

- No ocular Serious Adverse Events (SAEs) reported
- No drug-related systemic SAEs reported
- All ocular AEs were ≤ grade 2; the only grade 3 AE was not drug-related

EFFICACY

Positive Efficacy Data:

- Stable VA and OCT
- Median time to rescue: 6 months
- Clinically significant reduction in treatment burden

DAVIO - Durasert and Vorolanib In Ophthalmology - Wet AMD

Phase 1 Trial. Open label, Dose Escalation, No Control Arm

Enrollment

- Previously treated wet AMD eyes only
- No exclusion for presence of fluid

NO mandated EYP 1901 retreatments

Criteria for rescue anti-VEGF therapy*:

- New fluid > 75 microns (OCT) compared to Day-0
- ≥ 2 lines of BCVA secondary to wet AMD compared to Day-0
- New macular hemorrhage secondary to wet AMD

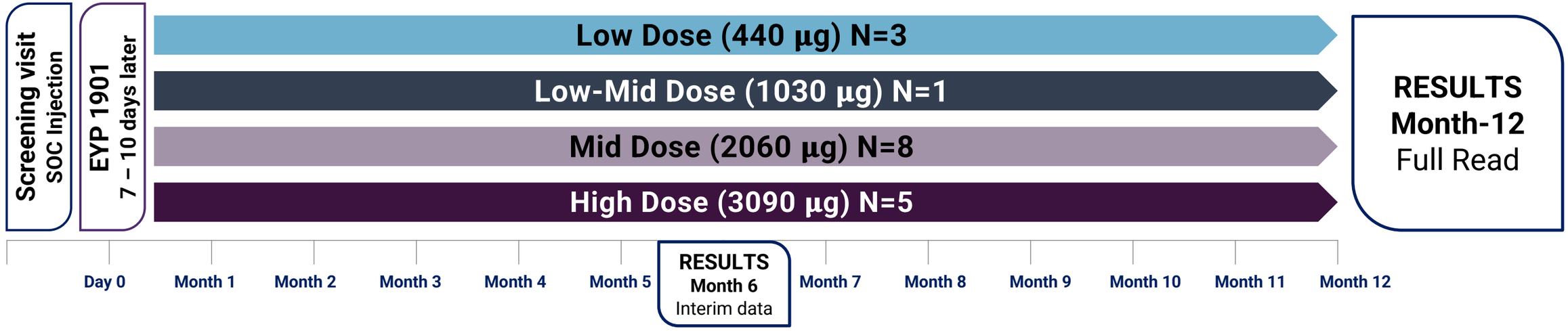
Primary endpoint: safety

- Interim at month-6
- Full readout at month-12

Secondary endpoints:

- BCVA
- CST as measured by OCT

**at the discretion of the investigator*



Note: All doses delivered in a single intravitreal injection.
BCVA: best corrected visual acuity; OCT: optical coherence tomography; CST: central subfield thickness

EYP-1901 Phase 1 DAVIO Participants and Follow-Up

Screening Characteristics (N=17) and Follow Up Visits	
Mean age, range (years)	77.4 (67–94)
Female (n, %)	13/17 (76%)
Mean BCVA, range (ETDRS letters)	69 letters, (38-85)
Mean CST, range (microns)	299 microns, (204–441)
Median length of time for wet AMD diagnosis prior to enrollment	17 months
Mean # of injections per year prior to enrollment	8.76 injections/year
Follow Up at 6 months	168 out of 170 (99 %) possible post treatment follow up visits performed

BCVA: best corrected visual acuity; ETDRS: Early Treatment Diabetic Retinopathy Study; CST: central subfield thickness

Results: Safety

DAVIO Primary Endpoint – Safety

Positive Overall Safety Data

No ocular serious adverse events (SAEs) reported
No drug-related systemic SAEs reported

No other reported significant adverse events such as:

- No vitreous floaters
- No endophthalmitis
- No retinal detachment
- No implant migration in the anterior chamber
- No retinal vasculitis
- No posterior segment inflammation

Ocular AEs:

- One eye: mild asymptomatic anterior chamber cell/flare; *Treated with Maxitrol® eyedrops – resolved in 8 days*
- One eye: asymptomatic vitreous hemorrhage from injection; *Observed*

AC, anterior chamber; AE, adverse event; BCVA, best corrected visual acuity; SAE, serious adverse event

DAVIO Summary to Date – Ocular Safety

Treatment Ocular Adverse Events as Occurring by Subject

Event	440 µg (n=3)	1030 µg (n=1)	2060 µg (n=8)	3090 µg (n=5)	Total (N=17)
Ocular SAEs	0	0	0	0	0
Dose-limiting toxicity events	0	0	0	0	0
Vitreous floaters	0	0	0	0	0
Endophthalmitis	0	0	0	0	0
Reduction in BCVA ≥10 letters[a]	1	0	1	1	3
Retinal detachment	0	0	0	0	0
Implant migration into AC	0	0	0	0	0
Ocular inflammation	0	0	1	0	1
Elevated IOP	1	0	0	0	1
Post-treatment ocular pain/discomfort	2	0	1	0	3
Progressive disease activity	1	0	2	8	11
Subconjunctival hemorrhage	0	0	3	1	4
Vitreous haze	0	0	0	0	0
Dry eye syndrome OU	1	0	0	0	1
Worsening cataracts OU	0	0	1	0	1
Worsening meibomian gland dysfunction OU	0	0	1	0	1
Silicone oil bubble	0	0	1	0	1
Lid edema	0	0	1	0	1
Ocular discharge	0	0	1	0	1
Vitreous hemorrhage	0	0	0	1	1
Corneal epitheliopathy secondary to dry eye (OS)	0	0	1	0	1
Flame shaped hemorrhage	1	0	0	0	1
Macular hemorrhage	1	0	0	0	1

AEs of particular interest

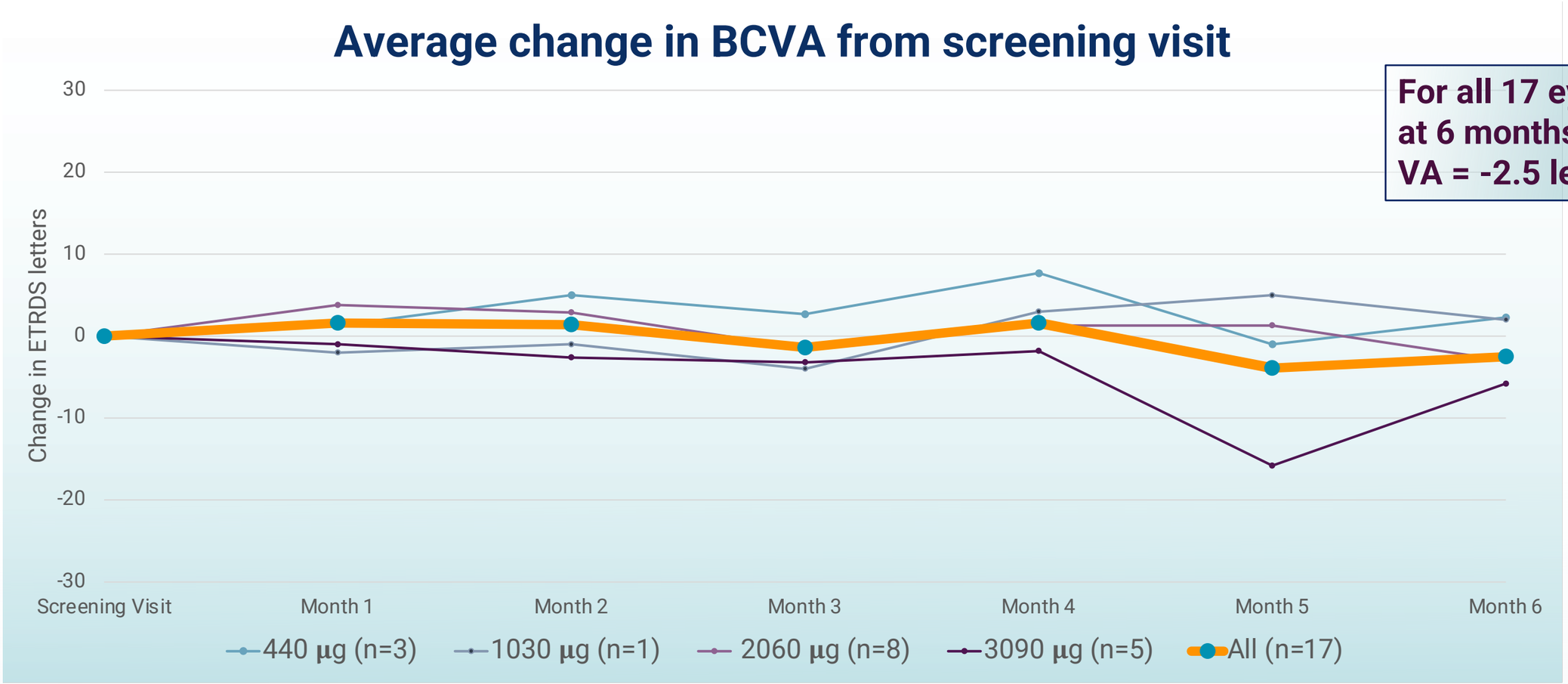
a. All mild-to-moderate in severity and determined not related to study drug
b. Grade 1/Mild

AC anterior chamber; AE, adverse event; BCVA, best corrected visual acuity; OS, left eye; OU; both eyes

Results:

Visual acuity, CST, Rescue Free rates, and Reduction in Treatment Burden

Results:
Average Visual Acuity (VA) Stable 6 Months After Treatment



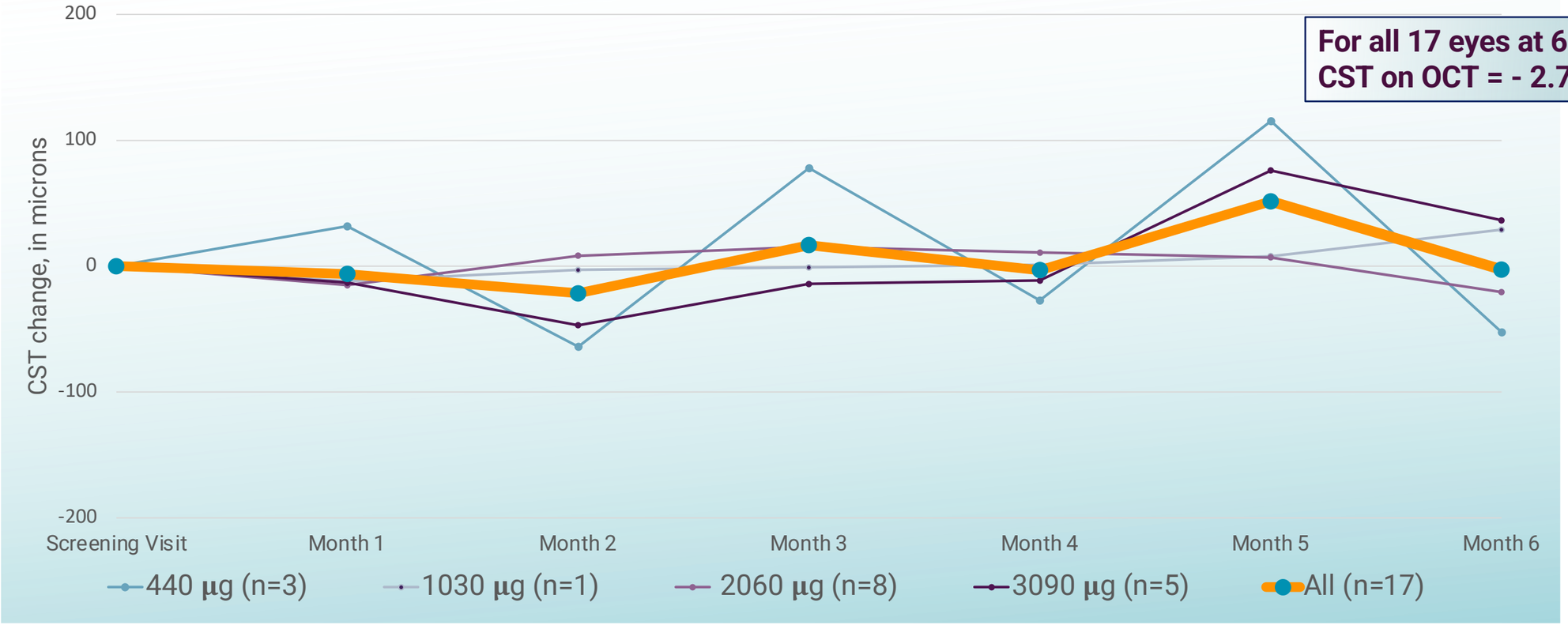
BCVA: best corrected visual acuity

Interim data – monitored through 4 months

Results: Central Subfield Thickness (CST)

Sustainable Anatomical Control & Efficacy

Average change in CST from screening visit

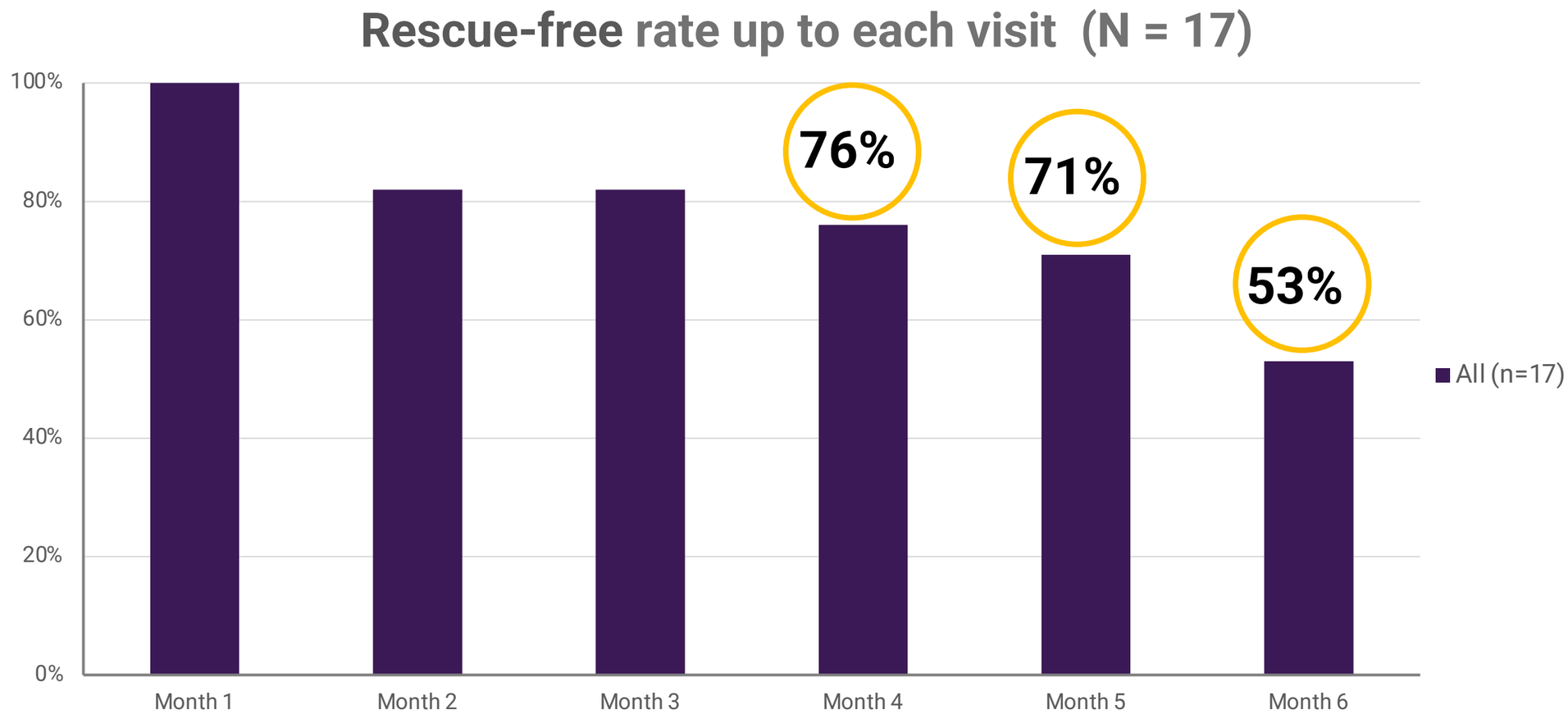


OCT: optical coherence tomography; CST: central subfield thickness

Interim data – monitored through 4 months

Rescue-free Rates up to Each Visit: Entire Study group

Median Time to Rescue = 6 Months



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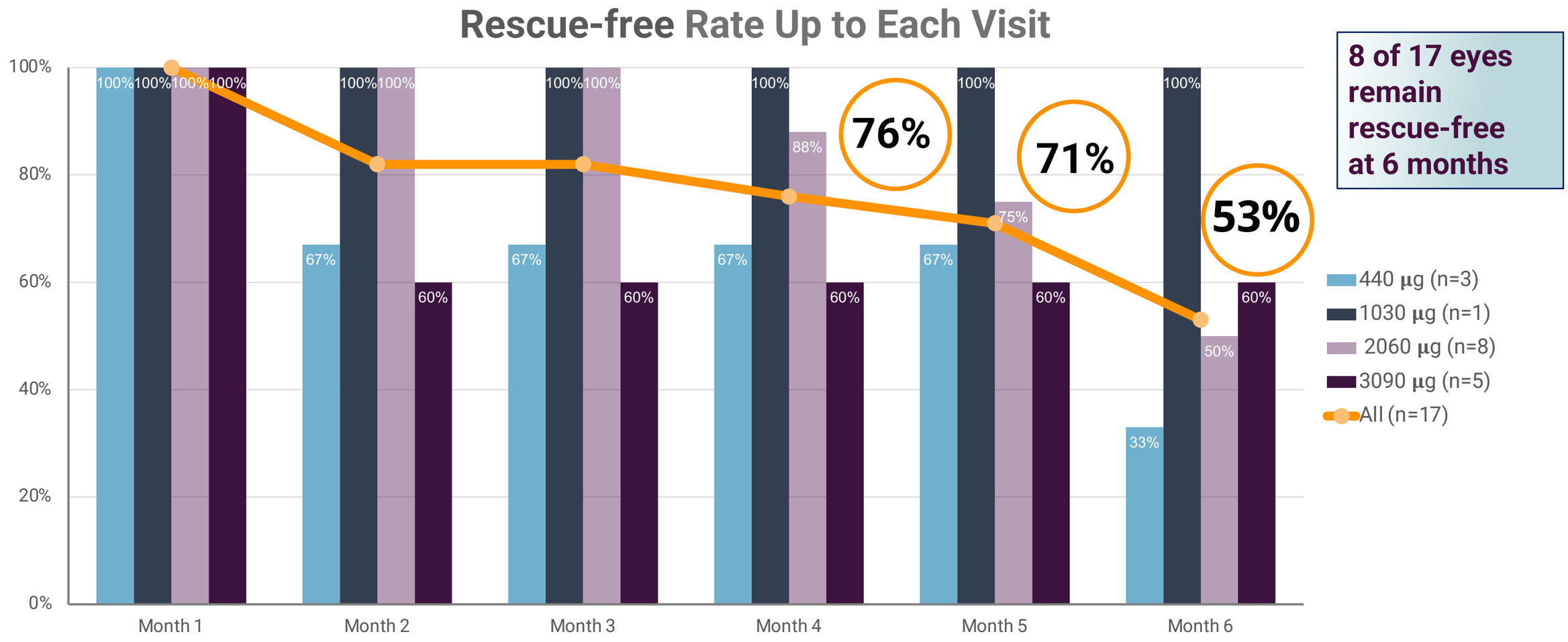


Interim data – monitored through 4 months

Details on Patients (n=9) That Received Rescue Anti-VEGF Therapy

Cohort	Subject #	Rescue Visit	Reason
Low Dose	2	Month 1	Rescued for CST
Low Dose	3	Month 5	Rescued for CST
Mid Dose	6	Month 5	Rescued for CST
Mid Dose	7	Month 5	Rescued for VA
Mid Dose	10	Month 4	Rescued for CST
Mid Dose	12	Month 3	Rescued for VA
High Dose	13	Month 1	new IRF – did not meet criteria
High Dose	15	Month 1	Rescued for CST
High Dose	17	Month 6	Rescued for CST

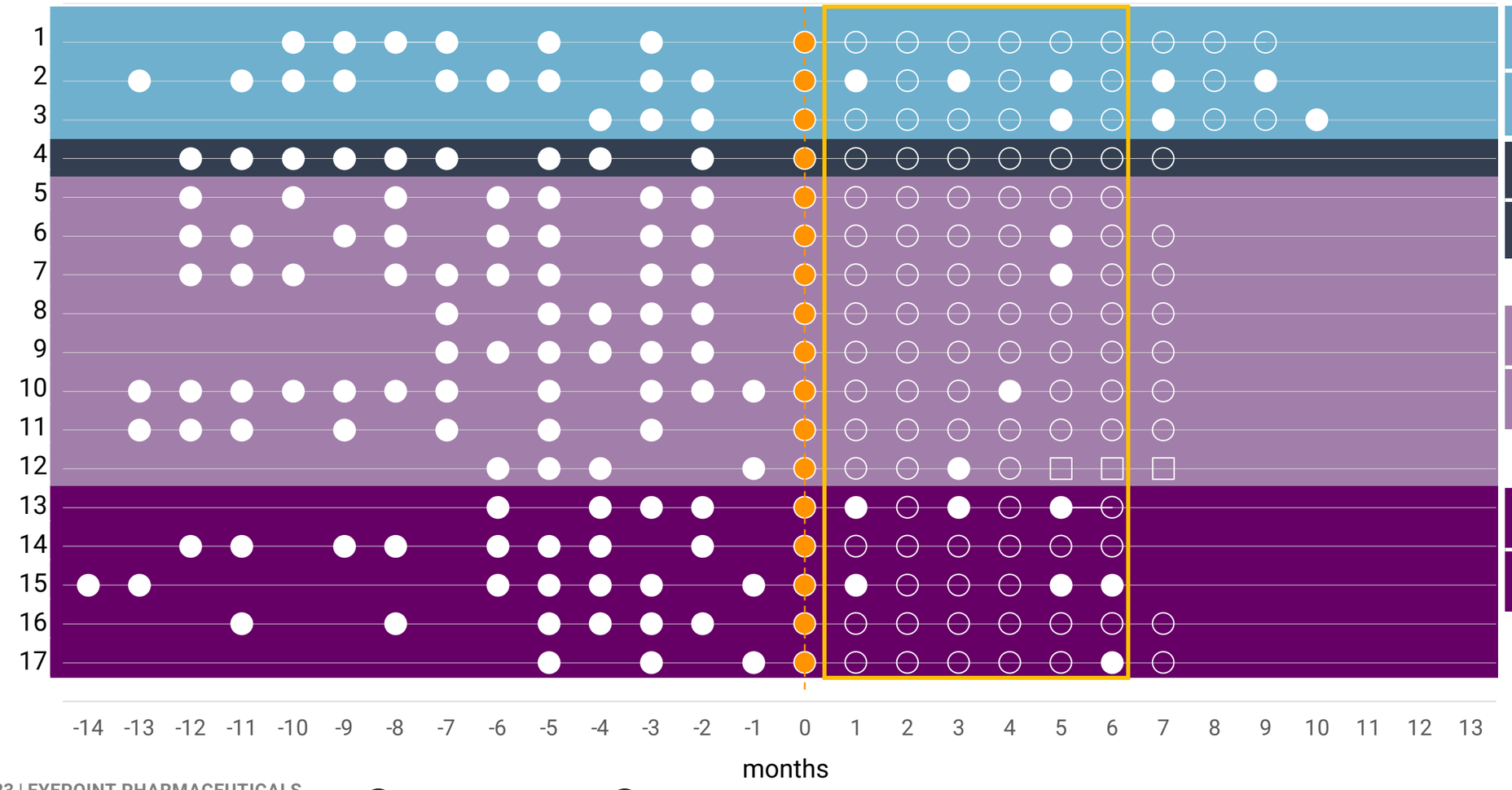
CST: central subfield thickness; SRF: subretinal fluid; IRF: intra-retinal fluid

CST's NOT Reading Center Confirmed - Interim data – monitored through 4 months

Results: Clinically Significant Reduction in Treatment Burden

79 % for the entire cohort

SOC Anti-VEGF Injections Before and After Treatment



Average Monthly TX Burden

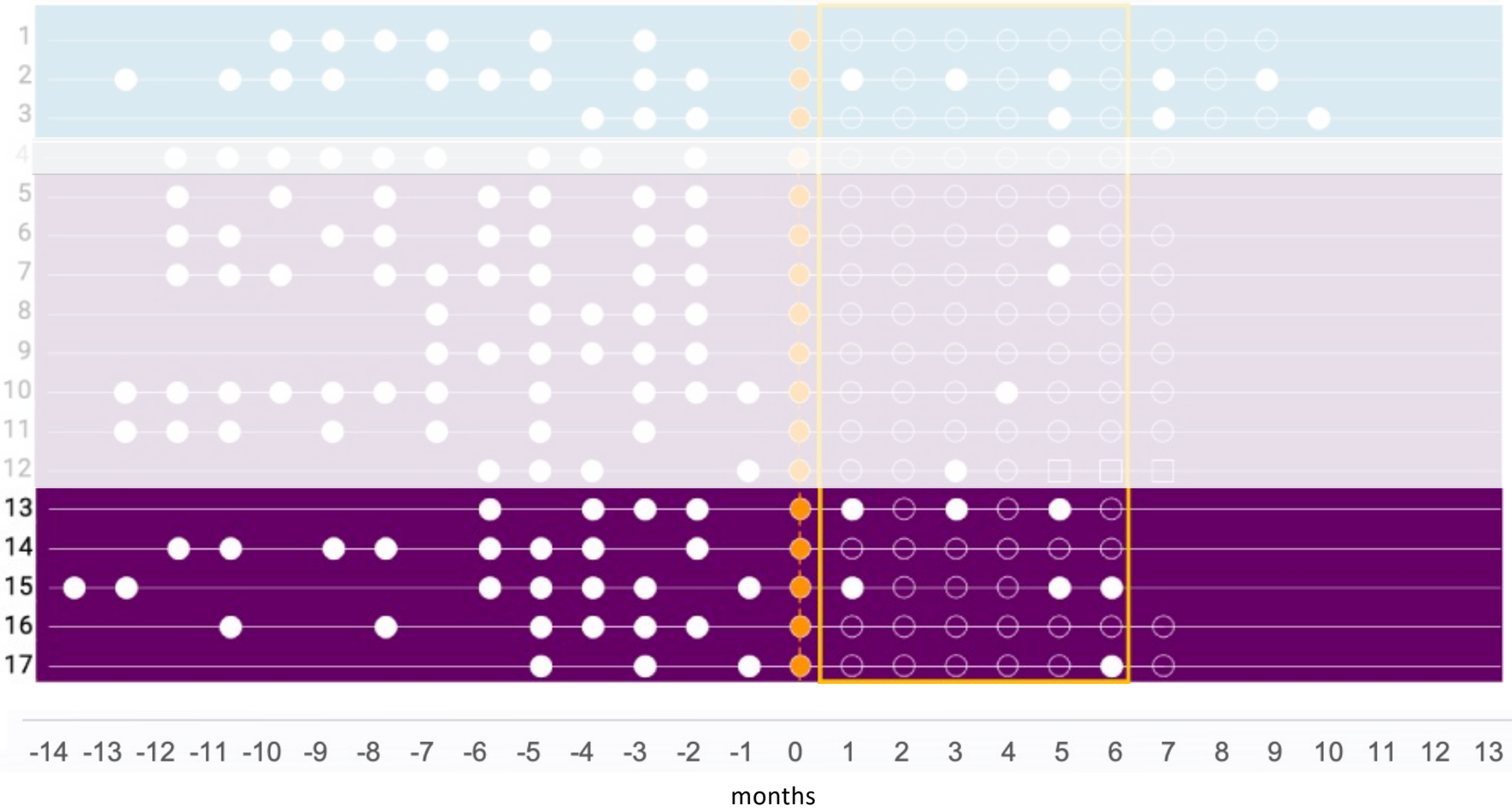
	Prior period	6m period after	↓ %
Low dose (n=3)	0.74	0.22	-70%
Low-mid dose (n=1)	0.78	0	-100%
Mid dose (n=8)	0.78	0.08	-89%
High dose (n=5)	0.59	0.23	-61%

● Anti-VEGF ○ No rescue injection given ☐ Missed visit

Interim data – monitored through 4 months

Results: Clinically Significant Reduction in Treatment Burden of 79 % for the Entire Cohort

SOC Anti-VEGF Injections Before and After Treatment



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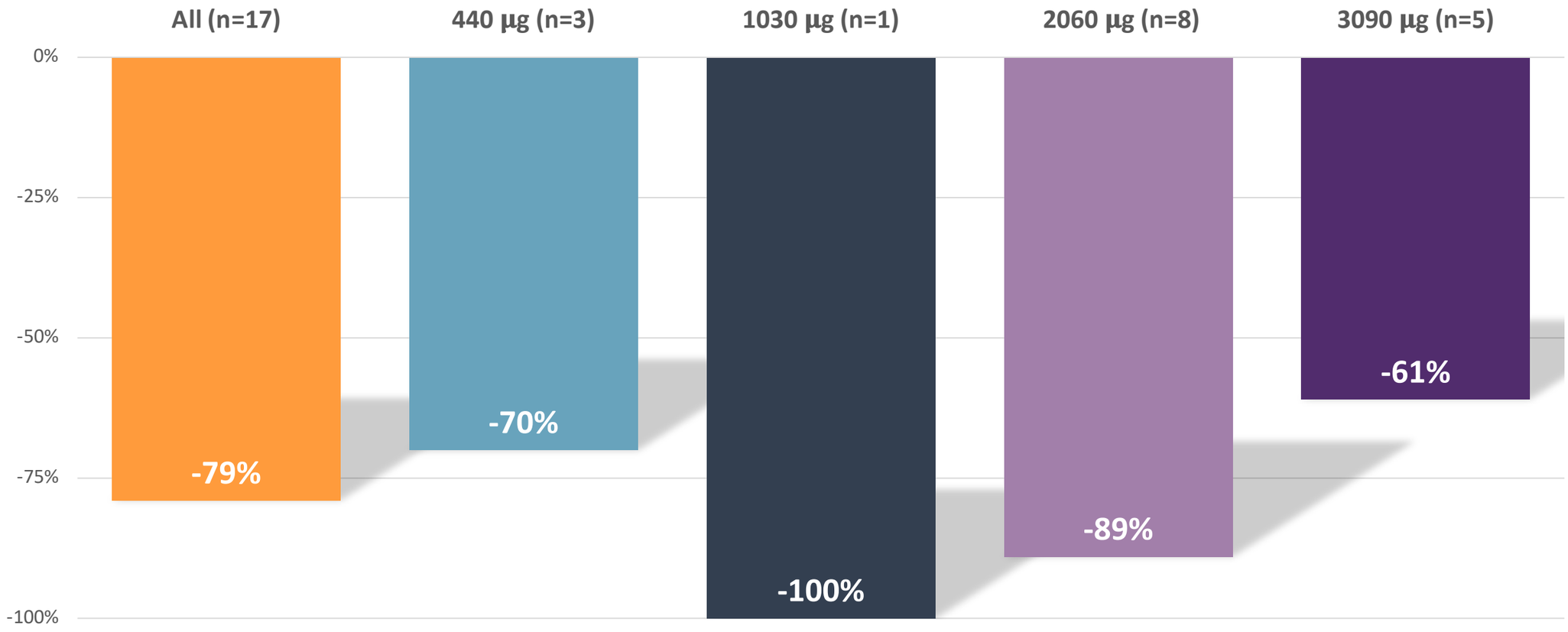
Interim data – monitored through 4 months

Treatment Burden After EYP1901

Substantial and Highly Clinically Relevant Reduction

Reduction in Treatment Burden at 6 months post-treatment



100 % reduction = no rescue through 6 months

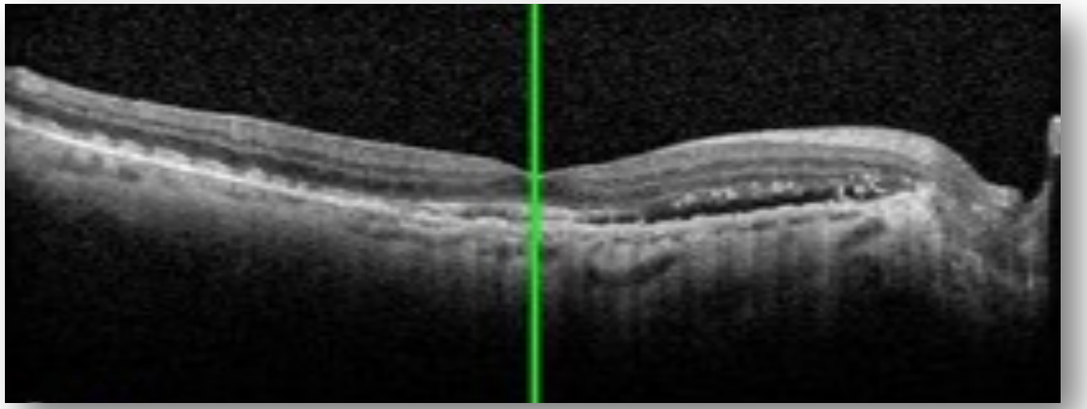
Interim data – monitored through 4 months

Case 1: Entered Dry, Stayed Dry for 9 Months

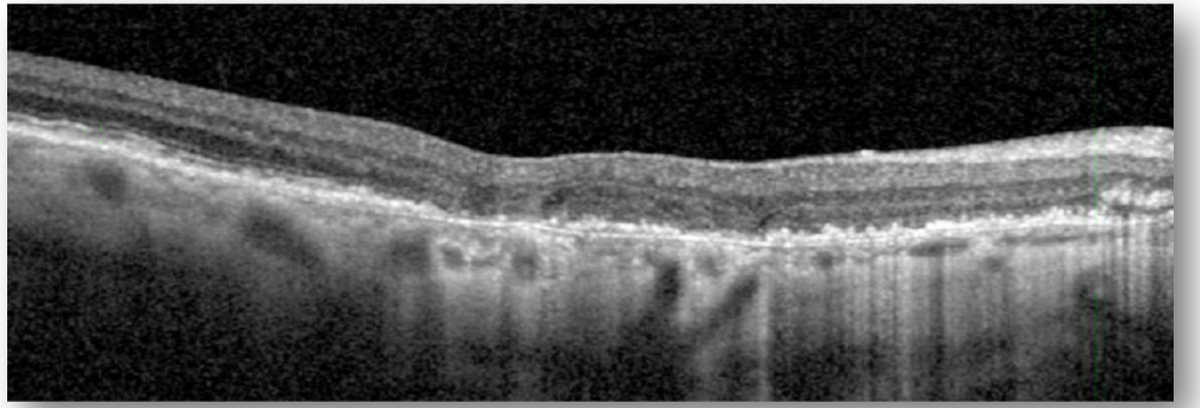
Low dose cohort (EYP-1901 440 µg)

Screening visits prior to treatment

Initial Diagnosis: *9 months prior to enrollment*

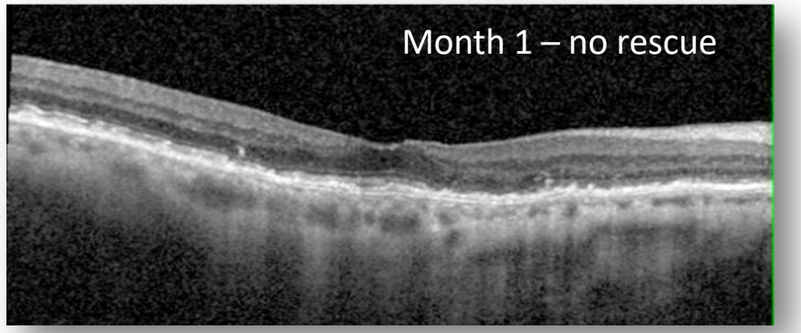


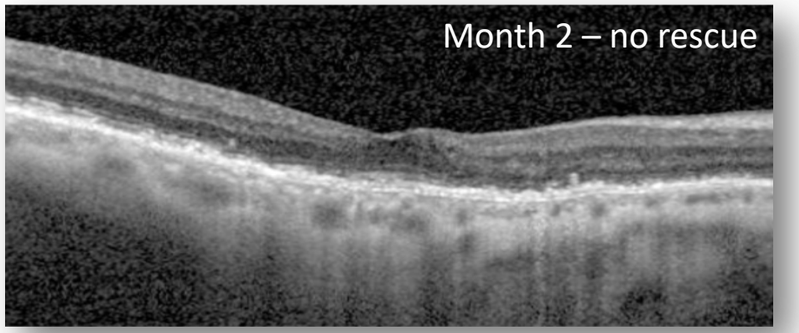
Screening Visit: *6 anti-VEGF injections prior to enrollment*

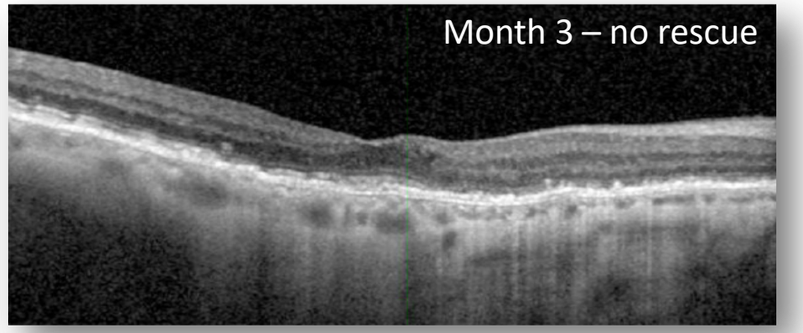


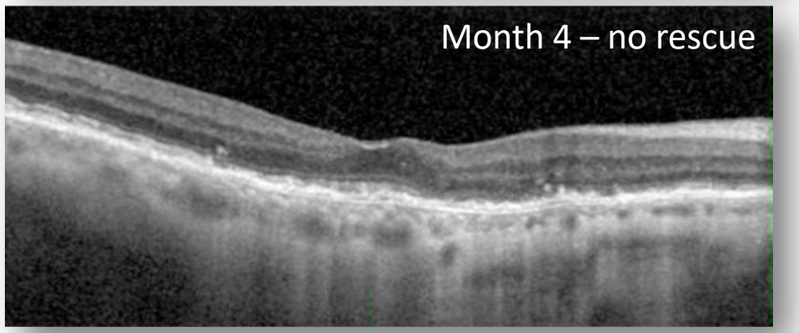
Case 1: Post-Treatment (No Rescues Through Month 9)

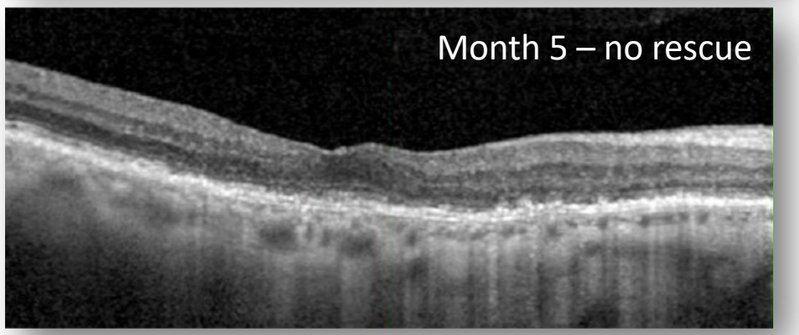
Low dose cohort (EYP-1901 440 µg)

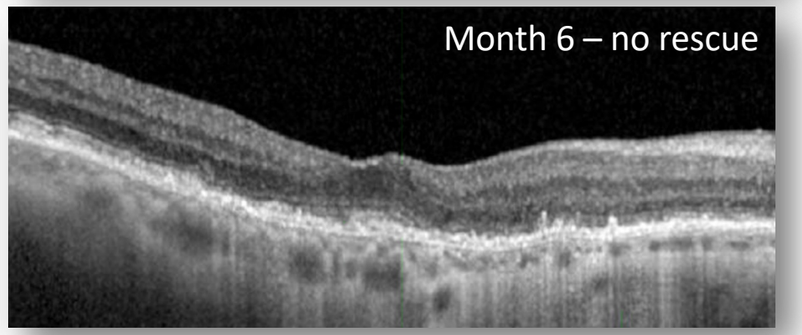


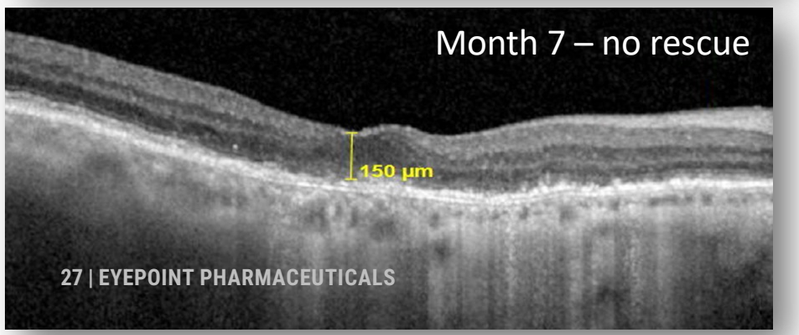


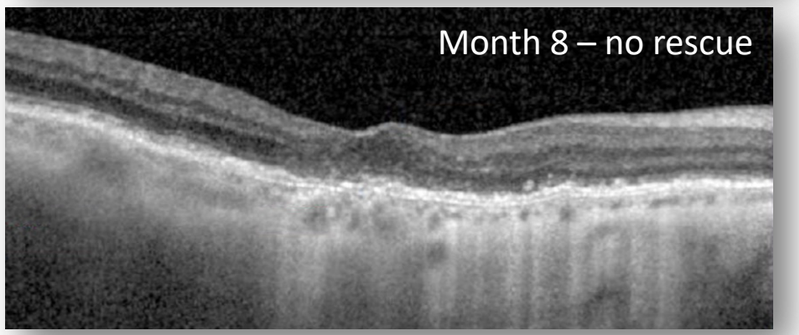


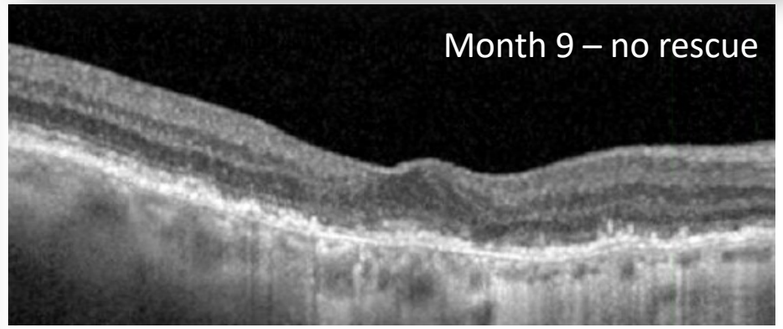










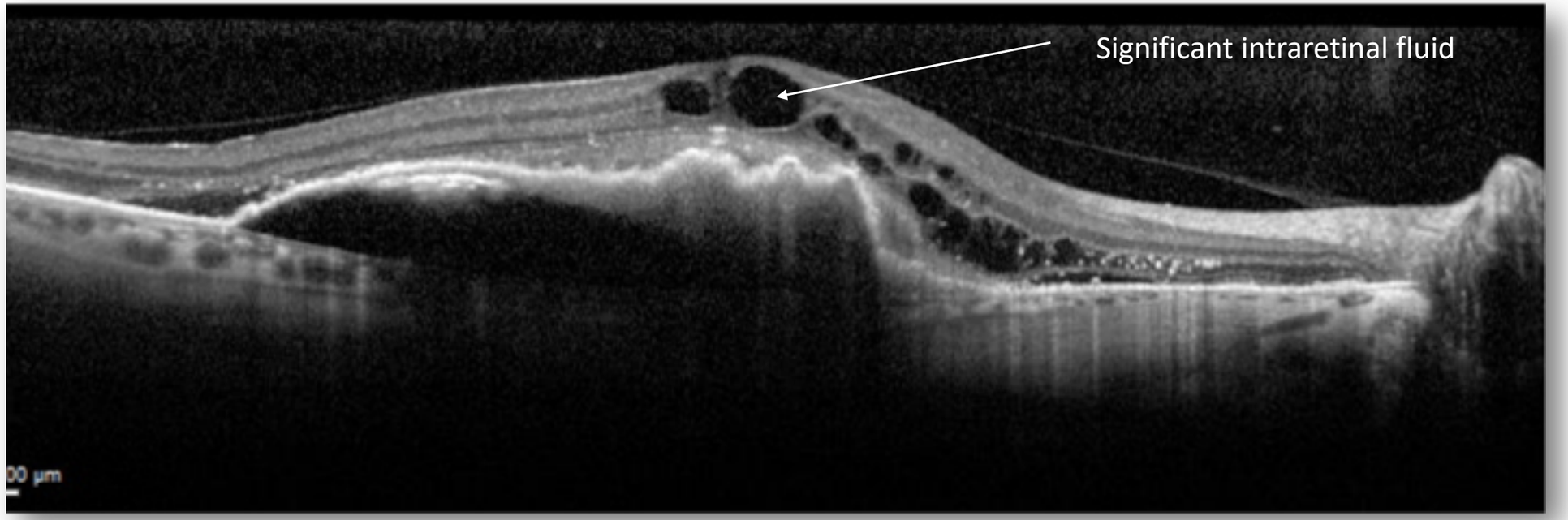


Case 2: Rescued at Month 1
Failure of Both SOC therapy and EYP 1901

Low dose cohort (EYP-1901 440 µg)

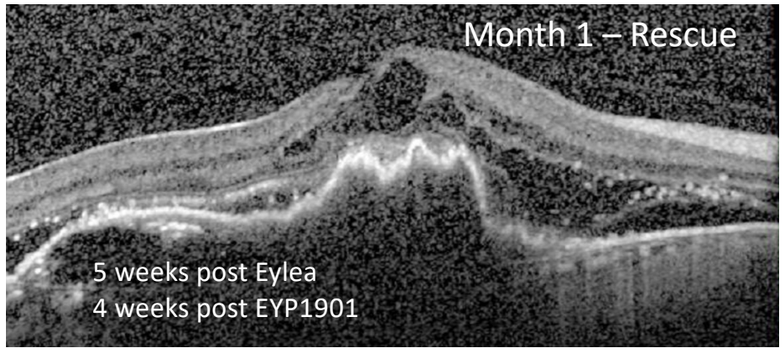
Prior to Treatment

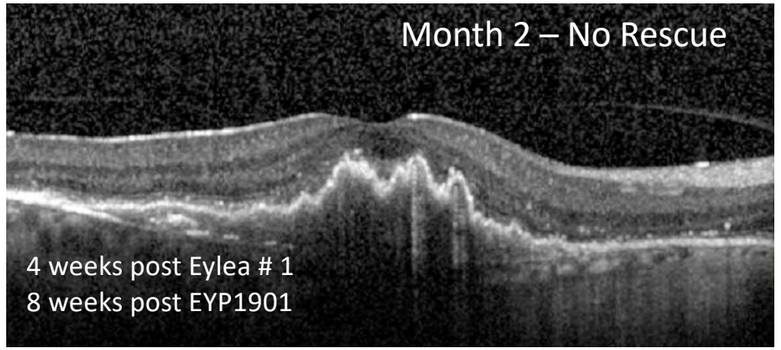
Screening Visit (9 prior anti-VEGF injections)

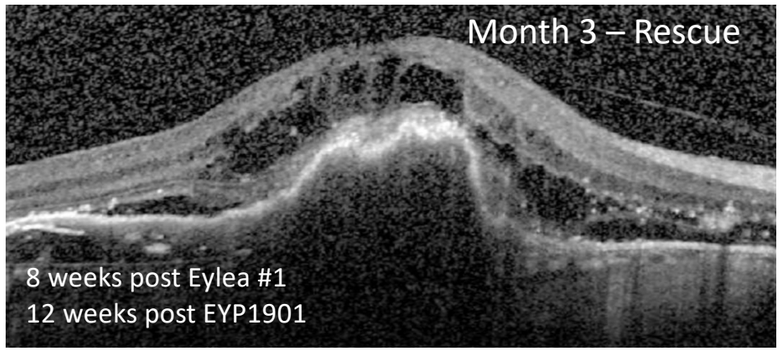


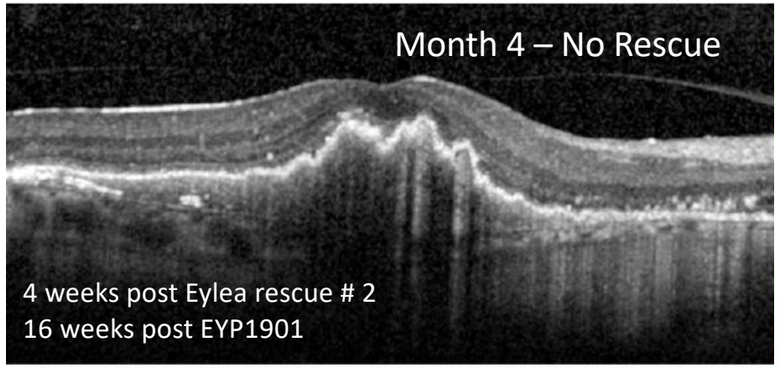
Case 2: 9 anti-VEGF injections prior to screening

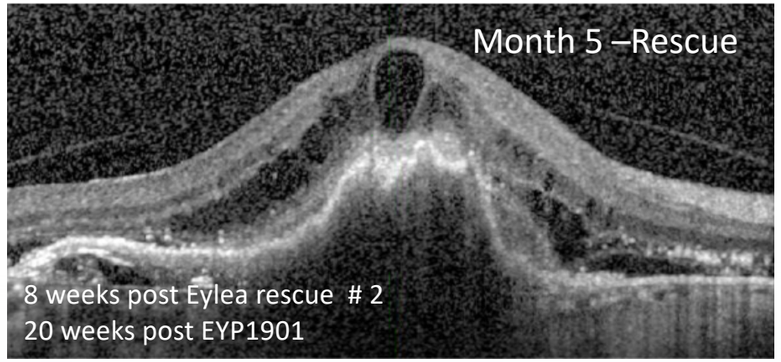
Low Dose Cohort (EYP-1901 440 µg)

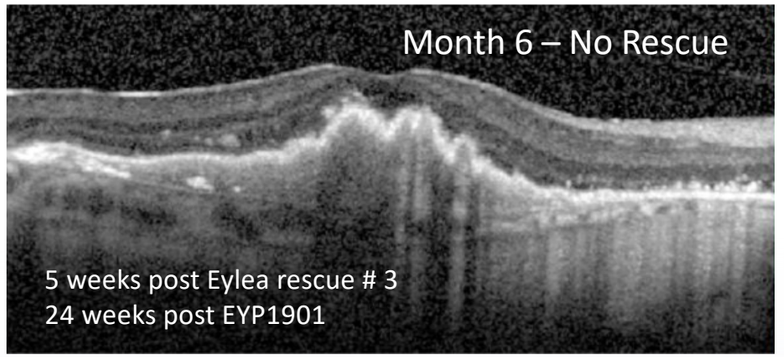












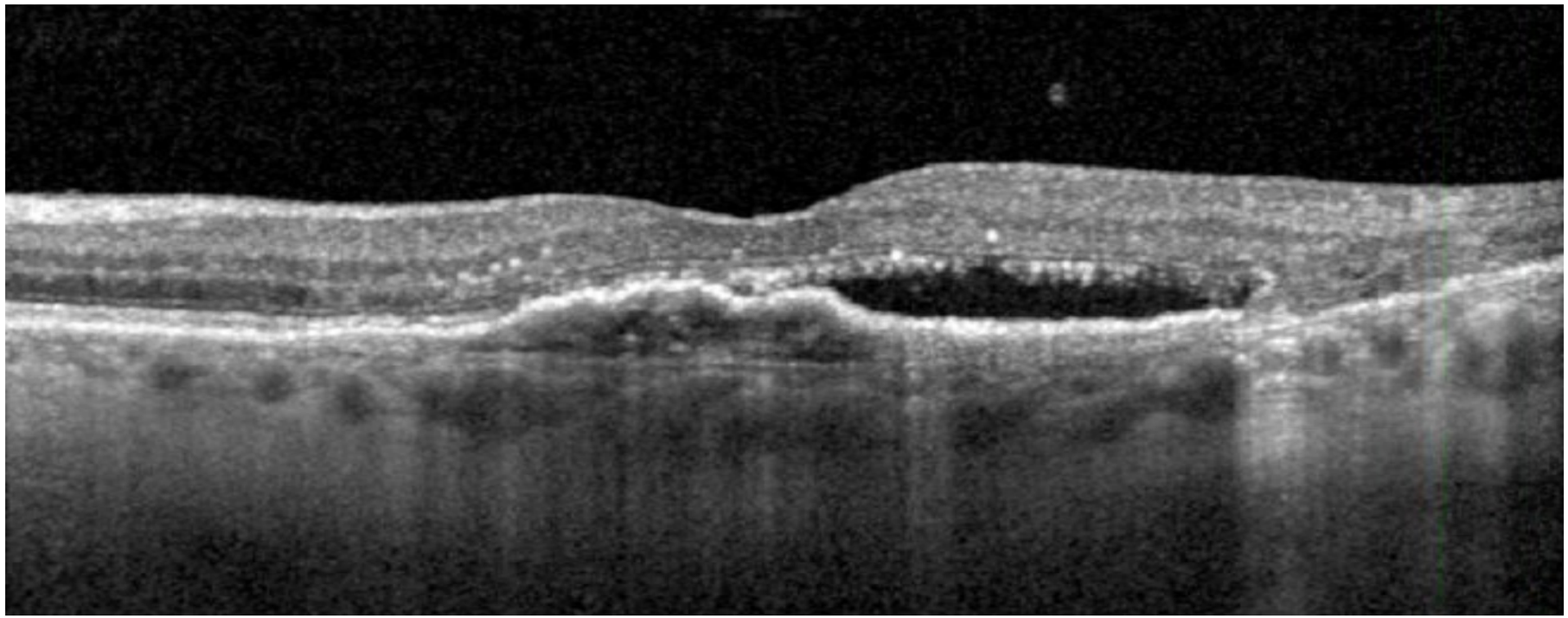
Despite early rescue, EYP1901 still reduced treatment burden by 34%

Case 3: Entered the Study With Subretinal Fluid

High dose cohort (EYP-1901 3090 µg)

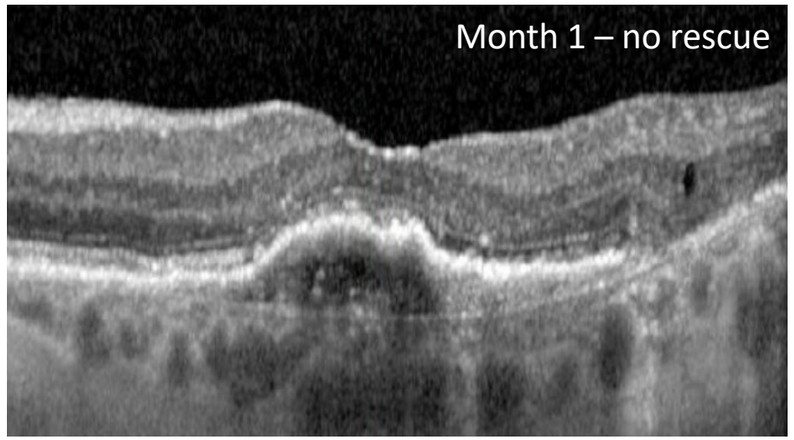
Prior to treatment

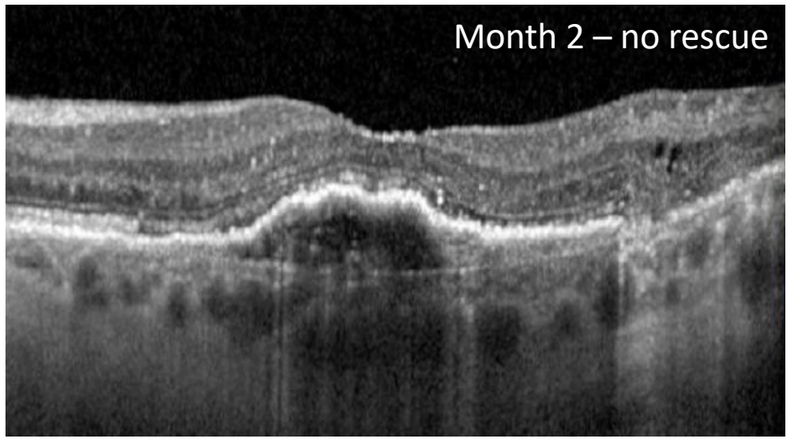
Screening Visit (8 prior anti-VEGF injections)

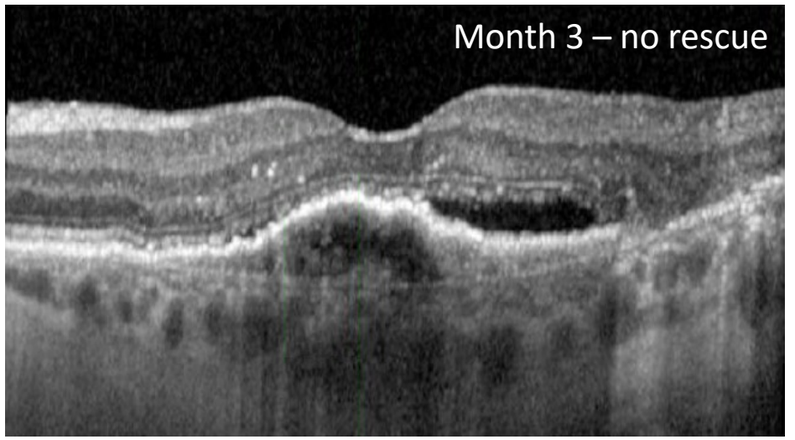


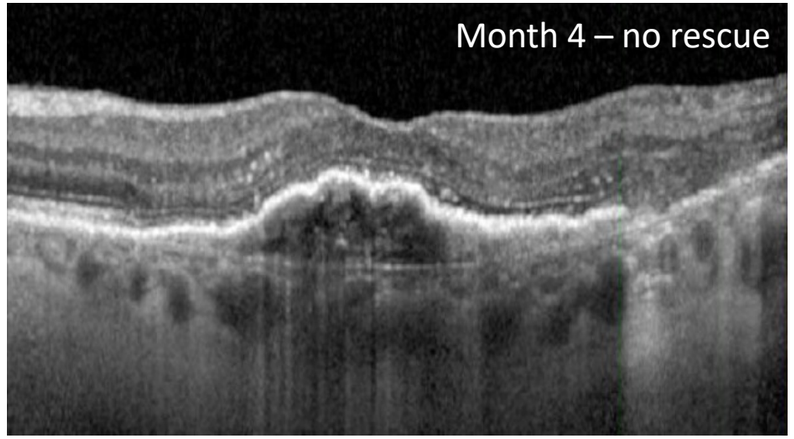
Case 3: Post-treatment – New Fluid Doesn’t Mean Rescue !

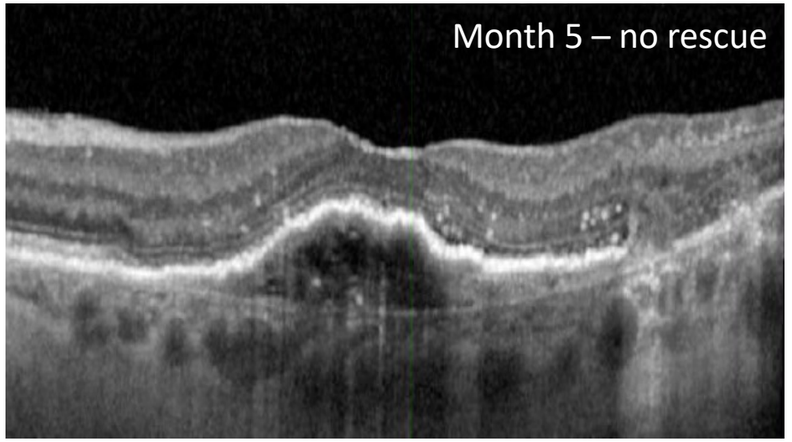
High dose cohort (EYP-1901 3090 µg)

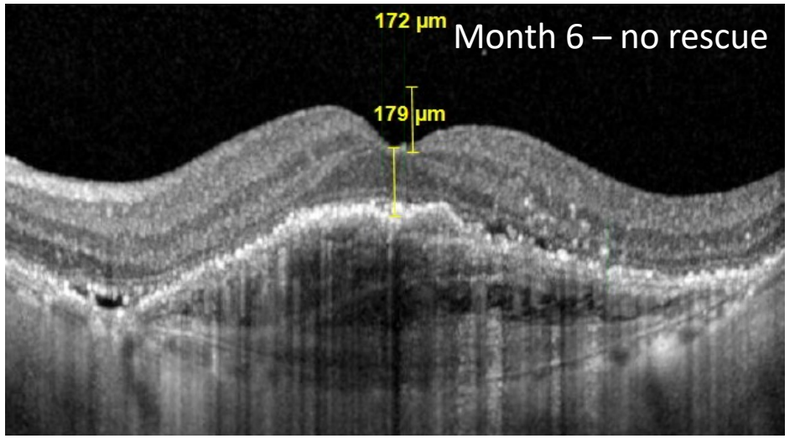












DAVIO Summary:
EYP-1901 Phase 1 Clinical Trial Met All Objectives

All objectives successfully met: Proof of Concept for Vorolanib in wet AMD

SAFETY

Positive Safety Data

- No ocular SAEs reported
- No drug-related systemic SAEs reported
- Ocular AEs - majority mild and to be expected

EFFICACY

Positive Efficacy Data:

- Stable VA and OCT
- Median time to rescue: 6 months
- **76 %** rescue-free up to 4 months
- **53 %** rescue-free up to 6 months
- Clinically significant reduction in treatment burden by **79 %**

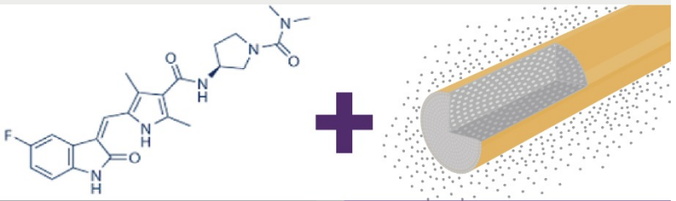
DURABILITY

8 of 17 (47 %) eyes still rescue-free

- One eye out nine months rescue-free

PIPELINE

EYP-1901



VOROLANIB | DURASERT

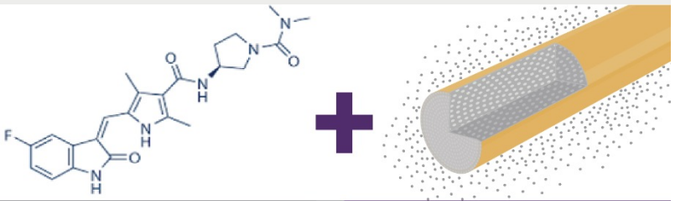
Key Takeaways for EYP-1901 from DAVIO Study

Summary of Clinical Findings

- EYP-1901 (vorolanib delivered with our bioerodible DURASERT) - favorable safety and tolerability profile
- Proof of Concept - clinically significant activity of vorolanib in wet AMD setting
- Demonstrated ability of DURASERT technology to deliver controllable, extended release of active drug over months
  - Implies highly clinically significant improvements to dosing frequency relative to SoC

PIPELINE

EYP-1901



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Key Takeaways for EYP-1901 from DAVIO Study

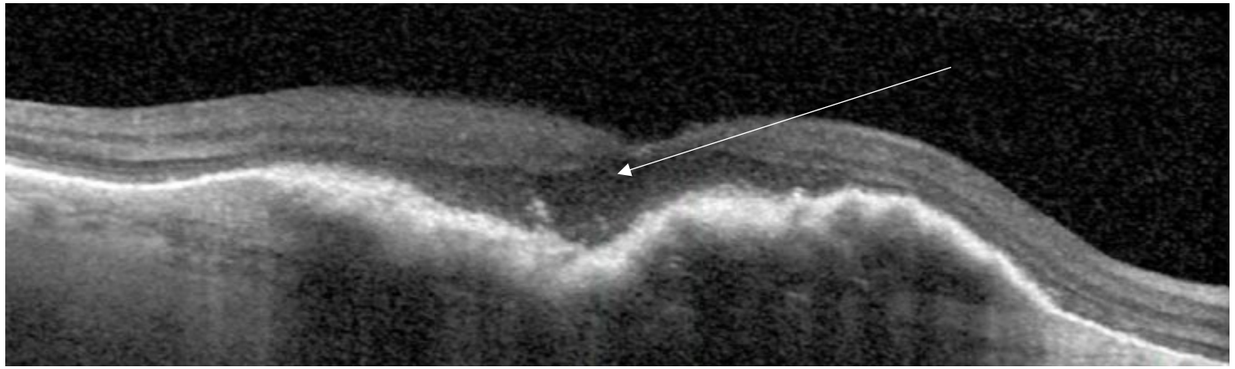
Next Steps for EYP-1901

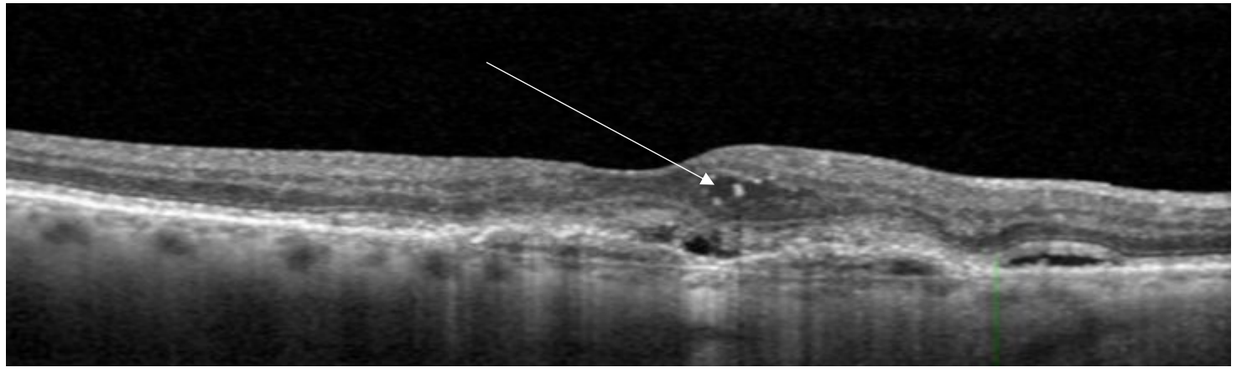
- Advance EYP-1901 into three Phase 2 clinical trials by YE:2023
  - Wet AMD initiation expected in 2022, Diabetic Retinopathy initiation expected in 2022, and Retinal Vein Occlusion initiation expected by 2023
- FDA Type C meeting in December 2021 to further inform wet AMD clinical development plan
- Use clinical findings and observations around biomarkers to refine Phase 2 clinical trial design in wet AMD

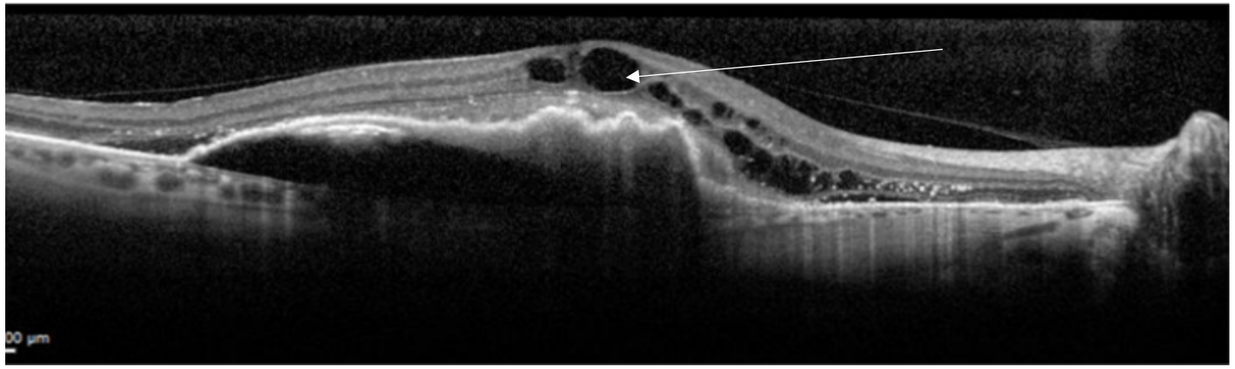
Refine Phase 2 Trial - Post-Hoc Analysis of OCT Biomarkers –

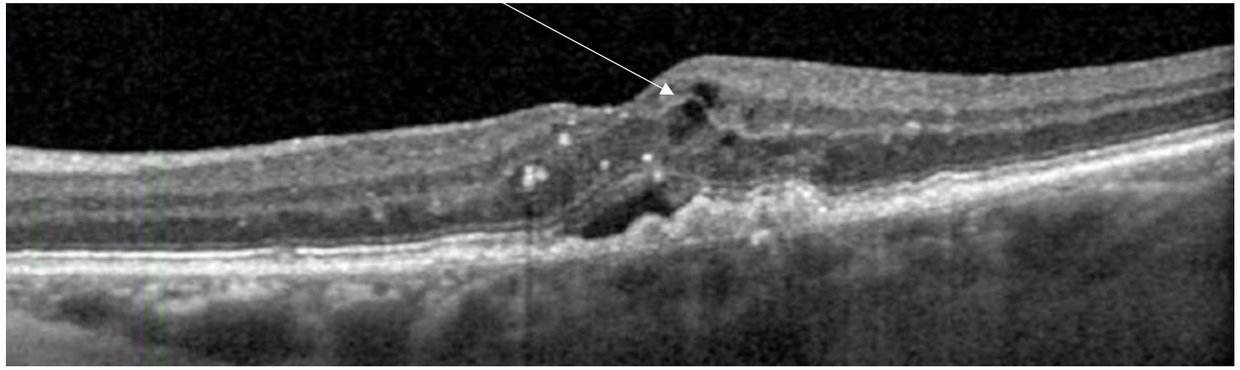
Wet AMD eyes with intraretinal fluid (IRF) - poor prognosis

DAVIO enrolled four subjects with foveal IRF at Screening

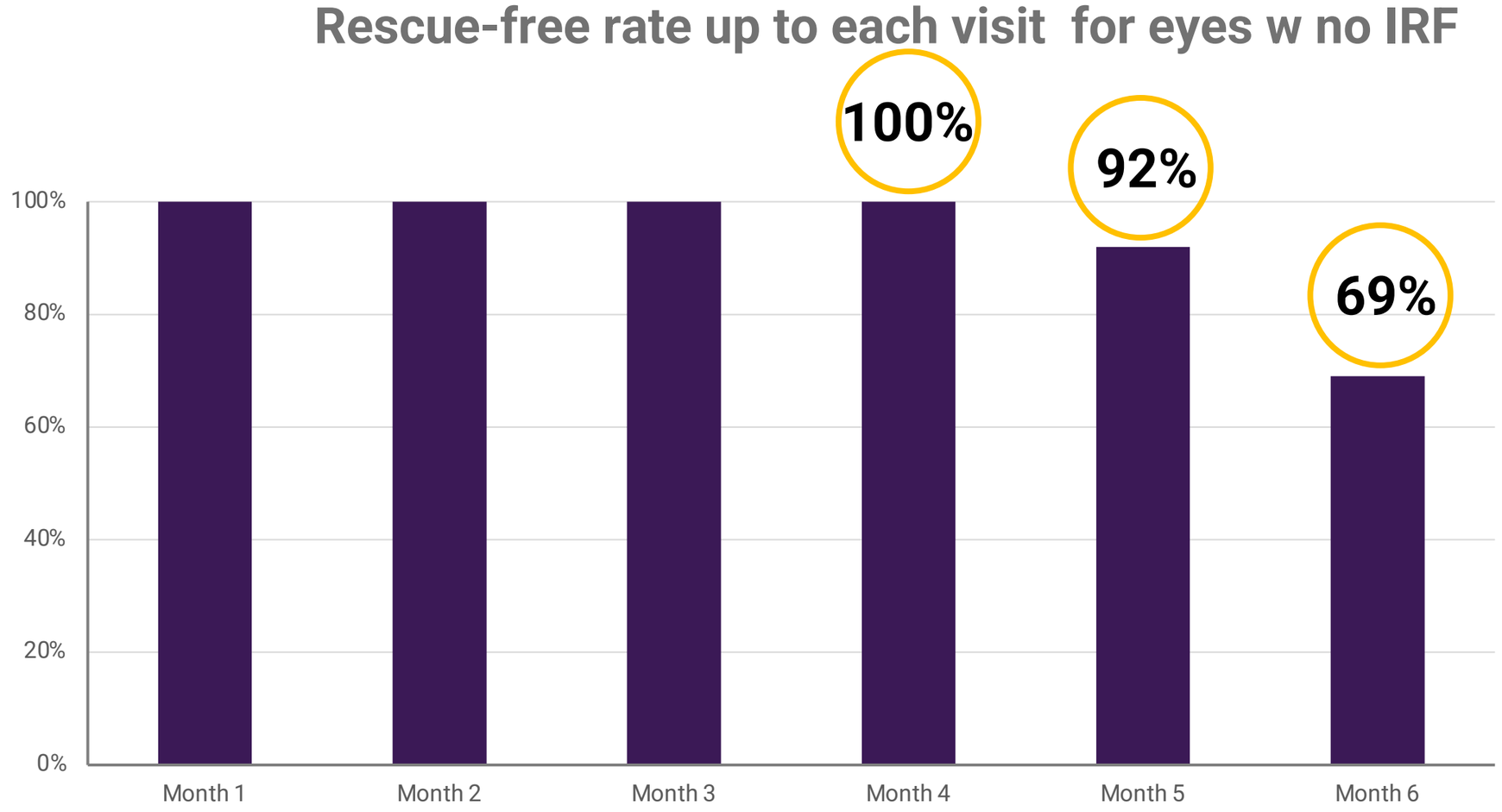








Post-hoc Analysis of Rescue-Free Rates for Eyes with No Foveal Intraretinal Fluid (IRF) - N=13

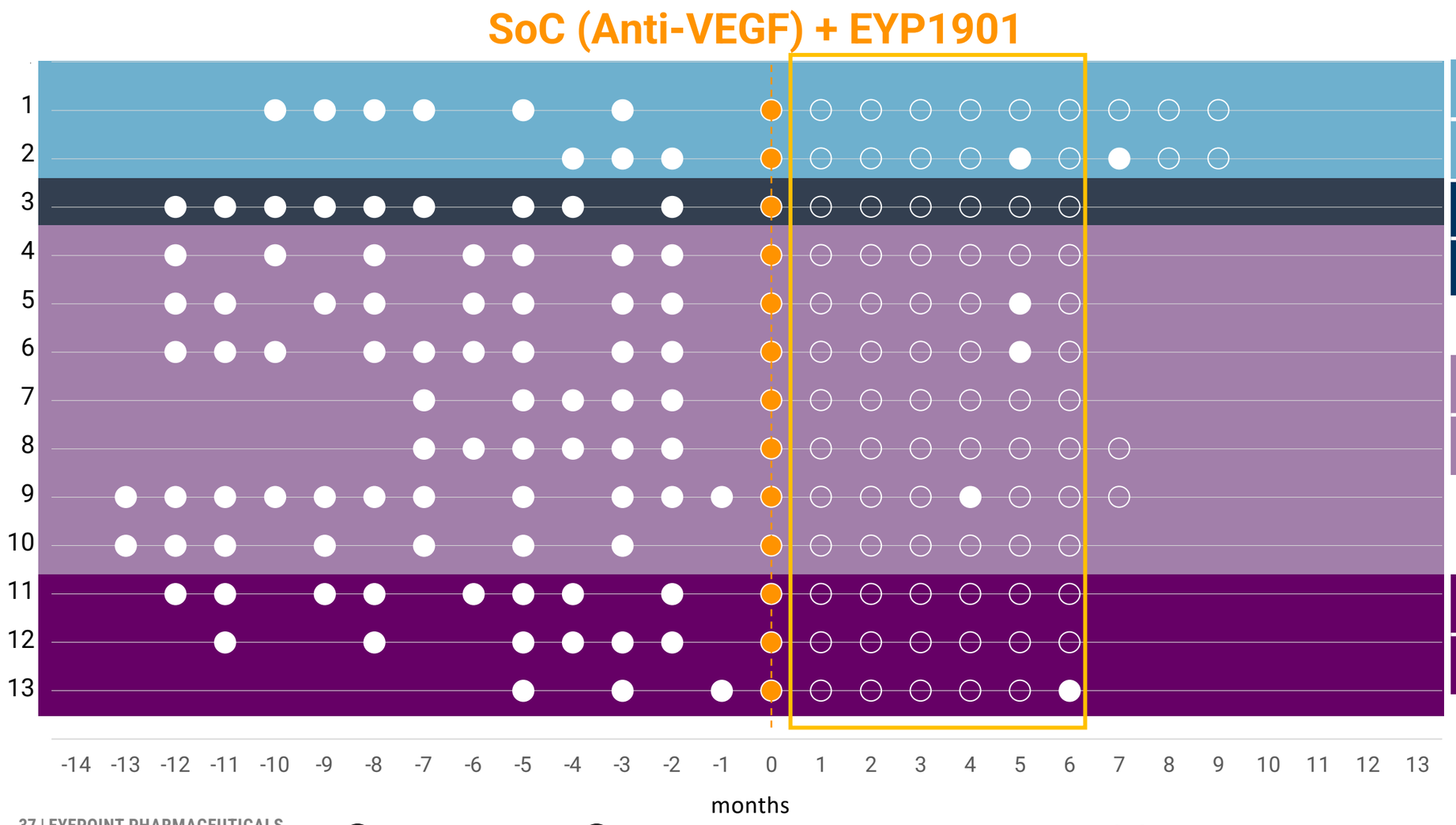


Interim data – monitored through 4 months

Post-hoc Results: 91% reduction in treatment burden

Excluding four patients with foveal intraretinal fluid at Screening

SOC Anti-VEGF Injections Before and After Treatment



Average Monthly TX Burden

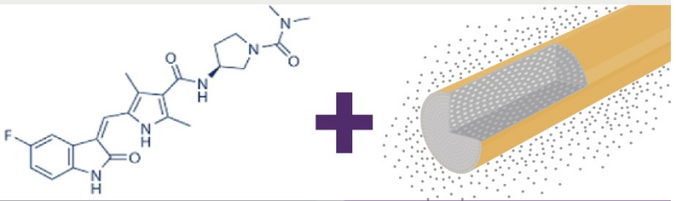
	Prior period	6m period after	↓ %
Low dose (n=2)	0.77	0.08	89%
Low-mid dose (n=1)	0.78	0	100%
Mid dose (n=7)	0.78	0.07	91%
High dose (n=3)	0.62	0.06	91%

● Anti-VEGF ○ No rescue injection given ☐ Missed visit

Interim data – monitored through 4 months

PIPELINE

EYP-1901



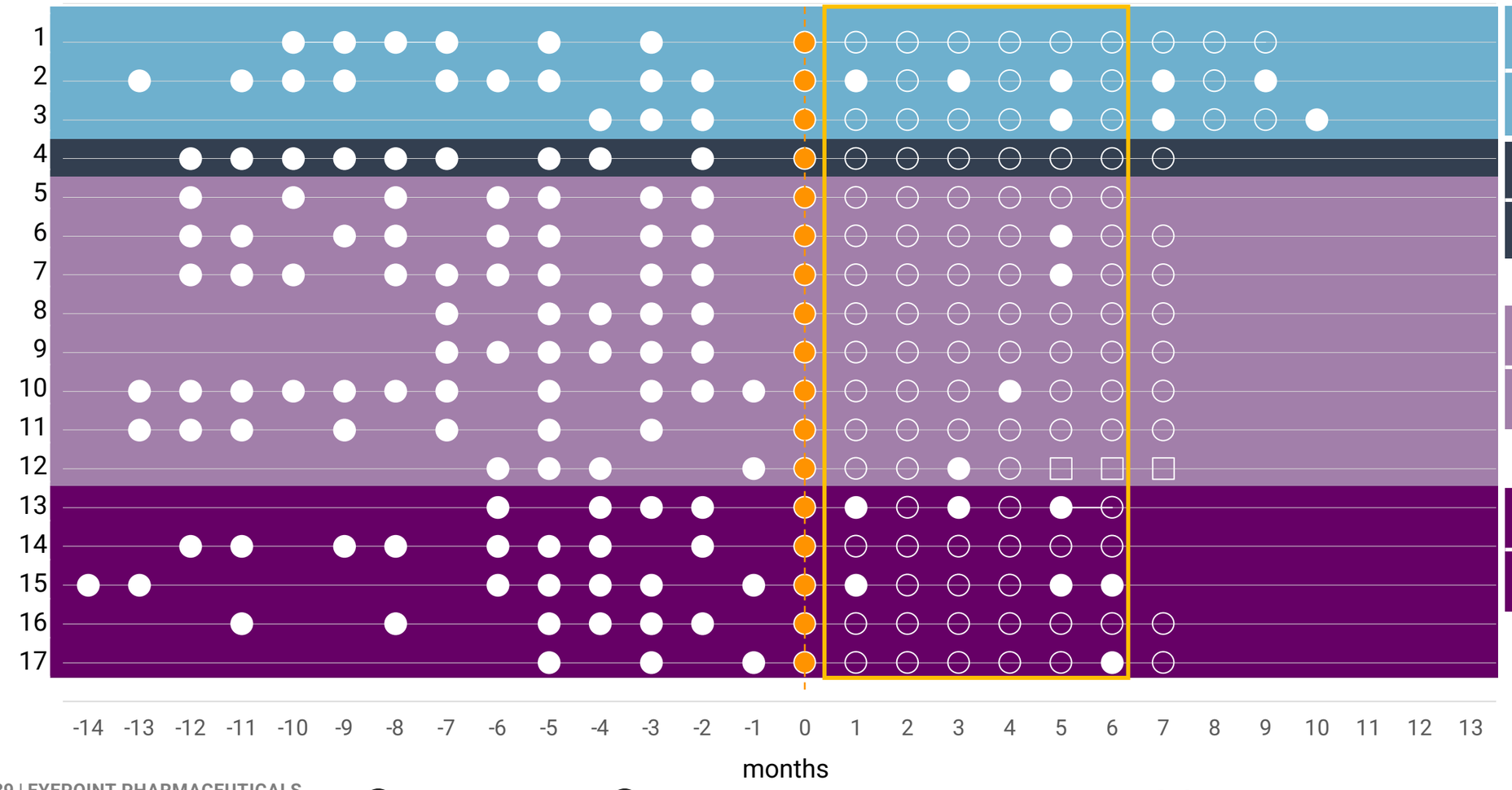
VOROLANIB | DURASERT

EyePoint 2022+ — Positioned to Transform the Ophthalmology Landscape

- Paradigm-shifting potential of DURASERT technology now demonstrated with multiple approved drugs and small molecule agents
  - Ability to harness technology for small molecule agents with different MOAs
  - Ability to tailor and control dosing frequency for specific indications and patient populations
  - Ability to inject multiple implants simultaneously
- Focus on executing multiple clinical POC studies for EYP-1901
- Apply new technological enhancements to DURASERT platform to further expand the scope and scale of new indications

Most Compelling Data from DAVIO - Clinically Significant Reduction in Treatment Burden of *79 % for the entire cohort*

SOC Anti-VEGF Injections Before and After Treatment



Average Monthly TX Burden

	Prior period	6m period after	↓ %
Low dose (n=3)	0.74	0.22	-70%
Low-mid dose (n=1)	0.78	0	-100%
Mid dose (n=8)	0.78	0.08	-89%
High dose (n=5)	0.59	0.23	-61%

● Anti-VEGF ○ No rescue injection given ☐ Missed visit

Interim data – monitored through 4 months

Delivering Innovation to the Eye

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PHARMACEUTICALS