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UBX1325 Update Call*

BEHOLD (DME) Data Updates
Upcoming ENVISION (AMD) Data Readouts

February 14, 2023

Nasdaq: UBX

*Dr. Bhisitkul is unable to join due to an unforeseen event

Special Note Regarding Forward-Looking Statements

This presentation and the accompanying oral commentary contain forward-looking statements including statements related to Unity Biotechnology Inc.'s ("UNITY's") understanding of cellular senescence and the role it plays in diseases of aging, the potential for UNITY to develop therapeutics to slow, halt, or reverse diseases of aging, including for ophthalmologic and neurologic diseases, the potential for UNITY to successfully commence and complete clinical studies of UBX1325 for DME, AMD, and other ophthalmologic diseases, the expected timing of enrollment and results of the clinical trials in UBX1325, and UNITY's expectations regarding the sufficiency of its cash runway. These statements involve substantial known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from the information expressed or implied by these forward-looking statements, including the risk that the COVID-19 worldwide pandemic may continue to negatively impact the development of preclinical and clinical drug candidates, including delaying or disrupting the enrollment of patients in clinical trials, risks relating to the uncertainties inherent in the drug development process, including the risk that interim results of our clinical studies may not be indicative of future results, and risks relating to UNITY's understanding of senescence biology. We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. The forward-looking statements in this presentation represent our views as of the date of this release. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this release. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of UNITY in general, see UNITY's most recent Quarterly Report on Form 10-Q for the quarter ended September 30, 2022, filed with the Securities and Exchange Commission on November 8, 2022, as well as other documents that may be filed by UNITY from time to time with the Securities and Exchange Commission. This presentation concerns drug candidates that are under clinical investigation which have not yet been approved for marketing by the U.S. Food and Drug Administration. They are currently limited by Federal law to investigational use, and no representation is made as to their safety or effectiveness for the purposes for which they are being investigated. This presentation does not constitute an offer or invitation for the sale or purchase of securities and has been prepared solely for informational purposes.

Agenda

Lynne Sullivan **Chief Financial Officer**	**Welcome and Forward-Looking Statements**
Anirvan Ghosh **Chief Executive Officer**	**Overview of UBX1325 Ph2 Studies**
Jamie Dananberg **Chief Medical Officer**	**BEHOLD study in DME: Supplemental Analysis**
Anirvan Ghosh **Chief Executive Officer**	**Design of ENVISION Study in AMD** **Upcoming Data Readouts and Q&A**

Overview of UBX1325 Studies

Anirvan Ghosh

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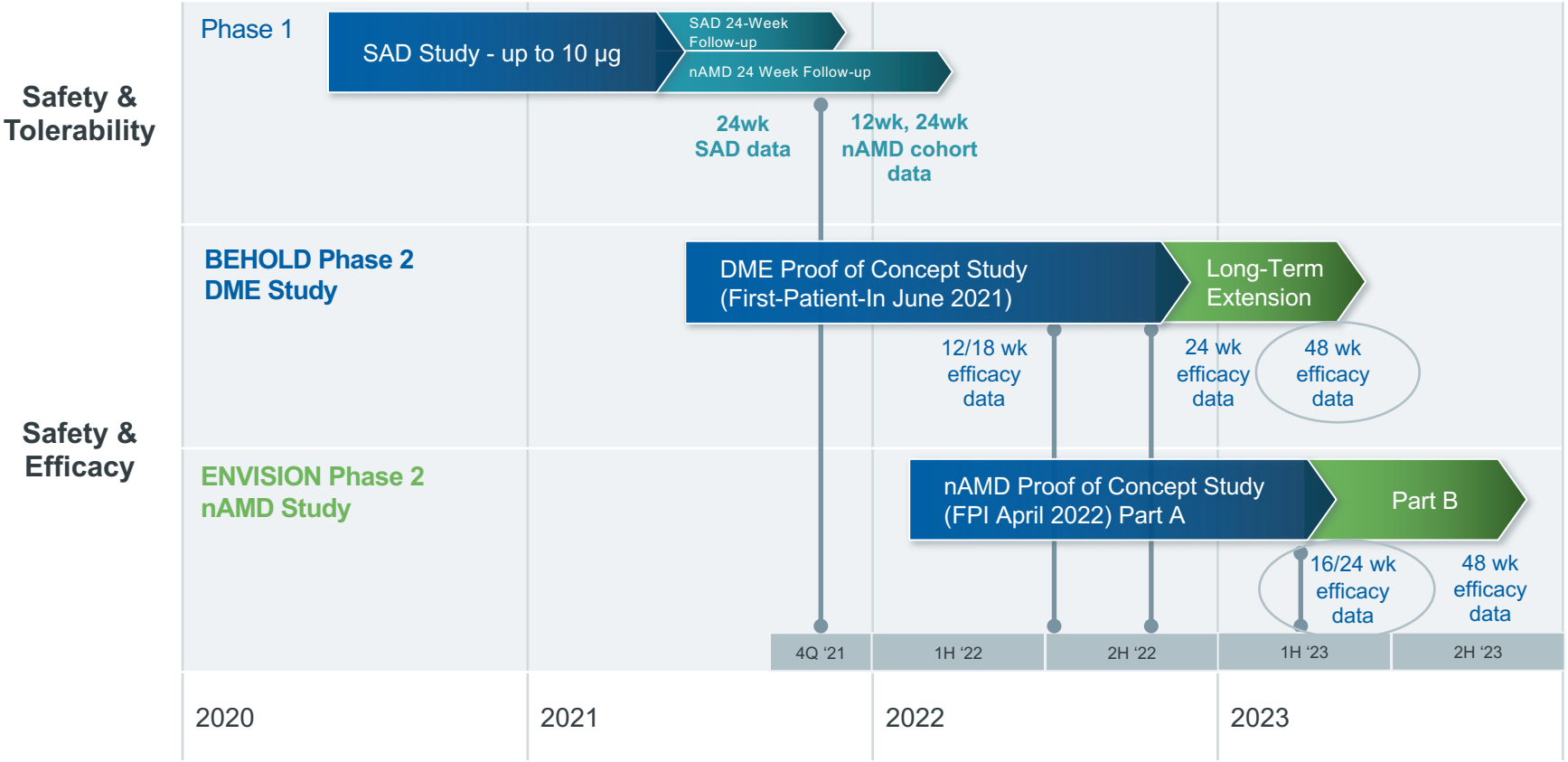
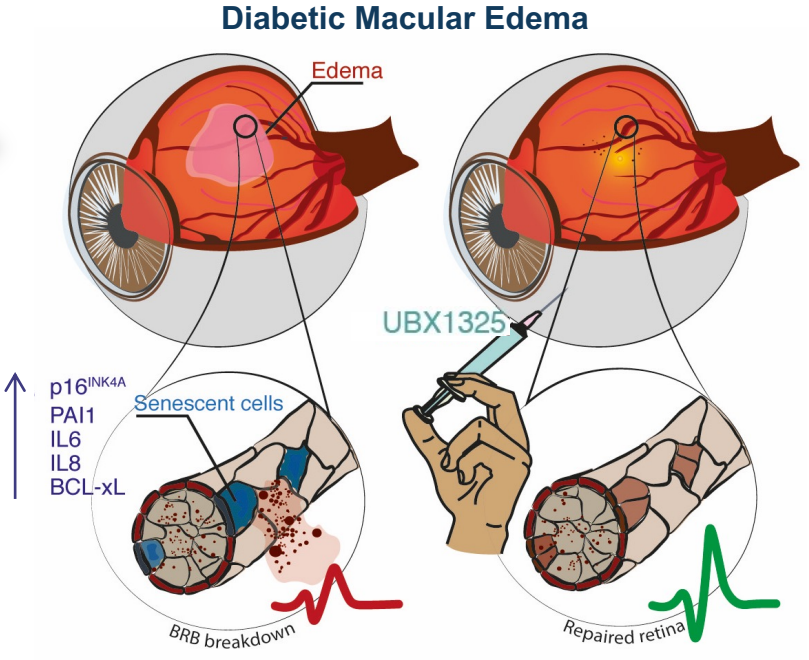
UBX1325 Clinical Program Overview



UNITY Is Developing Senolytic Medicines to Eliminate Senescent Cells to Restore Vascular Health and Improve Vision

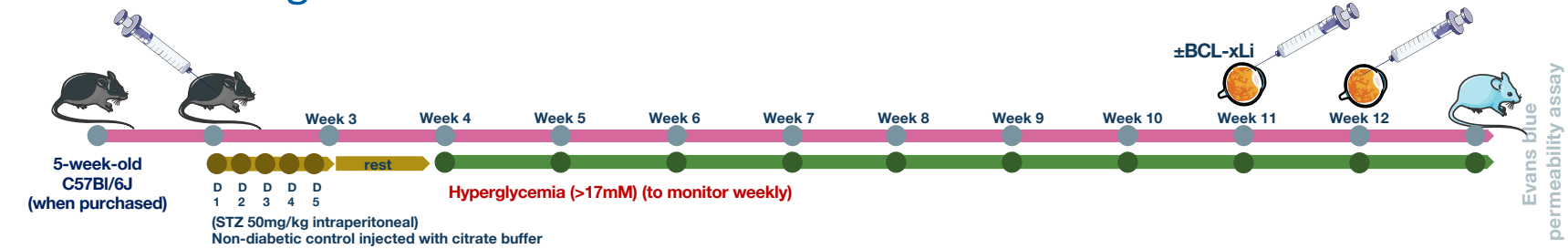


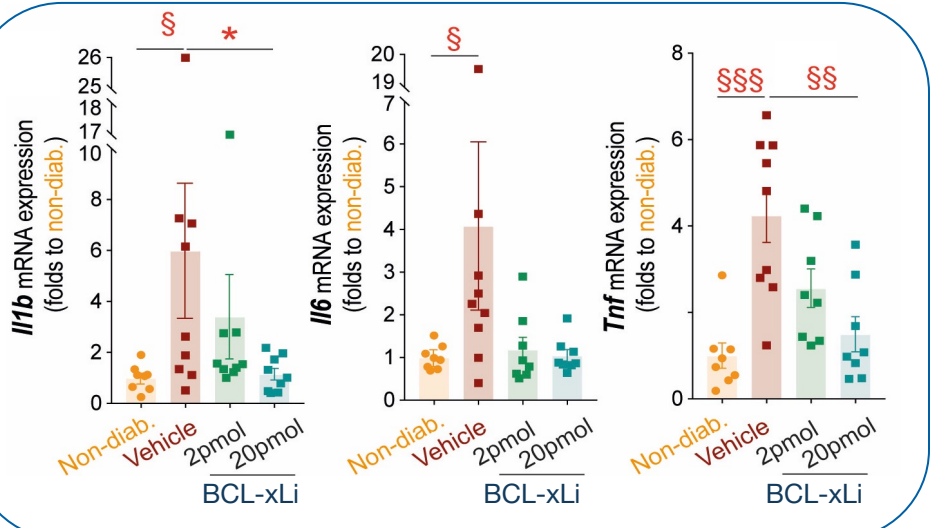
DME:
- Increased senescence burden
- Retinal vasculature affected
- Blood retinal barrier (BRB) Breakdown
- Loss of vision

DME treated with Senolytic intended results:
- Senescent cells removed
- Retinal vasculature restored
- Improvement in vision

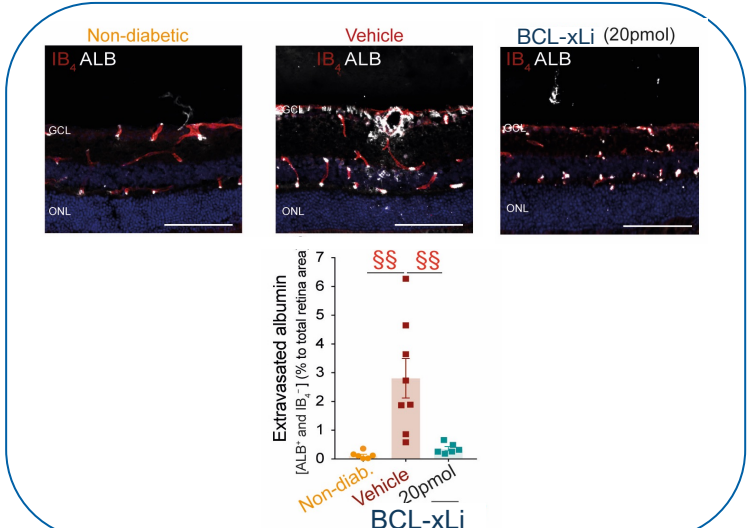
UNITY illustration.

In a Mouse Model of Diabetes Bcl-xL Inhibition Reduces Inflammation and Vascular Leakage





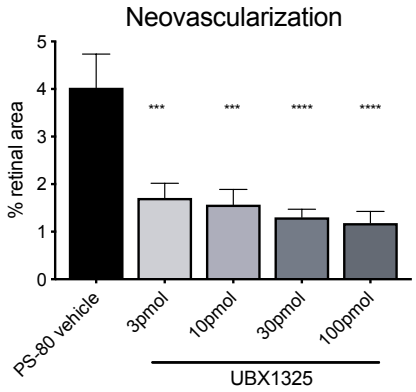
Inflammation

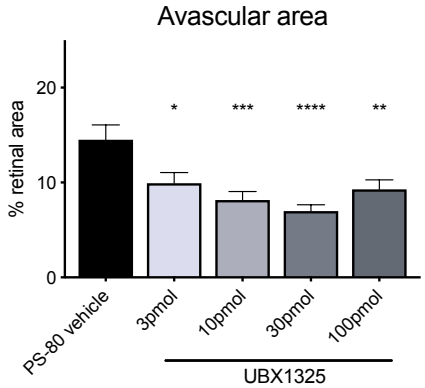


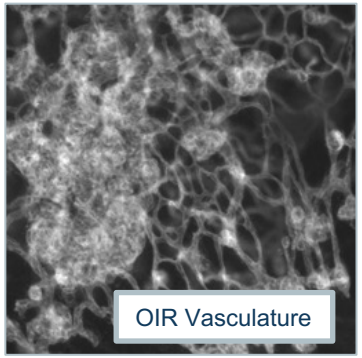
Vascular Permeability

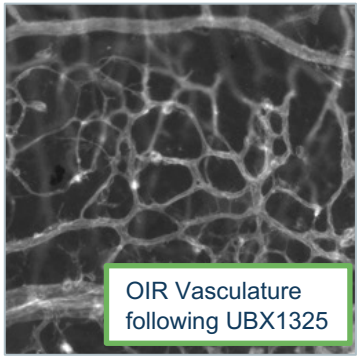
§ p < 0.05
§§ p < 0.01
§§§ p < 0.001

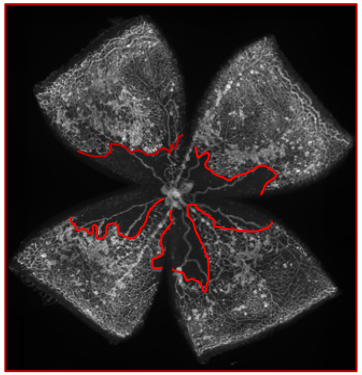
UBX1325 Improves Retinal Vasculature in Mouse Model of Neovascularization

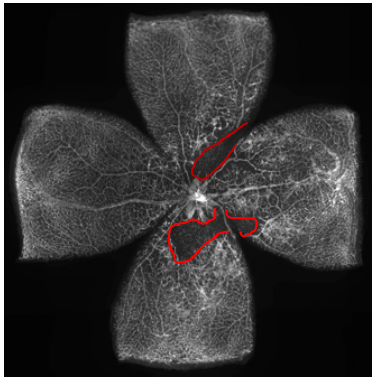






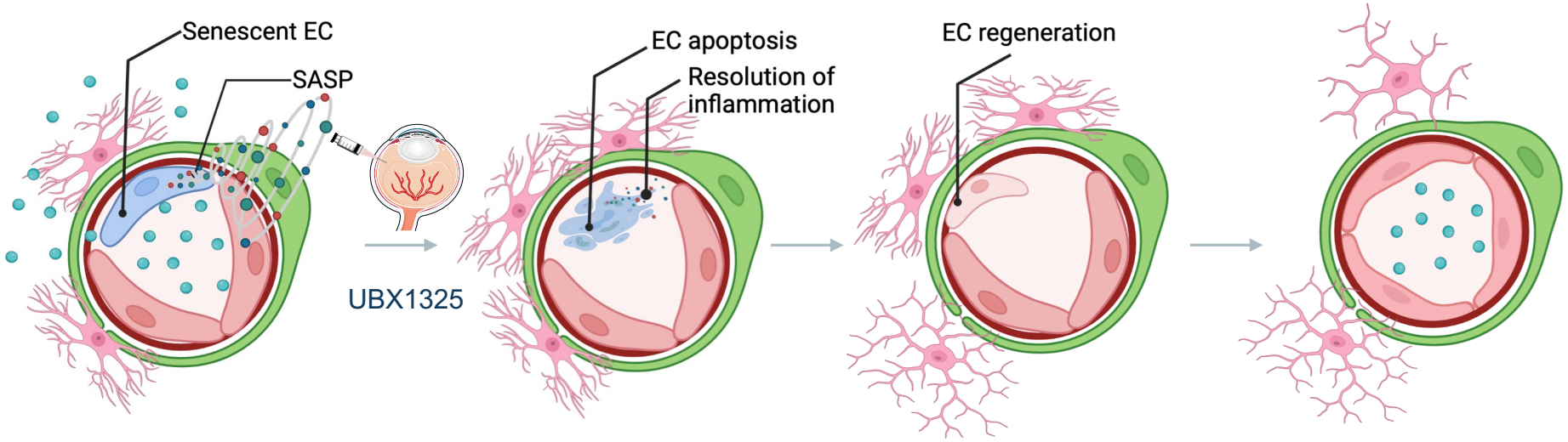






Proposed Mechanism of Action for UBX1325 in Mitigating Vascular Leakage

Diabetic blood vessel | **Vessel remodeling** | **Repaired blood vessel**



Senescent (Sn) ECs accumulate in diabetic retinas in areas of disease activity

- UBX1325 selectively triggers cell death of Sn ECs
- UBX1325 reduces retinal inflammation and vascular leakage

Preclinical data predicts progressive disease modification through vascular remodeling

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UBX1325 Has a Differentiated Profile With Best-In-Disease Potential

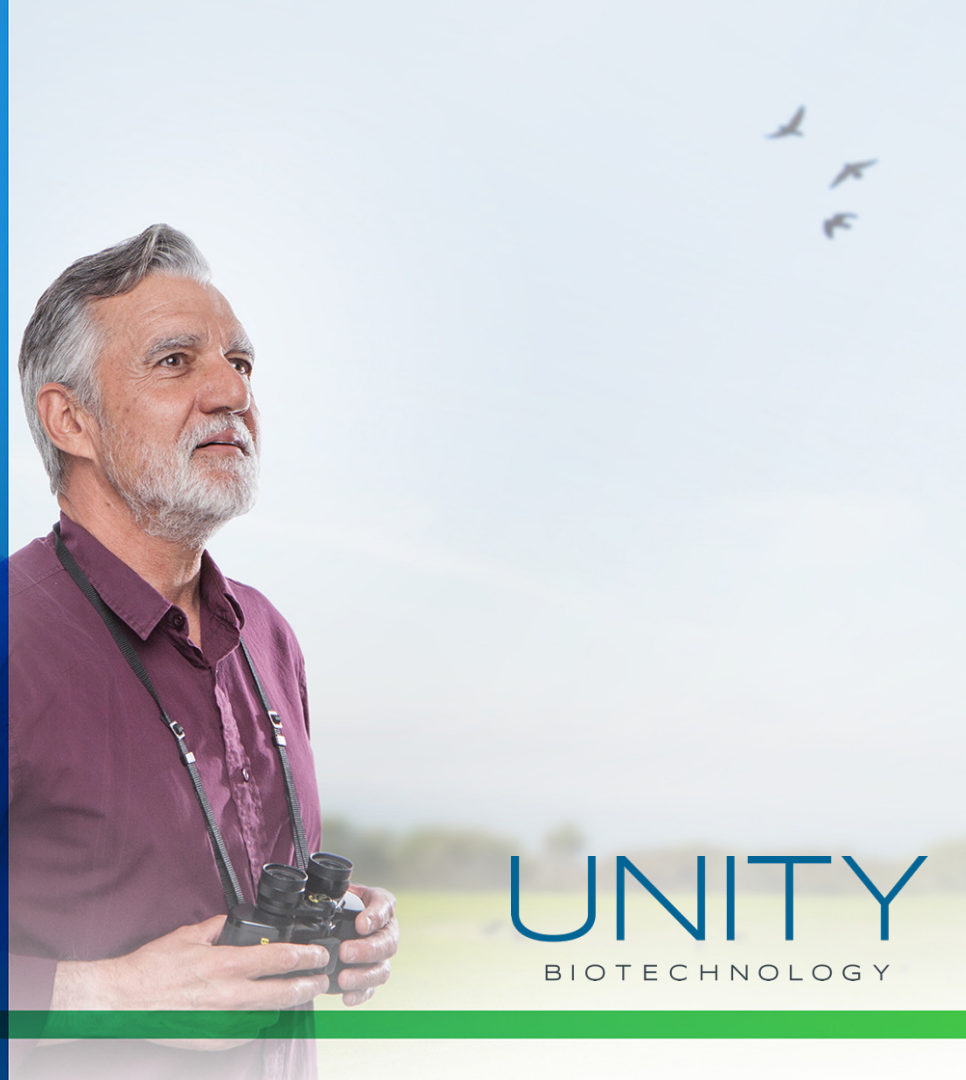
Potential to meaningfully change the treatment paradigm

Safety and Efficacy Profile	Current standard of care (Aflibercept)	aVEGF/Ang2 bispecific (Faricimab)	UBX1325
Favorable safety and PK profile	✓	✓	✓
Strong efficacy signal in broad patient population including sub-optimal anti-VEGF responders	X	X	✓
>50% patients achieve 6-month treatment free interval after single injection	X	X	✓
Reduction of ischemic regions of the retina and potential for disease modification	X	X	✓

✓ supported by clinical data ✓ supported by preclinical data

BEHOLD
Ph2 Study of UBX1325 in Patients with DME

Jamie Dananberg



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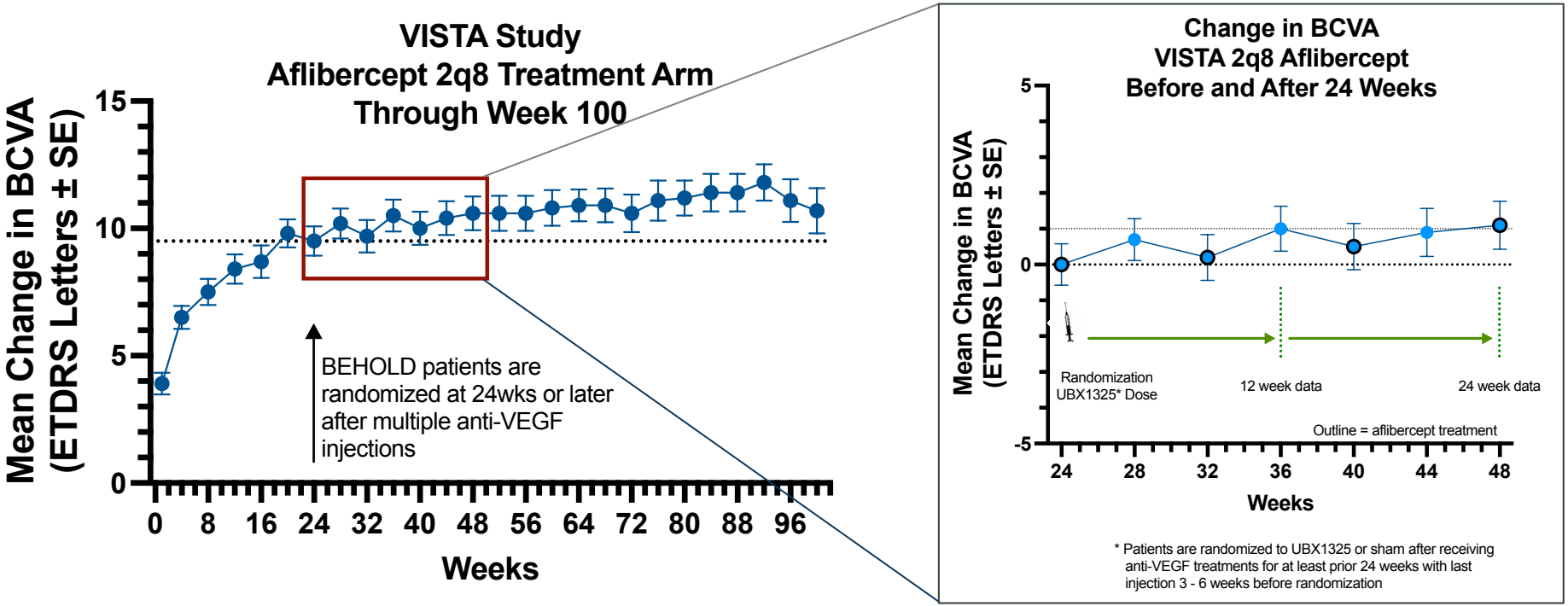
Context for DME Data: Majority of Anti-VEGF BCVA Benefit is in First Six Months After Which Gains Are Limited To ~One or Fewer Letters



Aflibercept DME BLA 125387 Suppl 48, 25 Mar 2015

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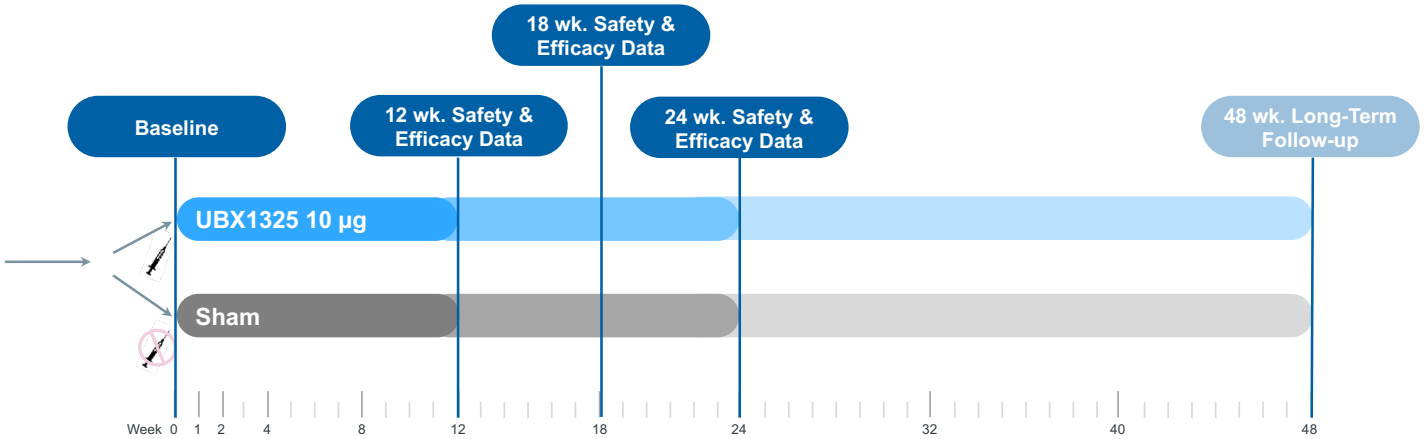
BEHOLD Study Design, Patient Population, and Endpoints

Patient Population

Individuals with **Diabetic Macular Edema** (with moderate diabetic proliferative retinopathy or better), **residual retinal fluid** (≥300 µm) and **visual acuity deficit** (73 ETDRS letters or worse) despite having received **repeated anti-VEGF** treatments (≥2 injections over last 6 months, last 3-6 weeks prior to randomization). Most subjects had 3 or more injections in preceding 6-month period.



	UBX	Sham	Total
Total Enrolled	32	33	65
Withdrawal, out-of-window visit at Wk24, lost to f/u	4	2	6
24-week analysis set	28	31	59

= UBX1325 injection

= Sham injection

Endpoints

- Safety and tolerability
- BCVA change from baseline
- Durability of response
- Sub- and intra-retinal fluid, CST changes
- Proportion of UBX1325 patients requiring 2 or more rescue treatments
- Changes in choroidal blood flow (OCT-A)

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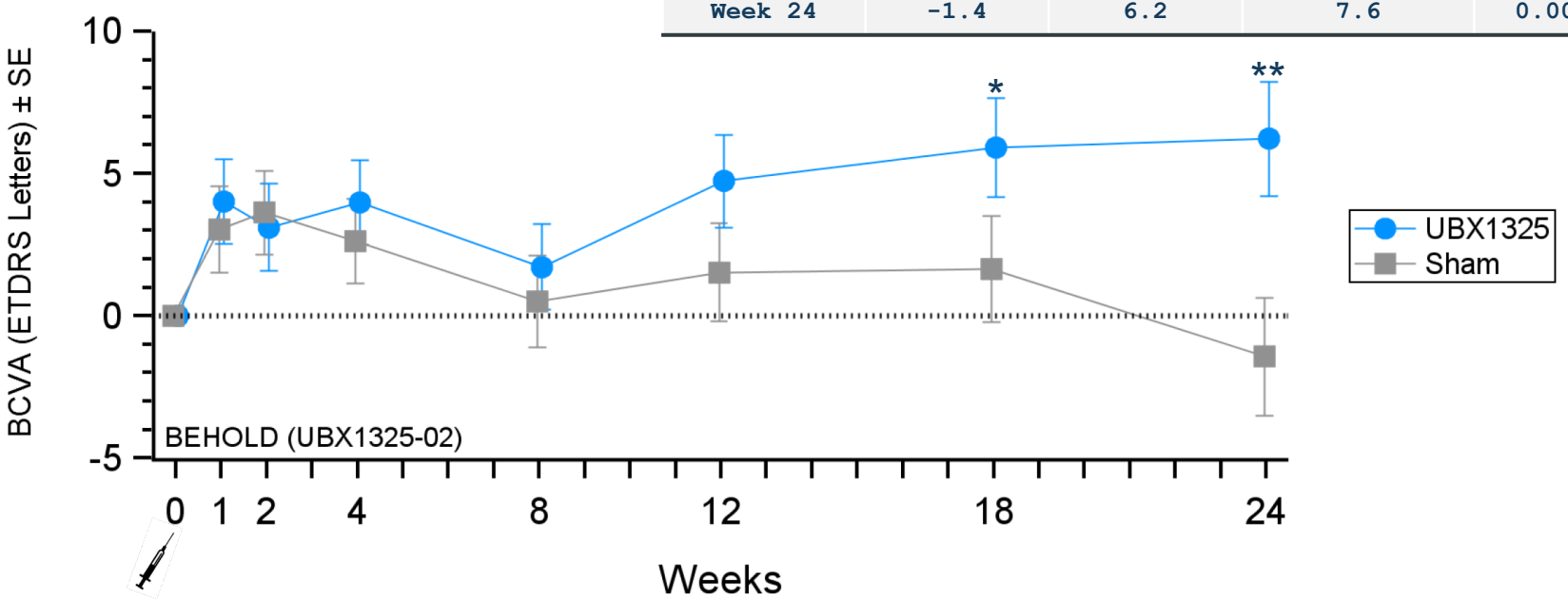
BEHOLD: 24-Week BCVA Change from Baseline† Met Pre-specified Criteria for Proof of Concept

	Sham	UBX1325	Difference	P-Value
Week 18	1.7	5.9	4.3	0.0943*
Week 24	-1.4	6.2	7.6	0.0084**

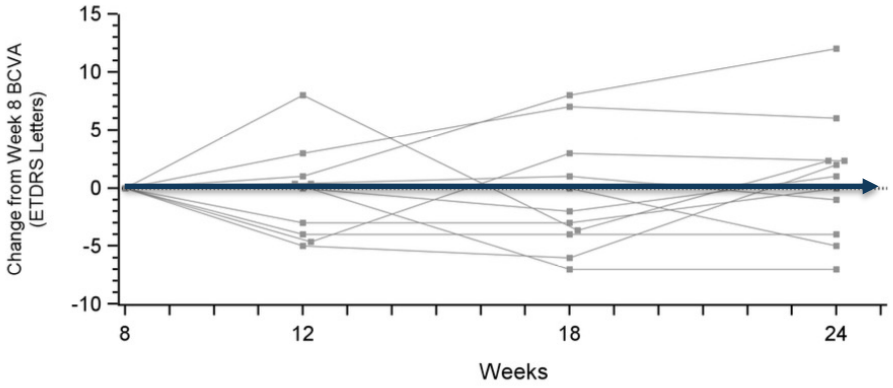


UBX1325 Led To A Sustained Improvement In BCVA Through 24 Weeks

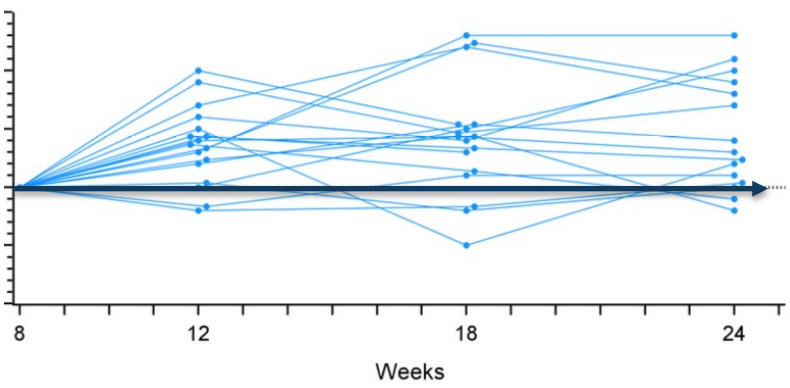
† MMRM Analysis

Individual Patient Curves of BCVA Change from Week 8-24*

Sham-treated Patients



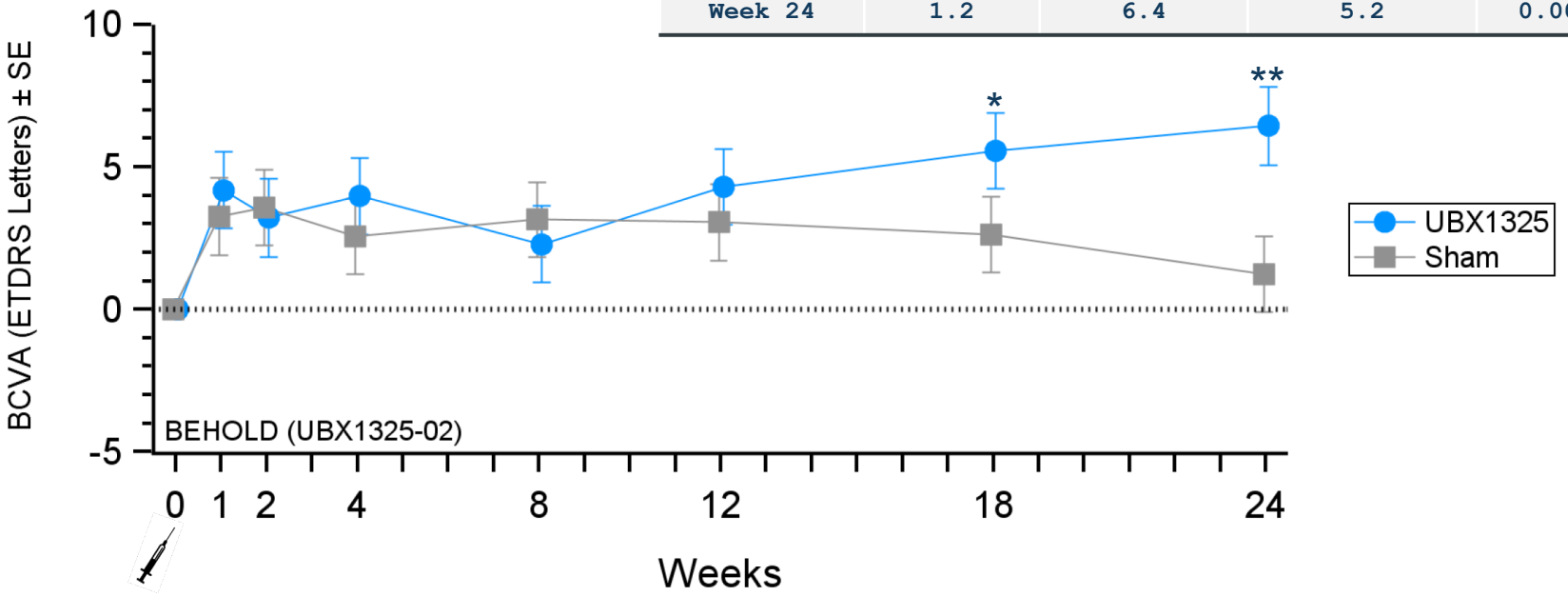
UBX1325-treated Patients



*patients who were rescue-free through 24 weeks

BEHOLD: 24-Week BCVA Change from Baseline† Including Post-Rescue Data

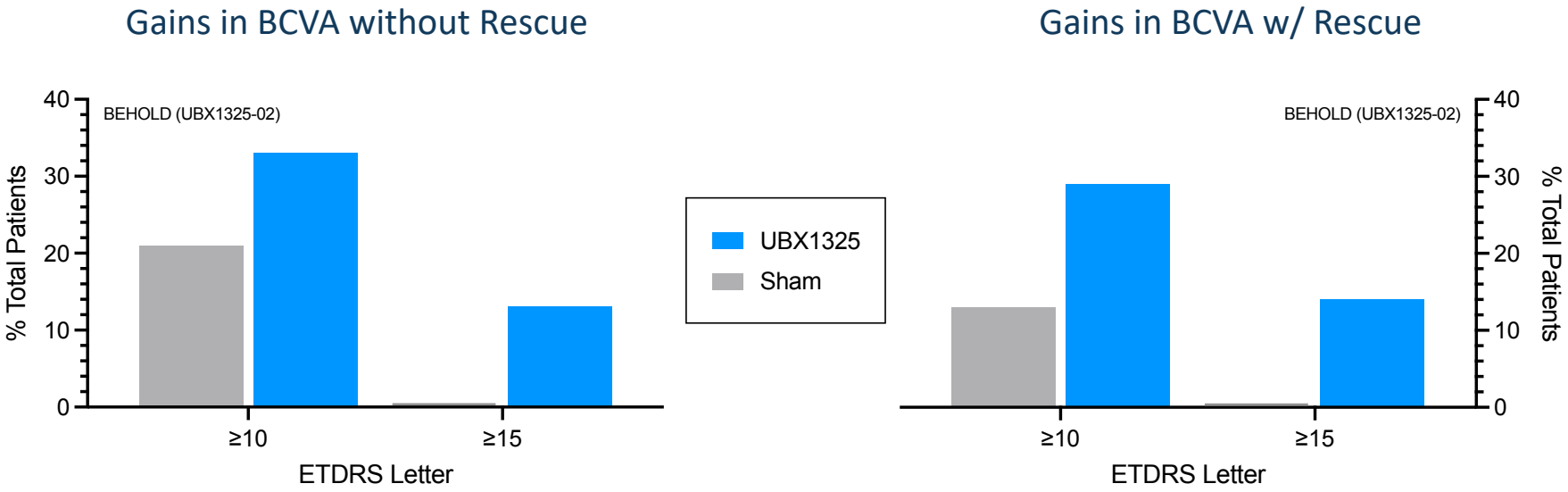
	Sham	UBX1325	Difference	P-Value
Week 18	2.6	5.6	3.0	0.1160*
Week 24	1.2	6.4	5.2	0.0068**



UBX1325 with As-Needed anti-VEGF Rescue Outperformed Sham with As-Needed Rescue Through 24 Weeks††

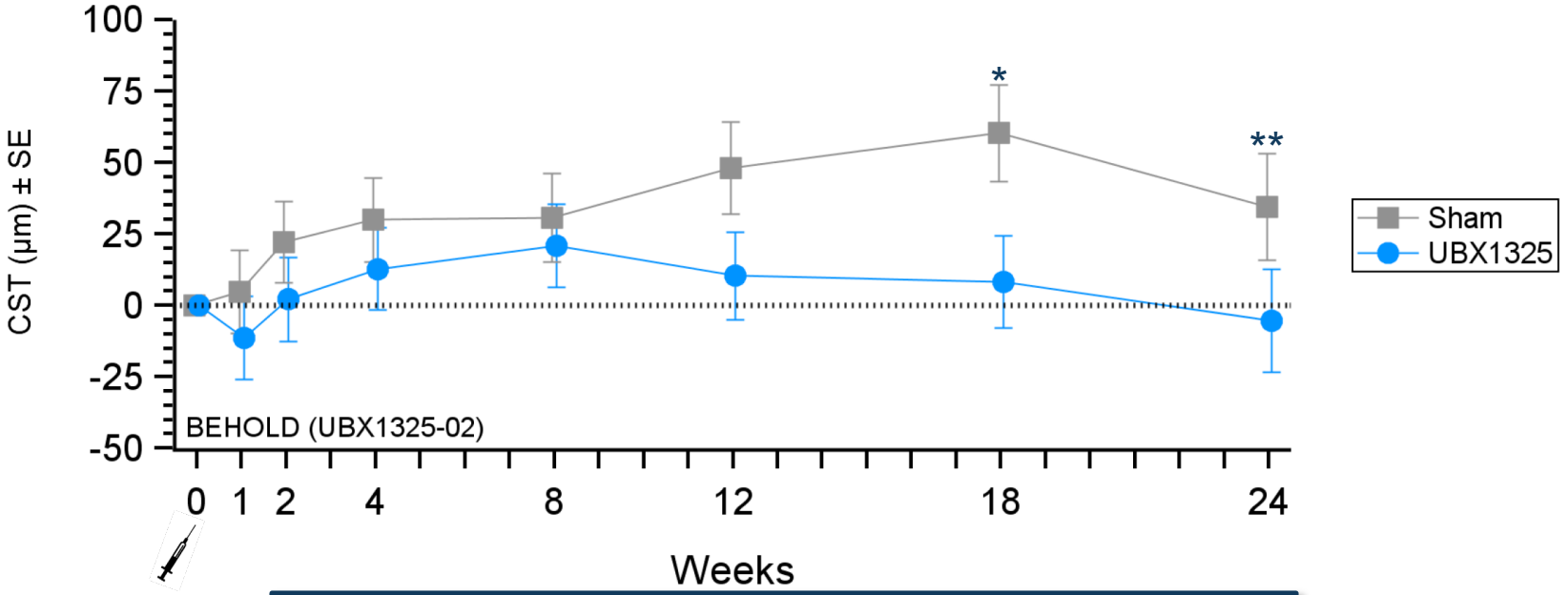
† MMRM Analysis
†† More rescues in Sham vs. UBX arms

Greater Proportion of Patients in UBX1325 Arm Had Larger Visual Acuity Gains Compared to Sham at 24 Weeks



BEHOLD: 24-Week CST Change from Baseline† Met Pre-specified Criteria for Proof of Concept

	Sham	UBX1325	Difference	P-Value
Week 18	60.3	8.2	-52.1	0.0278*
Week 24	34.6	-5.4	-40.0	0.1244**

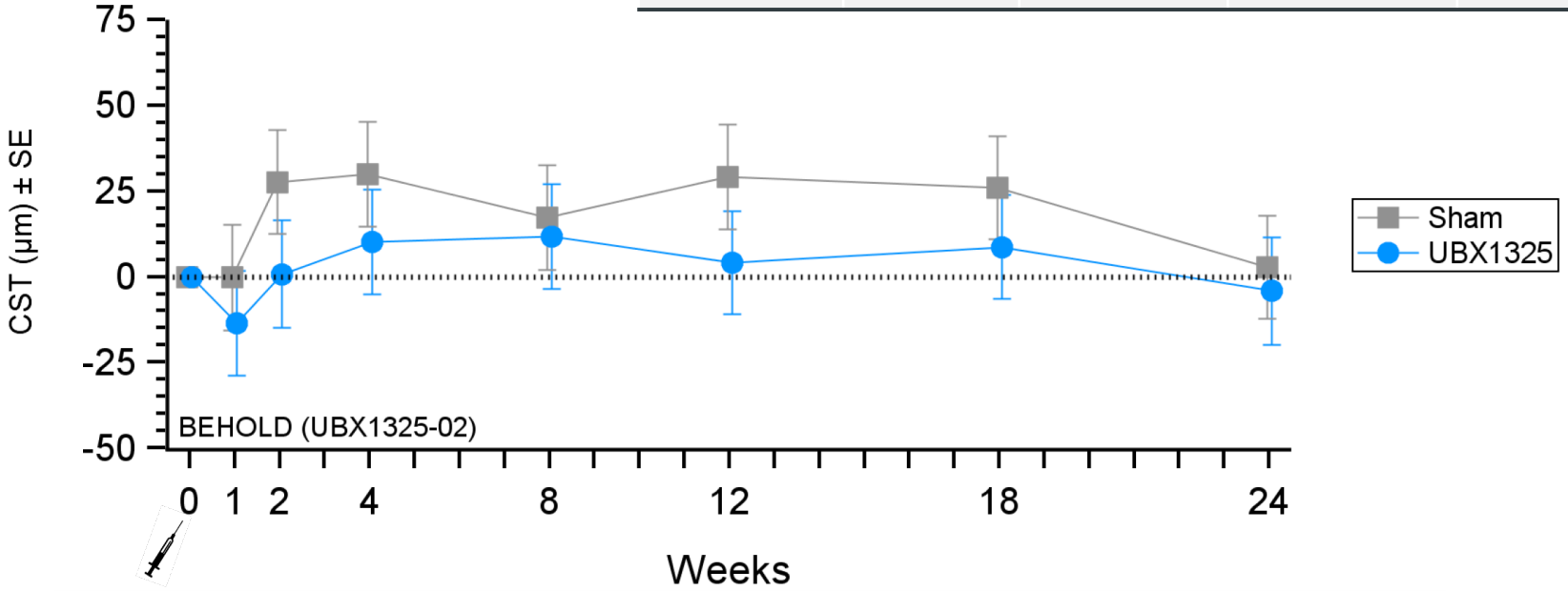


UBX1325 Stabilized the Retina Compared to Sham-Treatment

† MMRM Analysis

BEHOLD: 24-Week CST Change from Baseline† Including Post-rescue Data

	Sham	UBX1325	Difference	P-Value
Week 18	26.0	8.7	-17.3	0.4179
Week 24	2.7	-4.2	-6.9	0.7522



Adding anti-VEGF rescue data improved CST in sham arm but not in UBX1325 arm††

† MMRM Analysis

†† More rescues in Sham vs. UBX arms

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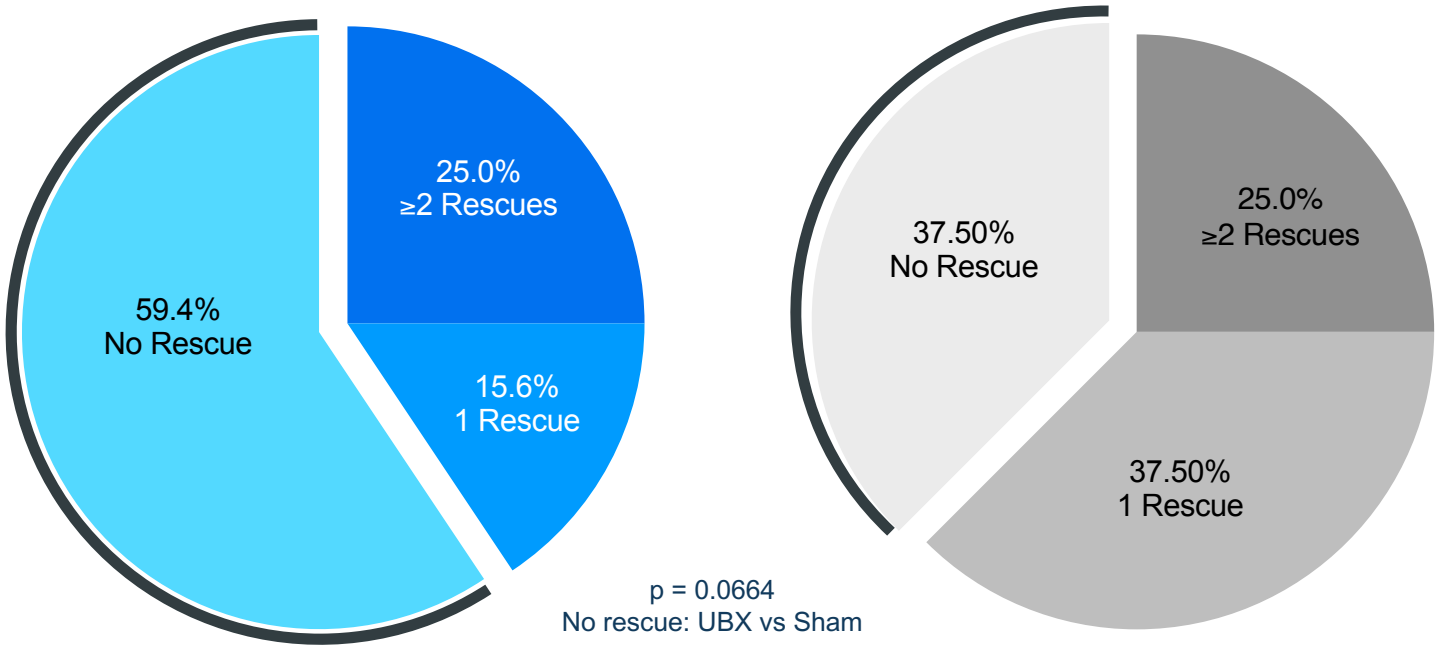
Majority of Patients on UBX1325 Were Rescue-free for 6 Months



Rescue Eligibility Criteria (<u>Either</u> Triggers Rescue):

- Decrease in BCVA of -10 ETDRS letters from the highest value (peak)
- Increase in CST of +75µm from baseline

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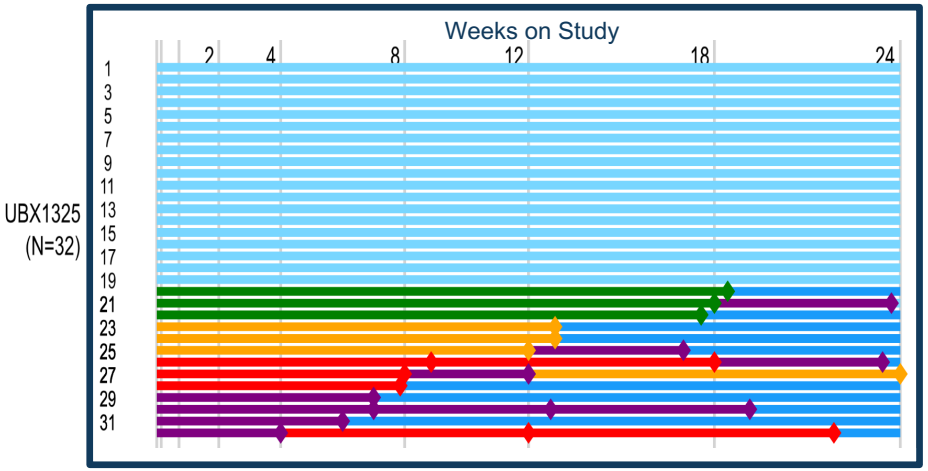
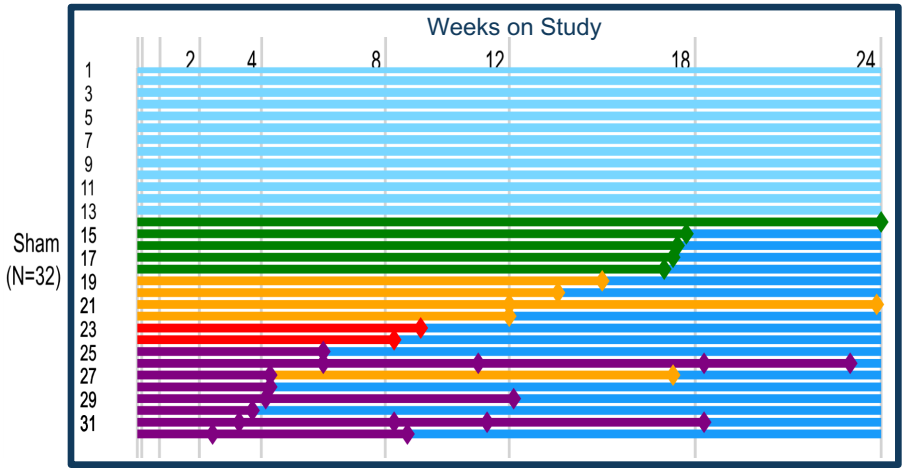
Sham-Treated Patients Were Rescued Earlier in Treatment Compared to UBX1325-Treated Patients

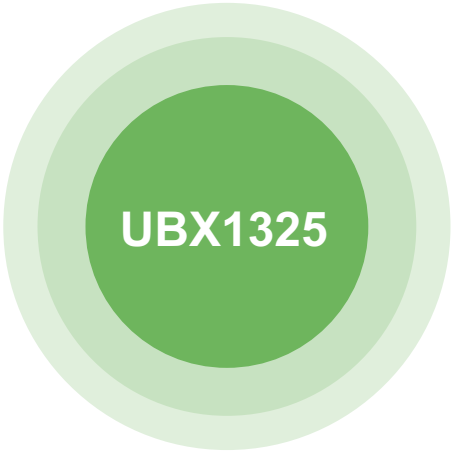




Weeks between Rescues

- <8 Weeks
- >=8 to <12 Weeks
- >=12 to <18 Weeks
- >=18 to <=24 Weeks
- Follow-Up
- Rescue-Free

A Single Injection of UBX1325 Provided Evidence of a Senolytic Agent Improving Visual Acuity in Patients with Diabetic Macular Edema



In the BEHOLD Study, UBX1325:

- Was well tolerated with a favorable safety profile and no intraocular inflammation
- Improved BCVA that was durable for a minimum of 6 months after one dose
- Allowed ~60% of patients to avoid anti-VEGF treatment for at least 6 months
- Maintained retinal structure vs. sham-treated subjects

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ENVISION
Ph2 Study of UBX1325 in Patients with wet AMD

Anirvan Ghosh

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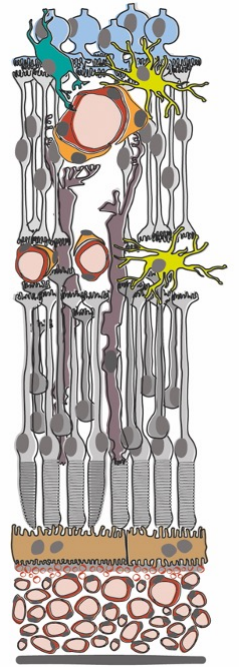
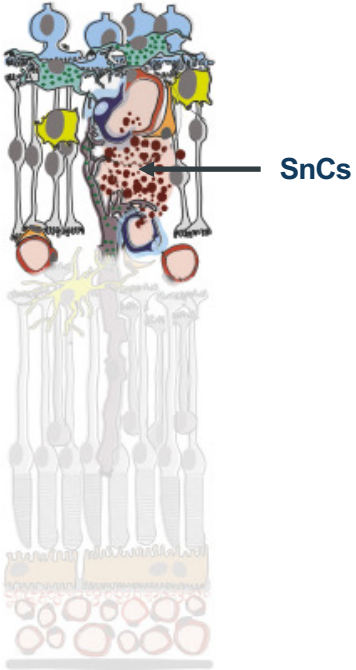
Vascular Pathophysiology and Senescence Burden in DME and Wet AMD

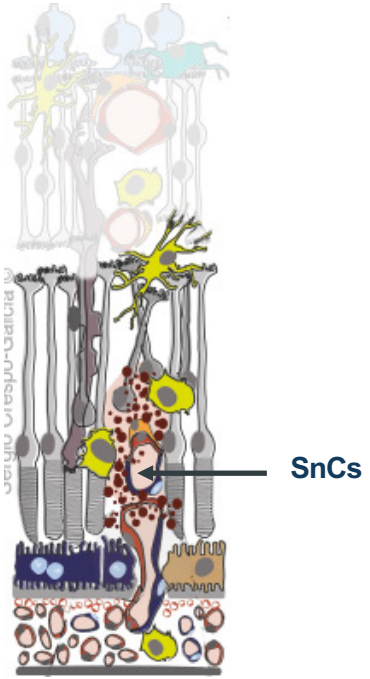


Healthy
Retina



DME: Retinal Vasculature Affected

Single dose of UBX1325 may provide high efficacy and long durability



Wet AMD: Choroidal Vasculature Affected

Optimum efficacy and durability may require a repeat dose of UBX1325

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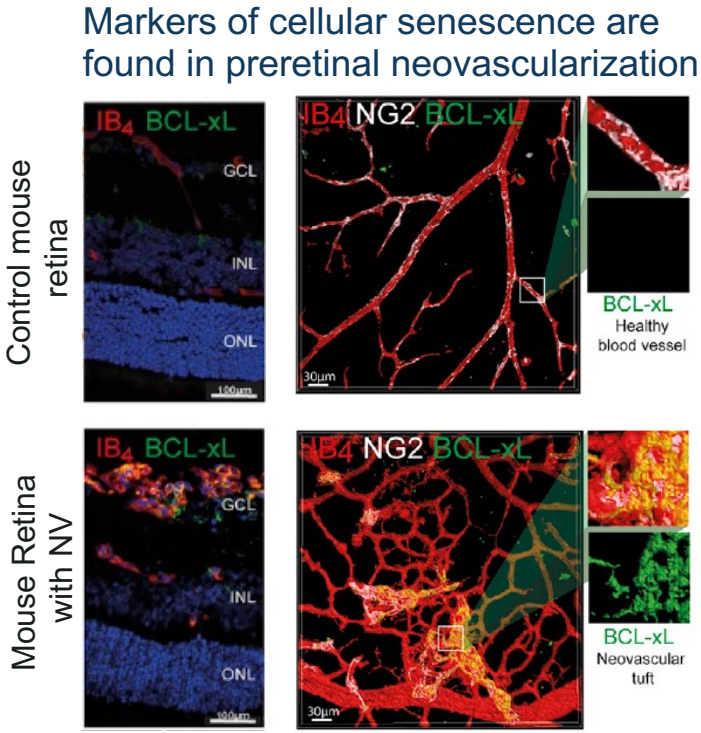
Bcl-xL Expression is Associated with Neovascular Tufts In a Mouse Model (OIR) of Pathological Neovascularization



Crespo-Garcia et al. Cell Metabolism, 2021

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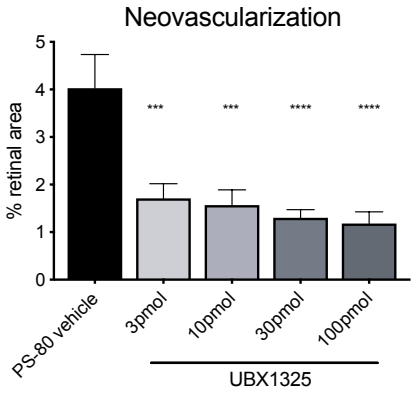
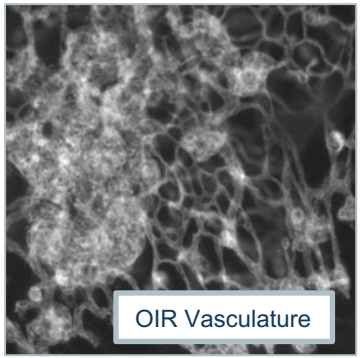
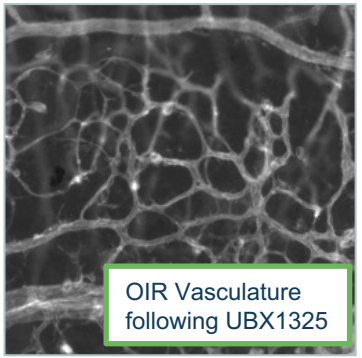
UBX1325 Improves Retinal Vasculature in Mouse Model of Neovascularization



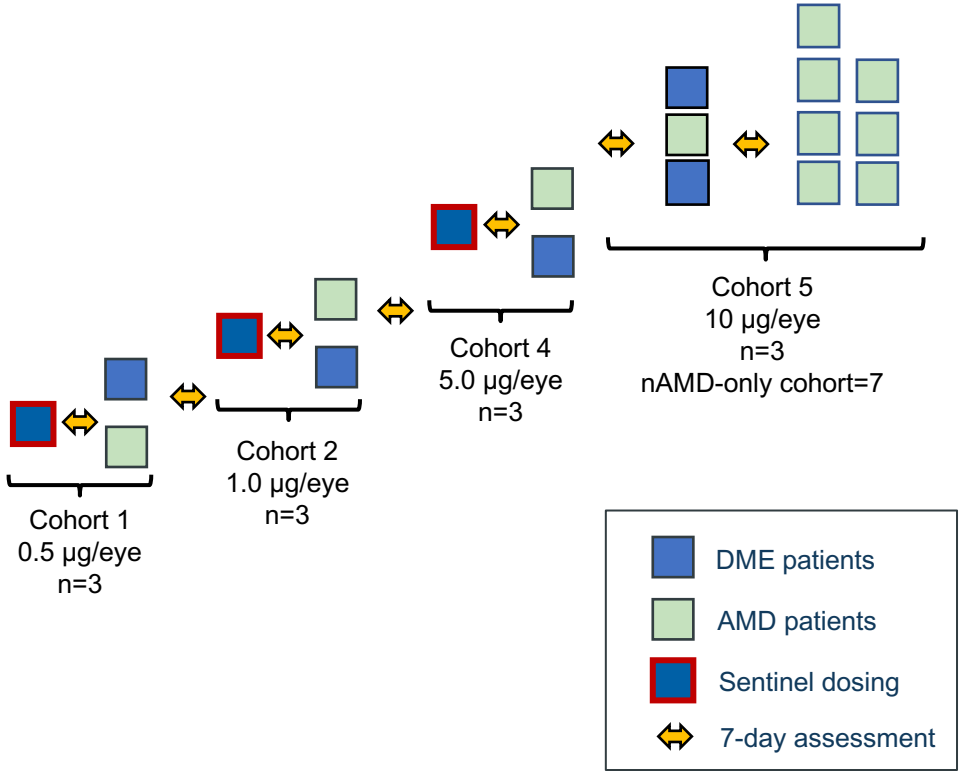




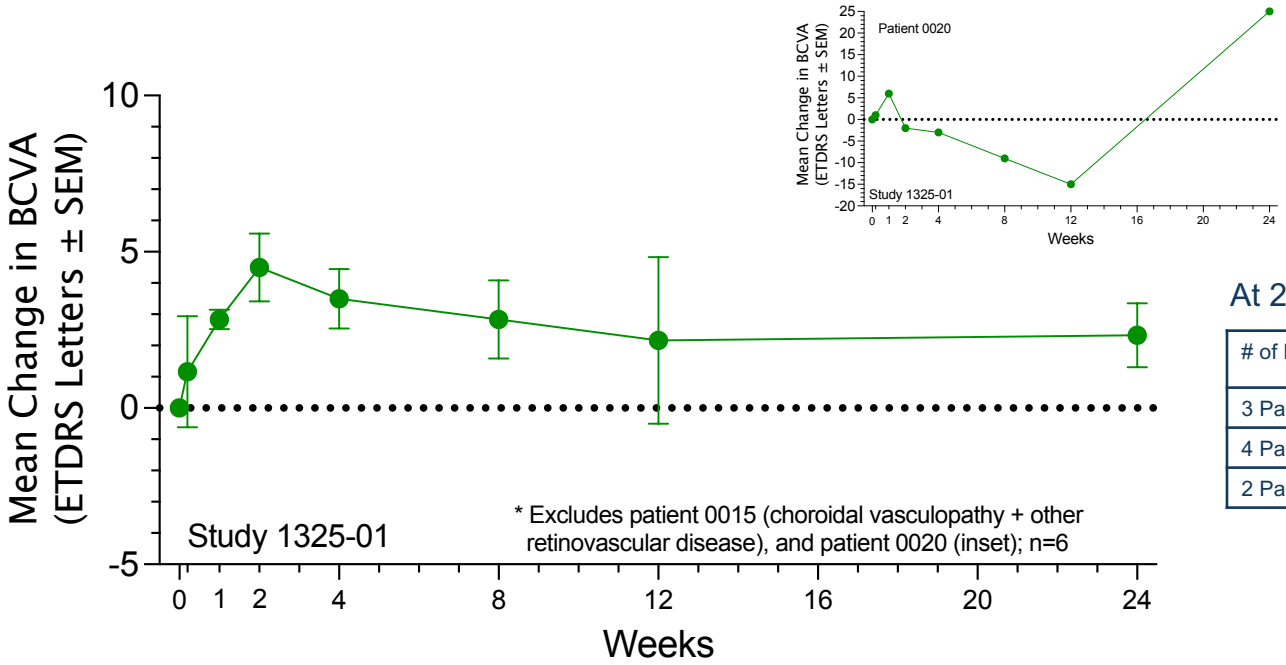
Phase 1 Data Review: SAD Safety Study in Patients with Advanced DME or nAMD

Study Population

- Advanced DME or nAMD with BCVA of 20/80 (55 ETDRS letters) or worse in the first 2 cohorts; 20/40 (70 ETDRS letters) or worse in later cohorts
- Patients for whom anti-VEGF therapy was no longer considered beneficial
- Patients had received neither an anti-VEGF agent nor a corticosteroid in the 3 months preceding enrollment
- DME patients had ≥350 µm of fluid; nAMD patient had presence of either sub- or intra-retinal fluid



Mean Change in BCVA Among Patients with wet AMD Treated with a Single Injection of UBX1325 10 µg (patient 0020 shown in inset)



At 24 weeks:

# of Patients	aVEGF Rescue Timing
3 Patients	No rescue
4 Patients	~12 weeks
2 Patients	~22 weeks

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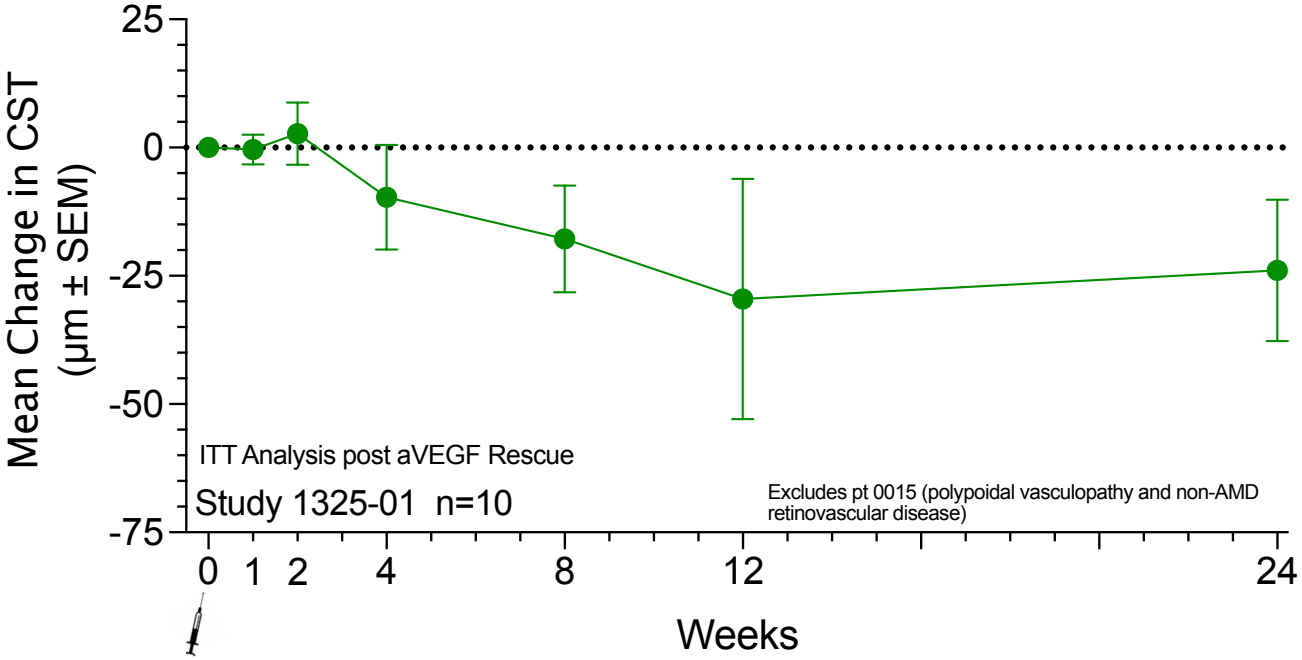
Mean change in CST Amongst Patients with wet AMD Through 24 Weeks After Single Injection of UBX1325



At 24 weeks:

# of Patients	aVEGF Rescue Timing
3 Patients	No rescue
5 Patients	~12 weeks
2 Patients	~22 weeks

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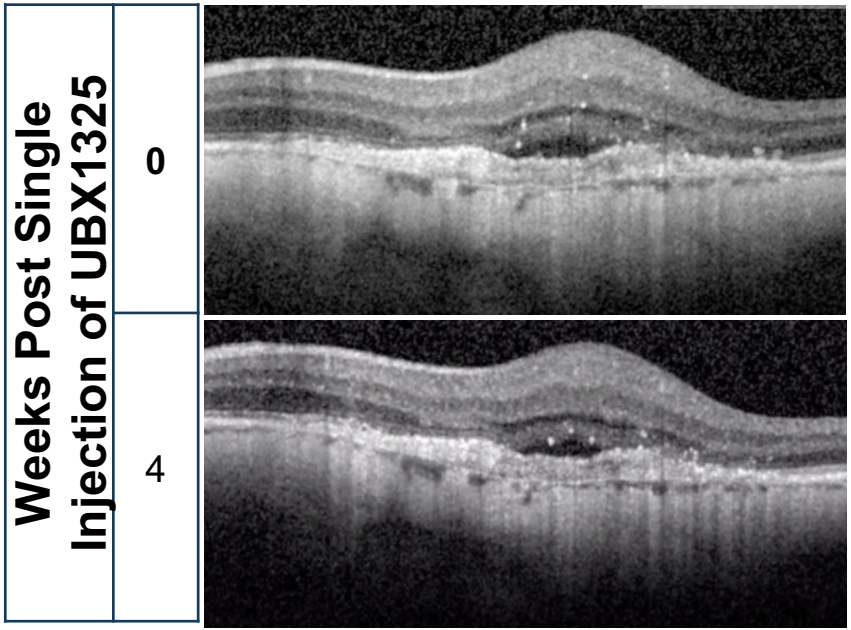
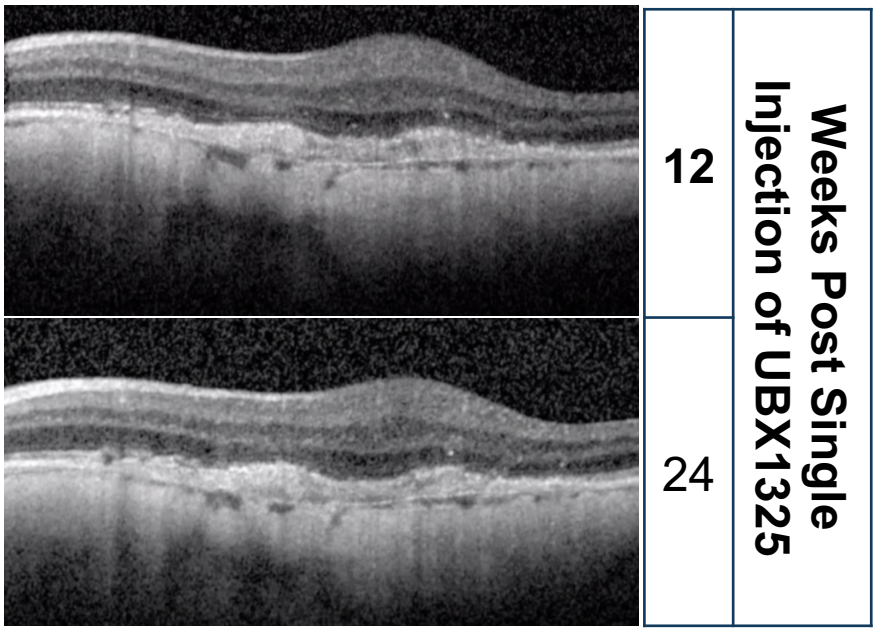
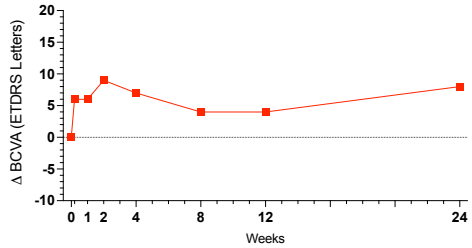
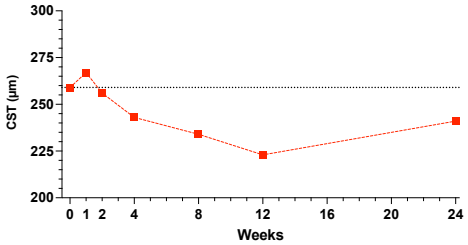
nAMD PATIENT 230-0007: 1 µg
BCVA IMPROVED, CST AND SRF REDUCED

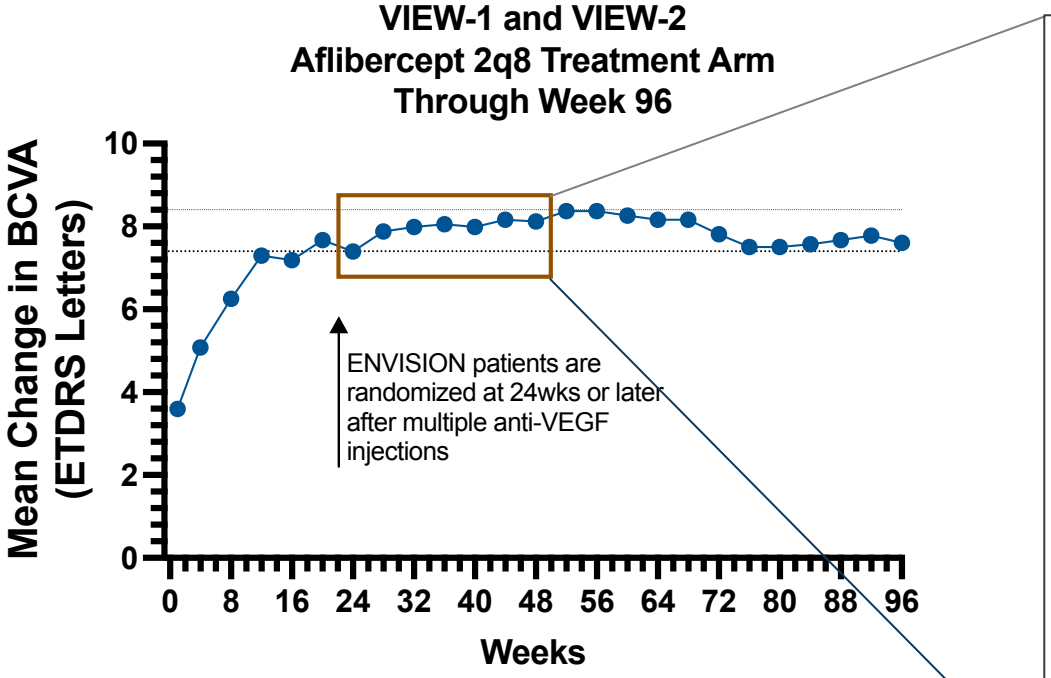


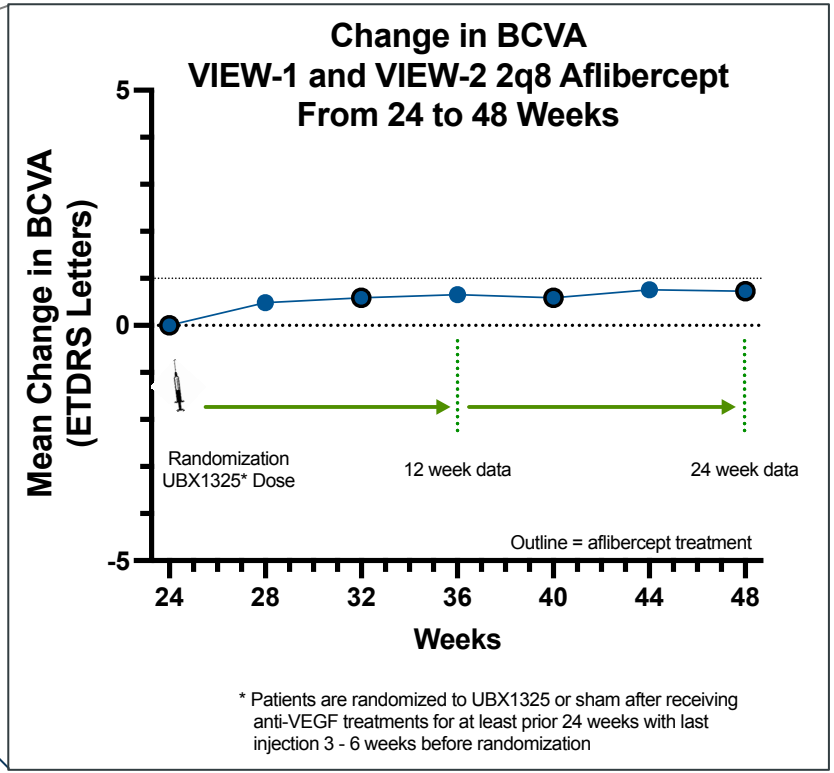






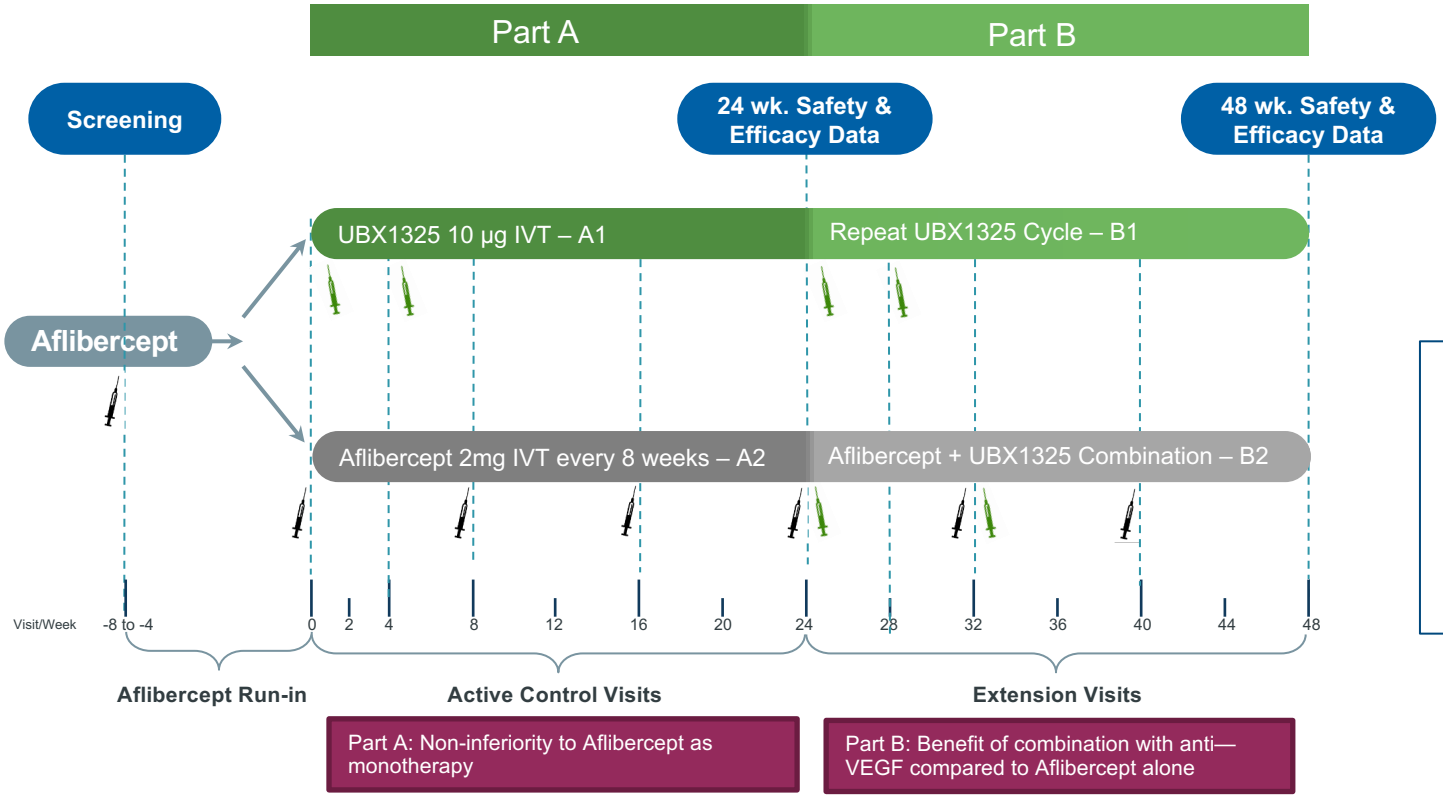
Context for AMD Data: Majority of Anti-VEGF BCVA Benefit is in First Six Months After Which Gains Are Limited To ~One or Fewer Letters





Aflibercept AMD BLA 125387 Orig-1, 11 Nov 2011
Schmidt-Erfurth, U., et al. (2014). Ophthalmology v121n(1), 193–201

ENVISION: wet AMD Phase 2 Study Design

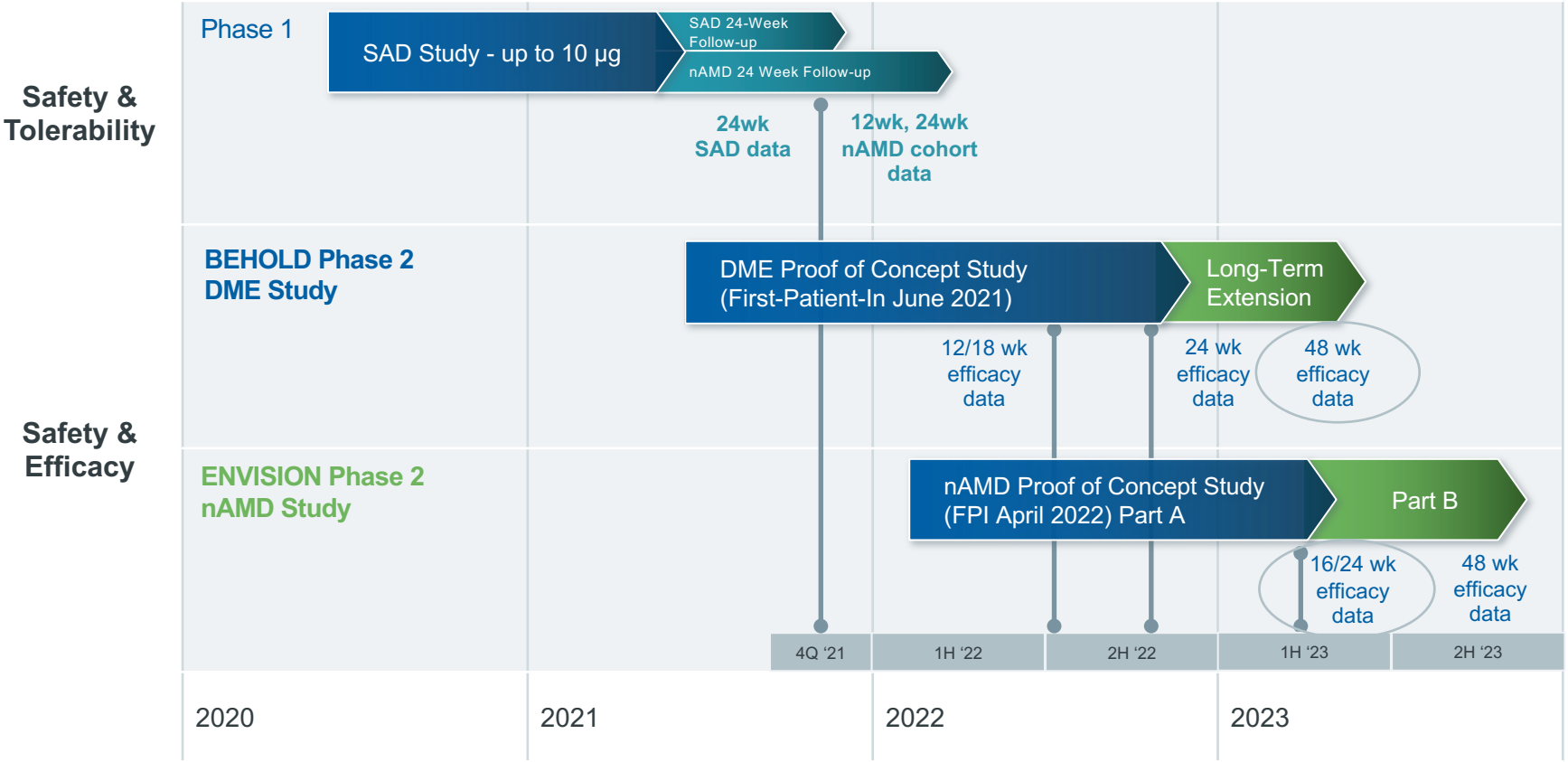


= UBX1325 injection

= Aflibercept injection

Sham injections of UBX1325 and aflibercept (not shown) are used across arms to ensure masking

UBX1325 Clinical Program Overview



Q&A

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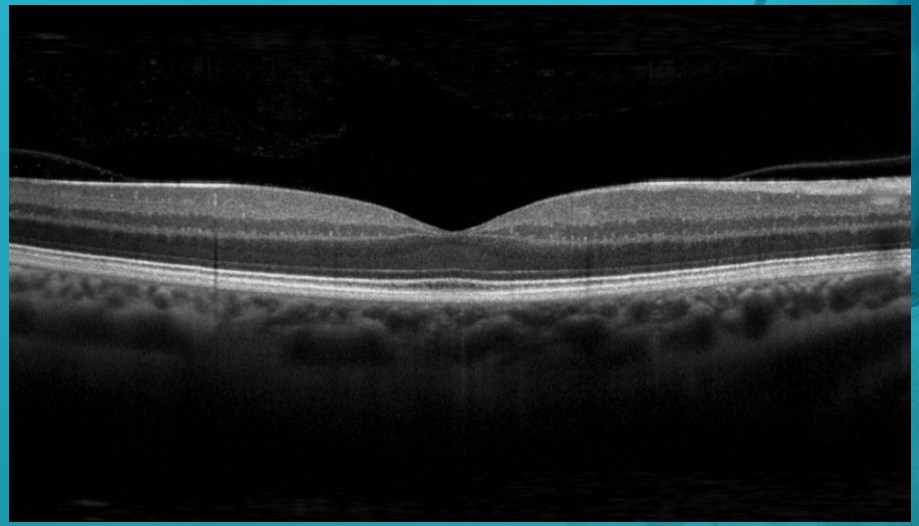
Summary of Treatment Emergent Adverse Events

	Sham (%) (N = 33)	UBX1325 10 µg (%) (N = 32)	Overall (%) (N = 65)
Subjects with at least one TEAE	28 (84.8)	24 (75.0)	52 (80.0)
Related TEAE	3 (9.1)	6 (18.8)	9 (13.8)
Grade ≥3 TEAE	4 (12.1)	3 (9.4)	7 (10.8)
Serious TEAE	3 (9.1)*	4 (12.5)*	7 (10.8)
Ocular TEAE for Study Eye	23 (69.7)	19 (59.4)	42 (64.6)
Treatment-related Ocular TEAE for Study Eye	3 (9.1)**	6 (18.8)**	9 (13.8)
TEAE leading to death	0	0	0
Intraocular inflammation, endophthalmitis, retinal artery occlusion, or vasculitis	**0**	**0**	**0**

* Unrelated or likely unrelated to treatment

** 2/3 Sham and 5/6 UBX most likely attributable to procedure: Conjunctival hemorrhage, eye irritation, conjunctival hyperemia
All mild – moderate, resolved without further intervention

Examples of Imaging Data



Normal Optical Coherence Tomograph (OCT)

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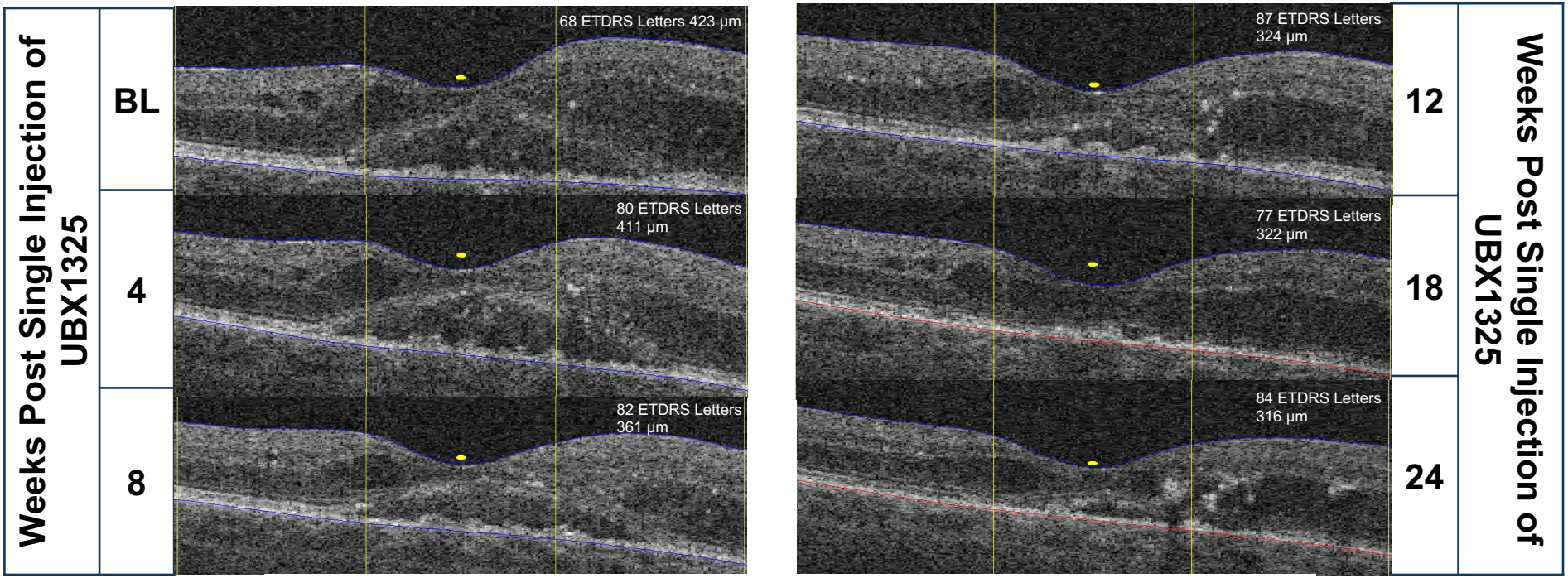
PATIENT A



CFBL	Week 12	Week 18	Week 24
BCVA (ETDRS letters)	+19	+9	+16
CST (µm)	-99	-101	-107

Tx History: aflibercept x5/6 mo. w/ last 4 weeks prior to randomization

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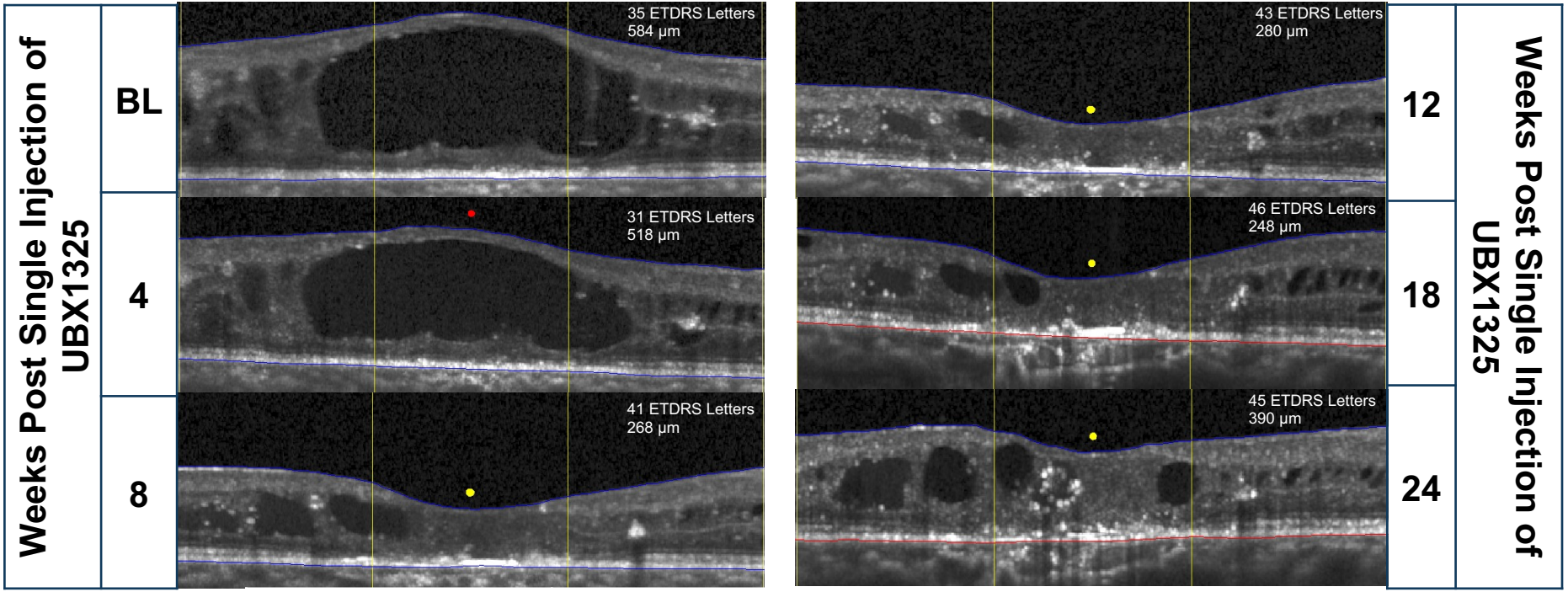
PATIENT B



CFBL	Week 12	Week 18	Week 24
BCVA (ETDRS letters)	+8	+11	+10
CST (µm)	-304	-336	-194

Tx History: bevacizumab x4 doses/6 mo. w/ last 3 wks prior to randomization

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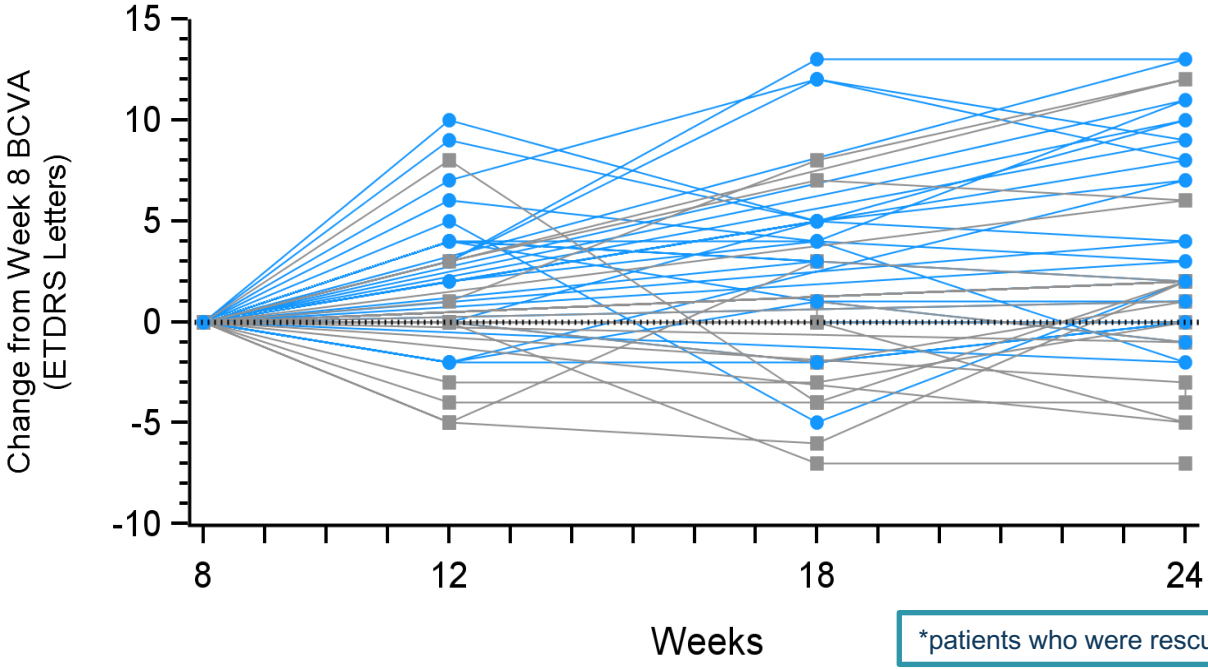
Individual Patient Curves of BCVA Change from Week 8-24*



*patients who were rescue-free through 24 weeks

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