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UBX1325
Phase 2 ENVISION nAMD Study
24 Week Data

NASDAQ: UBX

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 Annual Report on Form 10-K for the year ended December 31, 2022, filed with the Securities and Exchange Commission on March 15, 2023, 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.

UBX1325 Phase 2 ENVISION Study in Patients with Neovascular AMD

Phase 2 ENVISION Part A Study Data Highlights

UBX1325 monotherapy did not achieve non-inferiority through 24 weeks due, in part, to an unexpected 3.5 letter gain in the anti-VEGF control arm

UBX1325 maintained visual acuity in patients with ongoing active disease through 24 weeks with less than one letter mean decrease from baseline

52% of UBX1325-treated patients did not require anti-VEGF treatment through 24 weeks

UBX1325 was well tolerated with no instances of intraocular inflammation

Additional Insights from Secondary Analysis

- A single dose of run-in aflibercept may not have been sufficient to get patients entering study to anti-VEGF BCVA plateau
- UBX1325 may be more effective in patients with longer disease duration who may have greater senescence burden

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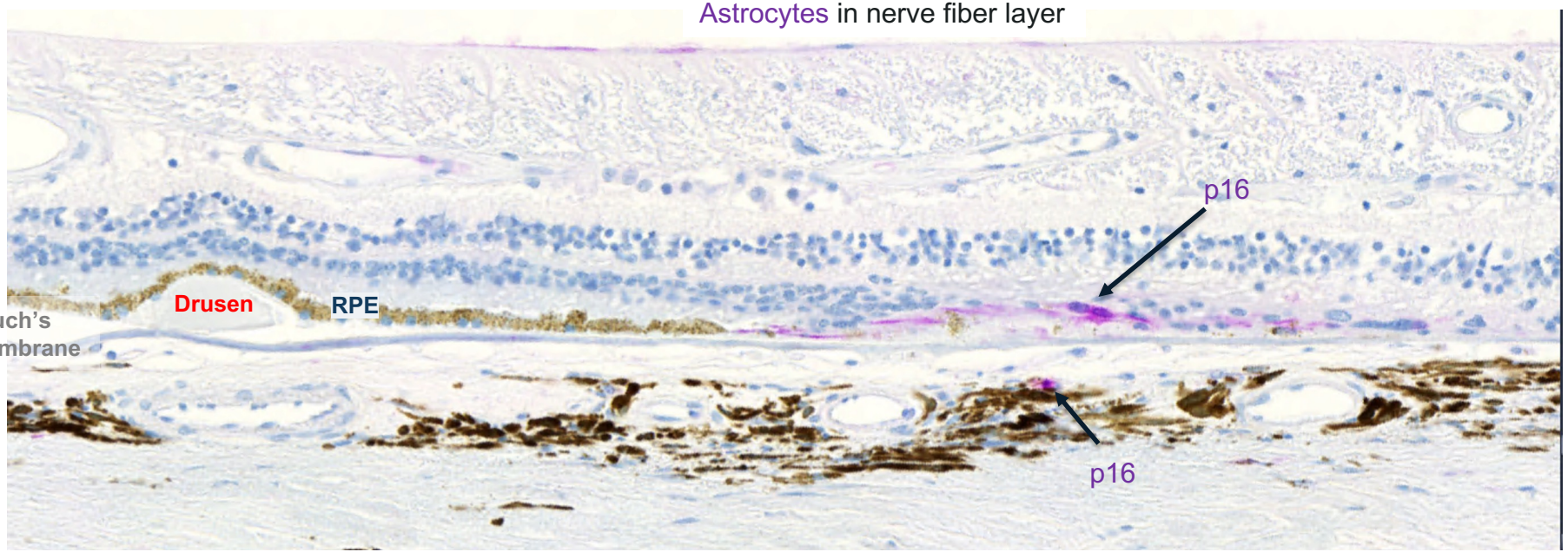
Disease Pathophysiology

UBX1325 Rationale and Mechanism of Action

Clinical Development Plan

Senescent cells are Associated with Disease Pathology in AMD

p16-positive senescent cells in 86y/o AMD posterior retina and choroid



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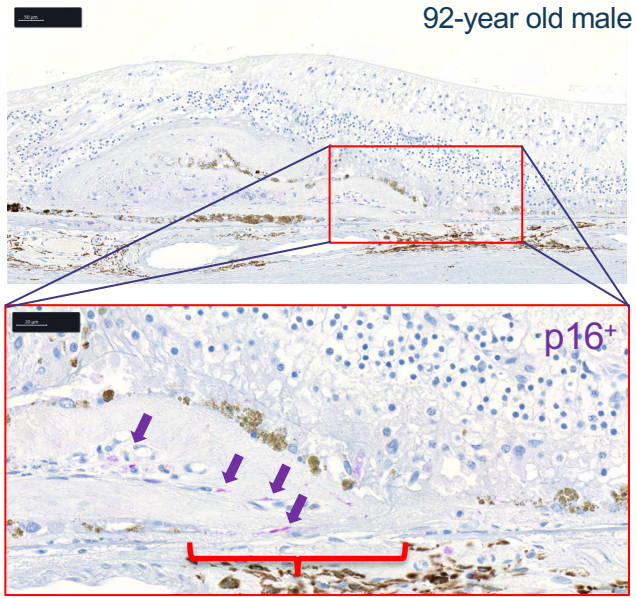
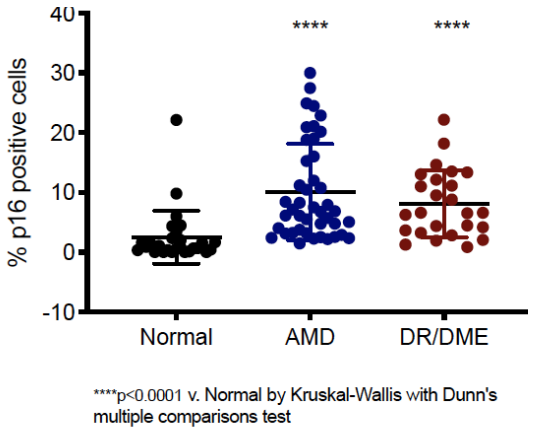
There is a Higher Burden of Senescent Cells in Advanced Disease

Macular region of patient with wAMD

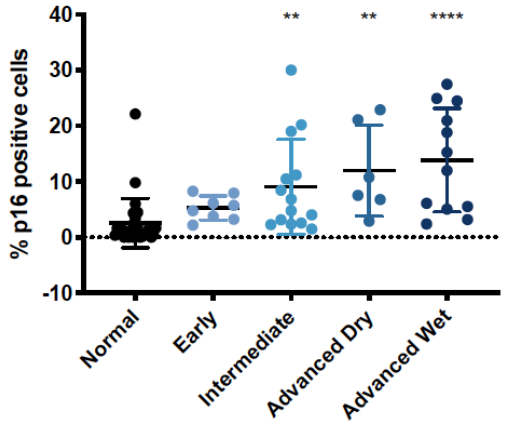


Disruption of Bruch's Membrane

% of p16+ cells



****p<0.0001 v. Normal by Kruskal-Wallis with Dunn's multiple comparisons test



**p<0.01; ****p<0.0001 v. Normal by Kruskal-Wallis with Dunn's multiple comparisons test

Percentage p16+ cells in human ocular normal (n=28), AMD (n=43) and DR/DME (n=25) samples. Each point represents a single whole globe.

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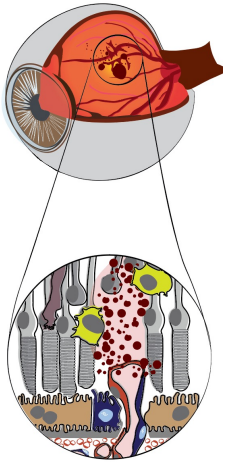
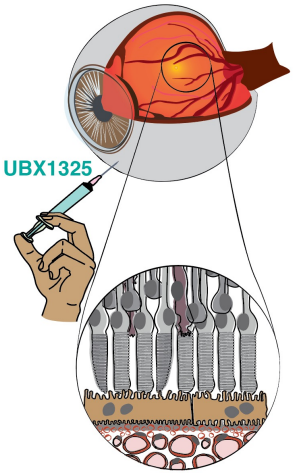
UNITY Is Developing Senolytic Medicines to Eliminate Senescent Cells to Restore Vascular Health and Improve Vision

Neovascular Age-related Macular Degeneration



Neovascularization & fluid extravasation



Repaired Retina

nAMD:

- Increased senescence burden
- Choroidal vasculature affected
- Neovascularization and vascular leakage
- Loss of vision

nAMD treated with Senolytic intended results:

- Senescent cells removed
- Choroidal vasculature and outer retina restored
- Improvement in vision

UNITY illustration.

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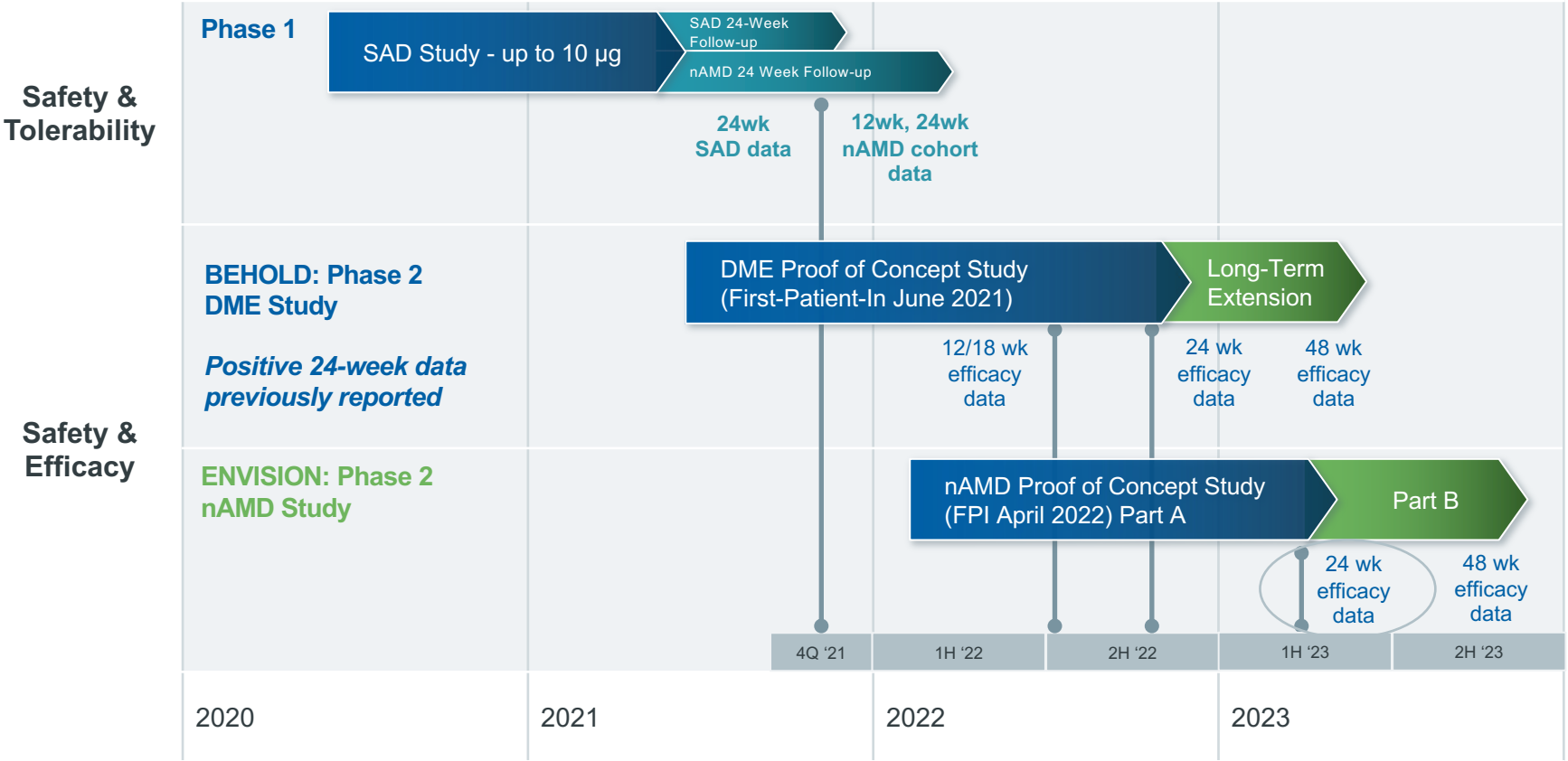
UBX1325 Clinical Program Overview



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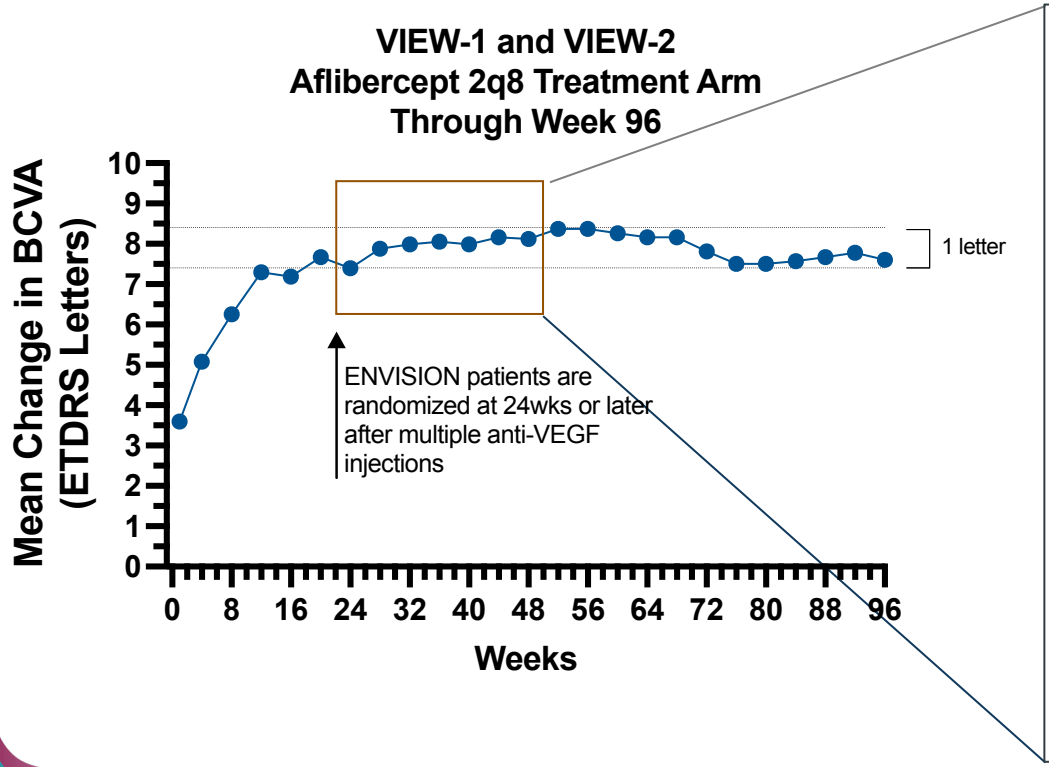
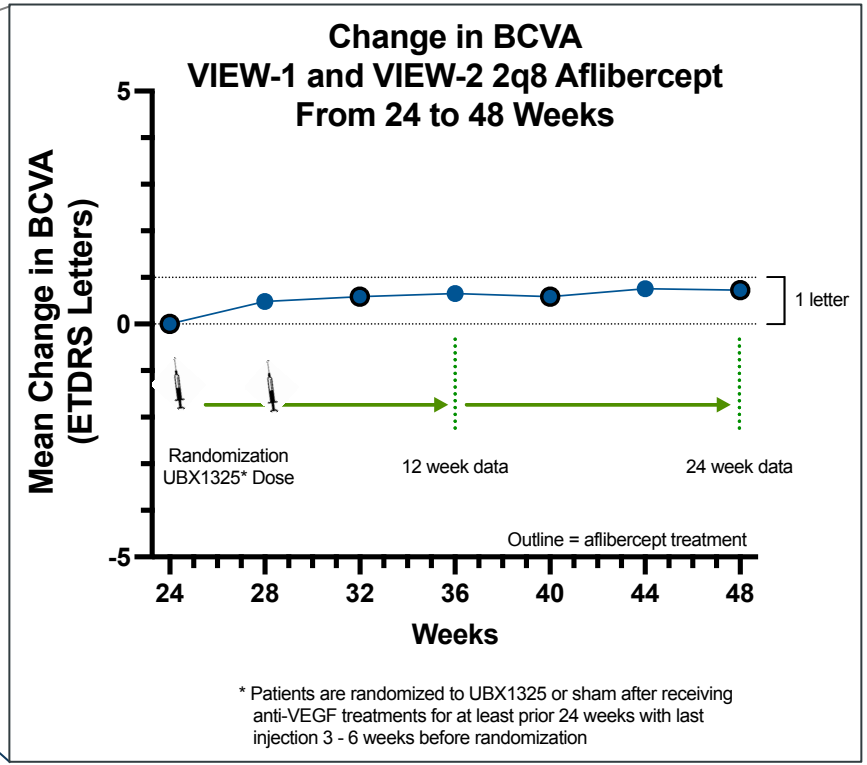
Clinical Context:

Response of nAMD Patients to anti-VEGF Treatment

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
Heier, J. S., et al and the VIEW 1 and VIEW 2 Study Groups (2012). Ophthalmology, 119(12), 2537–2548.

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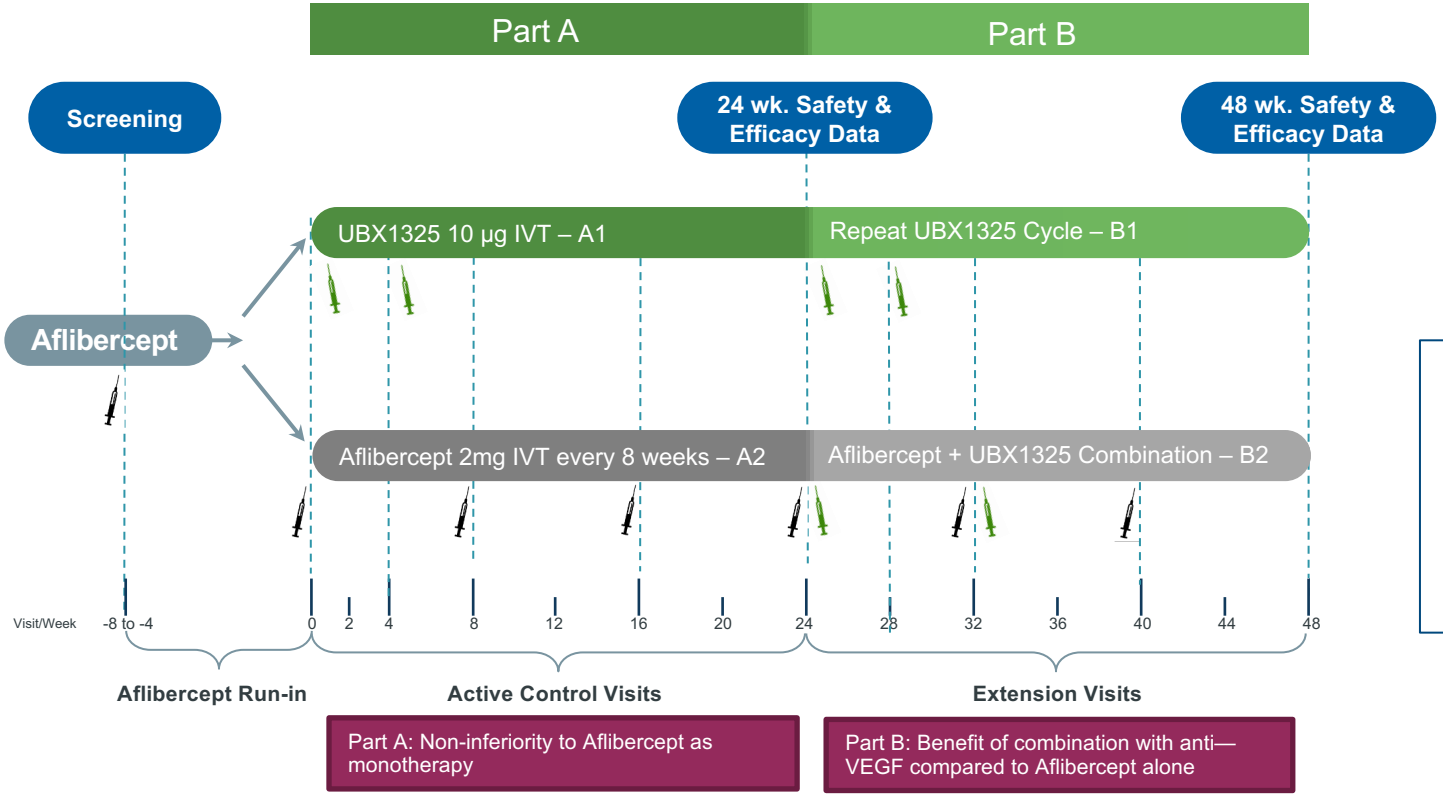
UBX1325 Phase 2 ENVISION Study

24-Week Data in Patients With nAMD

ENVISION: nAMD Phase 2 Study Design



= UBX1325 injection

= Aflibercept injection

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

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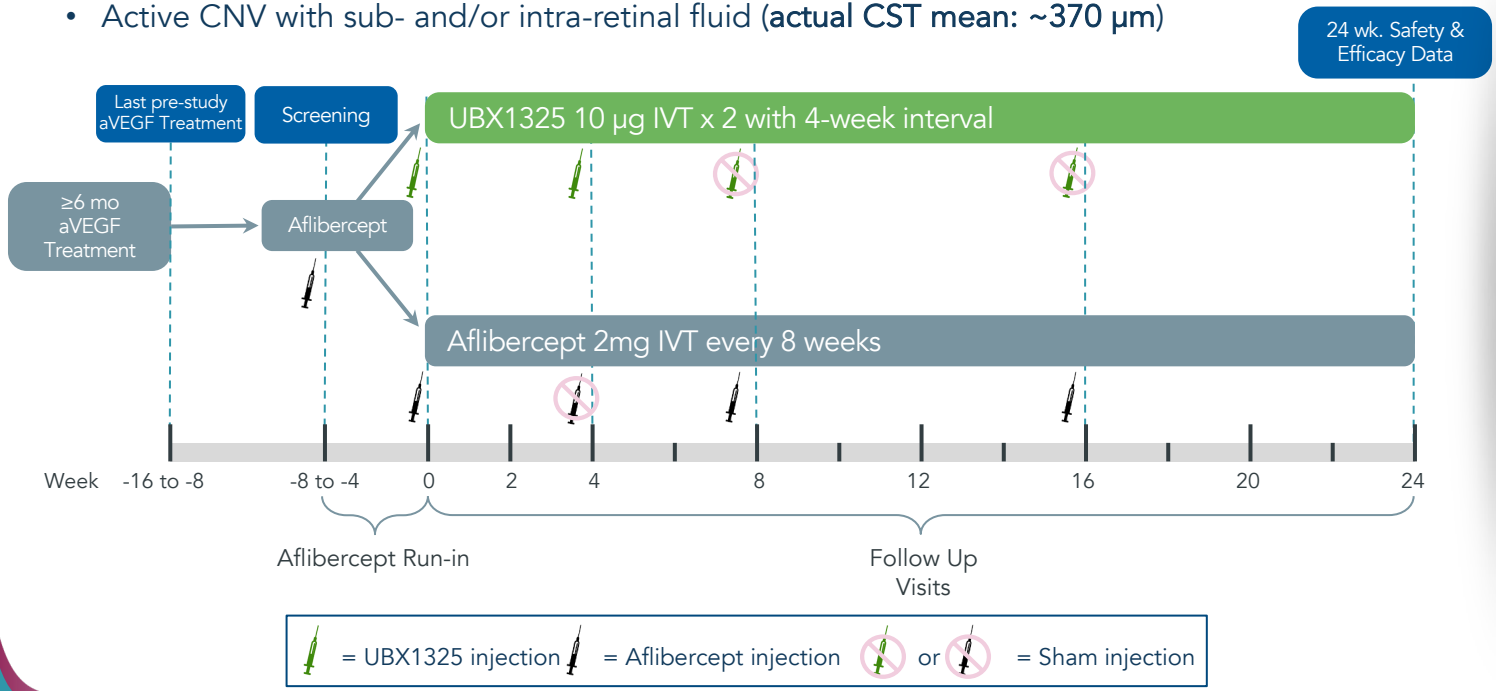
ENVISION: nAMD Phase 2 Proof-of-Concept Study Design – Part A

Population (actual enrolled 51) patients with AMD who had:

- At least 2 anti-VEGF IVTs in the preceding 6-month period (**actual ~4**)
- BCVA 70 – 20 ETDRS letters (**actual mean: ~60**)
- Active CNV with sub- and/or intra-retinal fluid (**actual CST mean: ~370 µm**)



Endpoints

- Safety and tolerability
- BCVA change from baseline
- CST change from baseline
- Non-inferiority vs aflibercept (BCVA and CST)
- Durability of response
- Sub- and intra-retinal fluid
- Changes in perfusion (FA and OCTA)
- Changes in photoreceptor function (mfERG)

Source: UBX1325-03 protocol; t_14_1_2

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ENVISION: Demographics at baseline

	Aflibercept	UBX1325
Baseline BCVA (ETDRS Letters)		
n	25	25
Mean	**62.4**	**58.0**
SD	9.46	13.47
Median	64.0	60.0
Min, Max	36.0, 77.0	25.0, 79.0
Baseline CST (µm)		
n	25	25
Mean	**367.5**	**370.8**
SD	151.75	108.85
Median	284.0	374.0
Min, Max	198.0, 683.0	206.0, 665.0
Duration of neovascular AMD (Years)		
n	25	25
Mean	**3.9**	**3.8**
SD	2.04	3.40
Median	3.3	2.4
Min, Max	1.1, 9.1	0.4, 14.6

Source: t_14_1_2

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Summary of Treatment Emergent Adverse Events

	Aflibercept 2mg Total 25 n (%)	UBX1325 10µg Total 25 n (%)
Subjects with at least one TEAE	19 (76.0)	20 (80.0)
Grade ≥3 TEAE	1 (4.0)	2 (8.0)
Serious TEAE	0	2 (8.0)
Ocular TEAE for Study Eye	14 (56.0)	15 (60.0)
Treatment-related Ocular TEAE for Study Eye	3 (12.0)	1 (4.0)
TEAE leading to death	0	1 (4.0)*
Intraocular inflammation, endophthalmitis, retinal artery occlusion, or vasculitis	**0**	**0**

* Unrelated to treatment

Source: t_14_3_1_4

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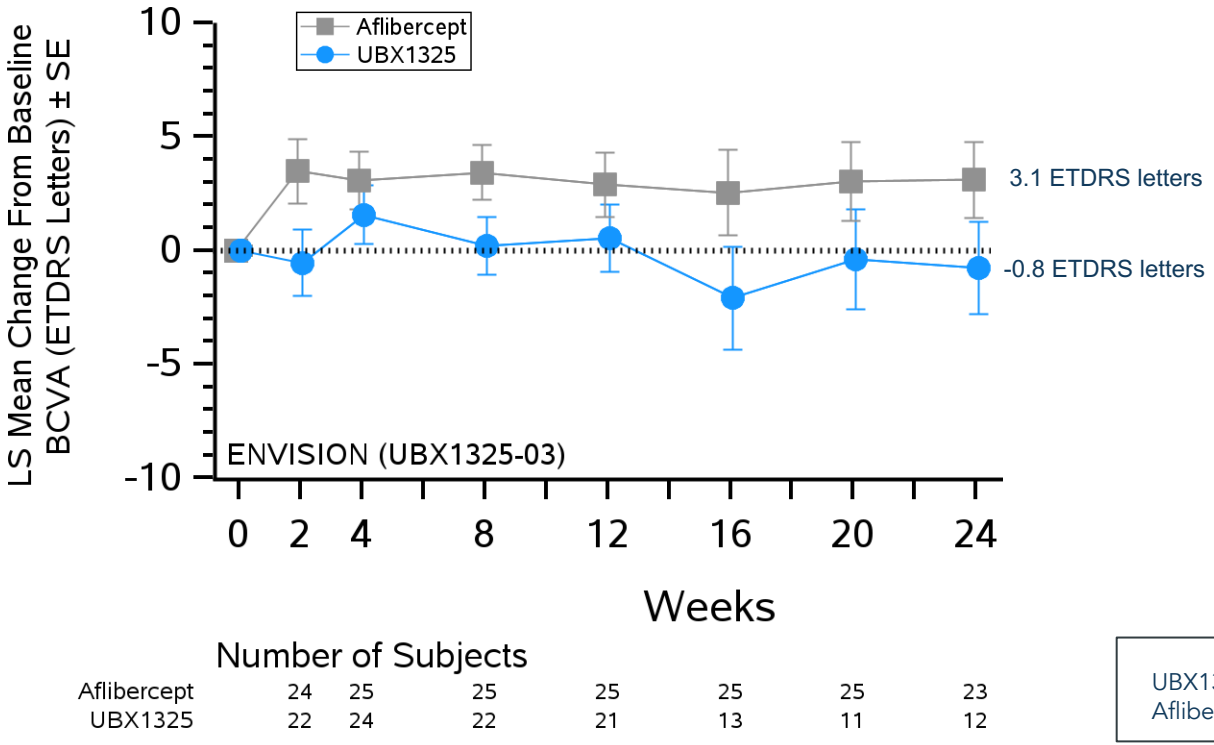
Change from baseline in BCVA excluding post-rescue data

UBX1325 Patients Maintained BCVA Through 24 Weeks; non-inferiority not met



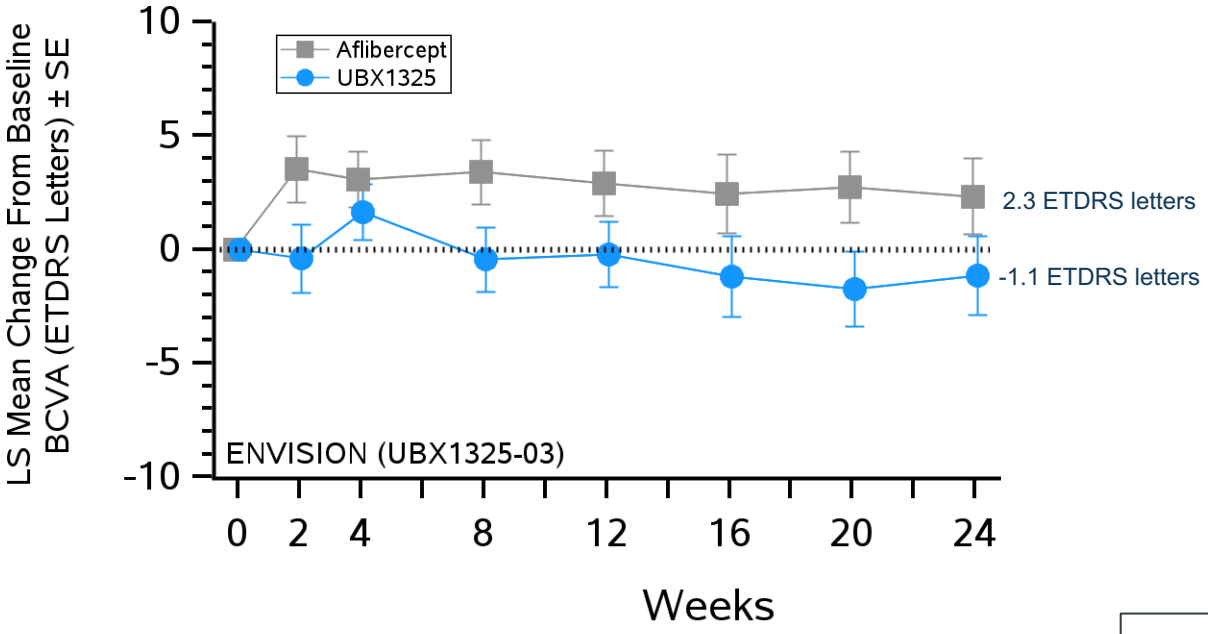
	Average CFBL Weeks 16 – 24 ETDRS letters (85% CI)
Aflibercept	2.9 (0.7 – 5.1)
UBX1325	-1.1 (-3.6 – 1.4)

UBX1325 dosed at 0 and 4 weeks
Aflibercept dosed at 0, 8, and 16 weeks

Source: f_14_2_1_1_a; t_14_2_1_1

Change from baseline in BCVA including post-rescue data

UBX1325 patients maintained BCVA through 24 Weeks



	Average CFBL Weeks 16 – 24 ETDRS letters (85% CI)
Aflibercept	2.5 (0.5 – 4.5)
UBX1325	-1.4 (-3.4 – 0.7)

UBX1325 dosed at 0 and 4 weeks
Aflibercept dosed at 0, 8, and 16 weeks

Source: f_14_2_1_2_a; t_14_2_1_2

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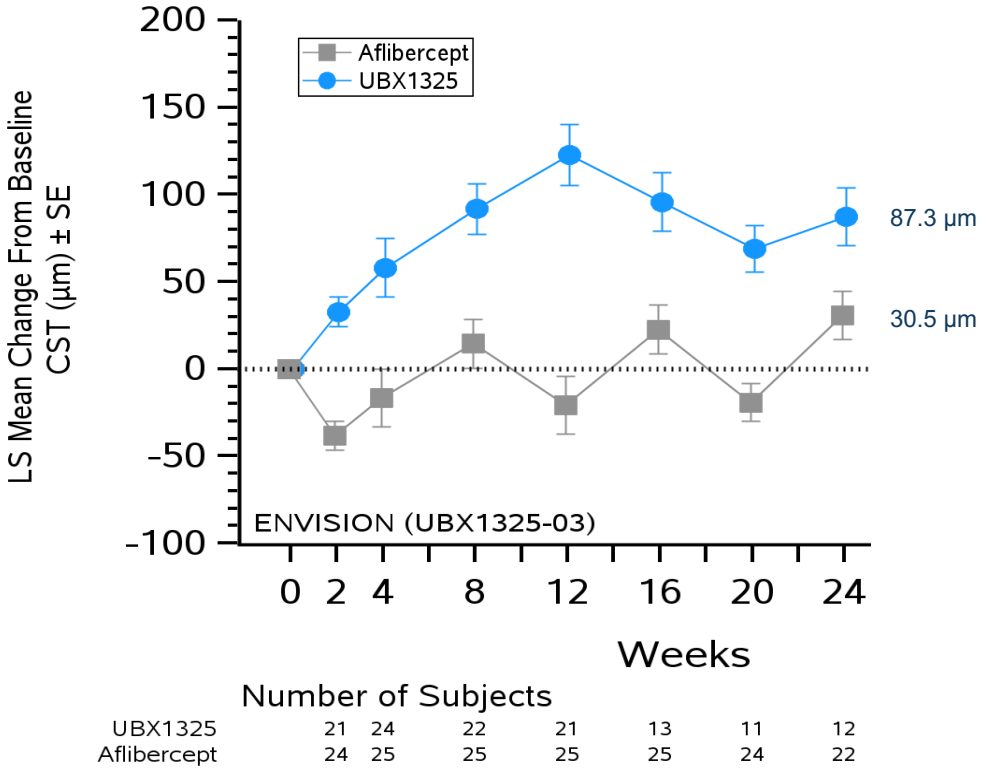
Change from baseline in CST excluding post-rescue data

Delayed impact on CST is consistent with potential time-course for senolytic mechanism to exert effect



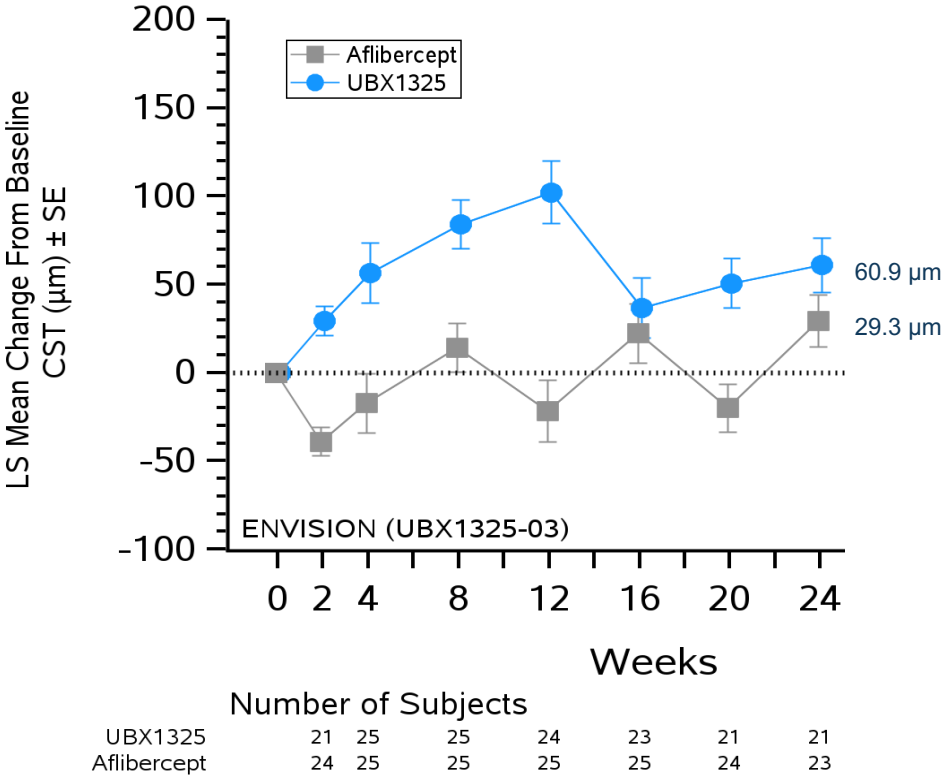
	Average CFBL Weeks 16 – 24 µm (85% CI)
Aflibercept	11.3 (-4.9 – 27.4)
UBX1325	84.0 (65.8 – 102.3)

UBX1325 dosed at 0 and 4 weeks
Aflibercept dosed at 0, 8, and 16 weeks

Source: f_14_2_1_3

Change from baseline in CST including post-rescue data

Anti-VEGF rescue appears to improve CST in UBX1325-treated patients



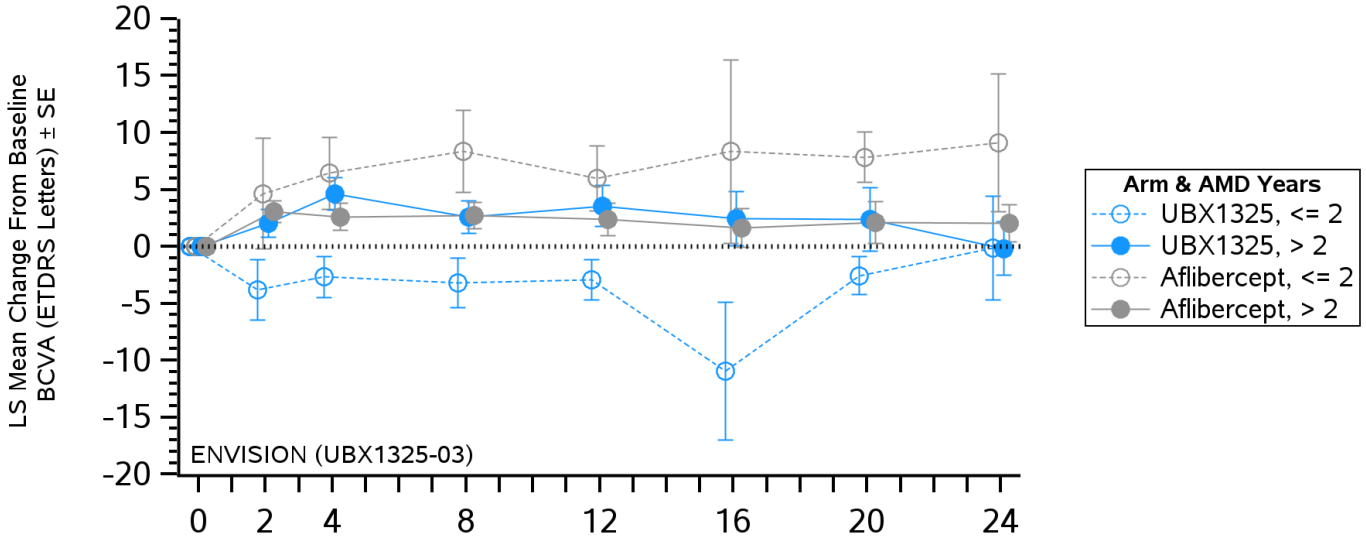
	Average CFBL Weeks 16 – 24 µm (85% CI)
Aflibercept	10.5 (-7.0 – 28.1)
UBX1325	49.4 (31.4 – 67.3)

UBX1325 dosed at 0 and 4 weeks
Aflibercept dosed at 0, 8, and 16 weeks

Source: f_14_2_1_4

Impact of AMD diagnosis duration on BCVA response *excluding* post-rescue data

*Patients with AMD diagnosis over two years may show stronger treatment effect with UBX1325**



Number of Subjects

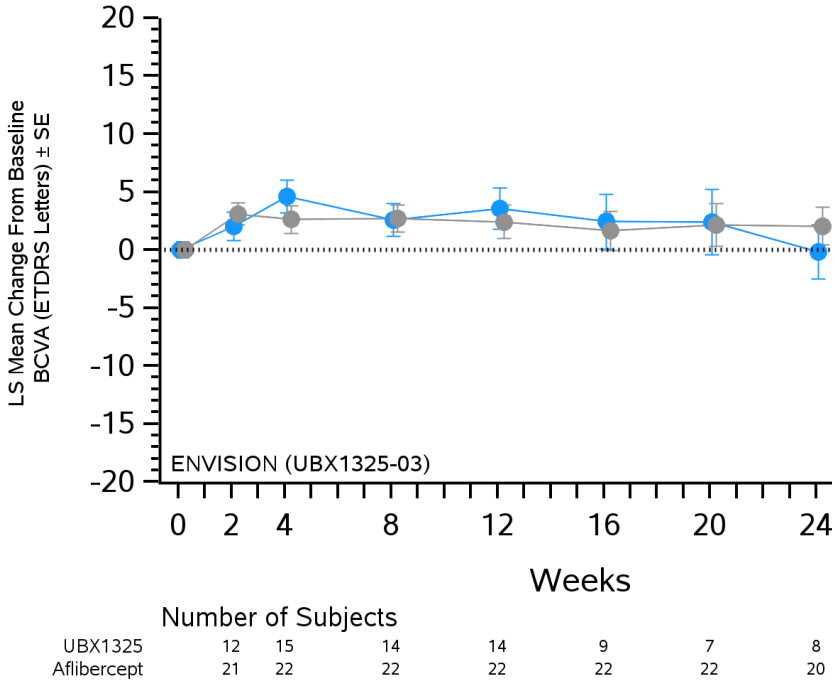
UBX1325, <= 2	10	9	8	7	4	4	4
UBX1325, > 2	12	15	14	14	9	7	8
Aflibercept, <= 2	3	3	3	3	3	3	3
Aflibercept, > 2	21	22	22	22	22	22	20

UBX1325 dosed at 0 and 4 weeks
Aflibercept dosed at 0, 8, and 16 weeks

* *Post hoc* analysis expanding on *a priori* hypothesis

Source: f_14_2_3_17

BCVA change in patients with wAMD diagnosis >2 years excluding post-rescue data is similar between UBX1325 and aflibercept-treated patients*



	Average CFBL Weeks 16 – 24 ETDRS letters (85% CI)
Aflibercept	1.9 (-0.2 – 4.0)
UBX1325	1.6 (-1.3 – 4.4)

UBX1325 dosed at 0 and 4 weeks
Aflibercept dosed at 0, 8, and 16 weeks

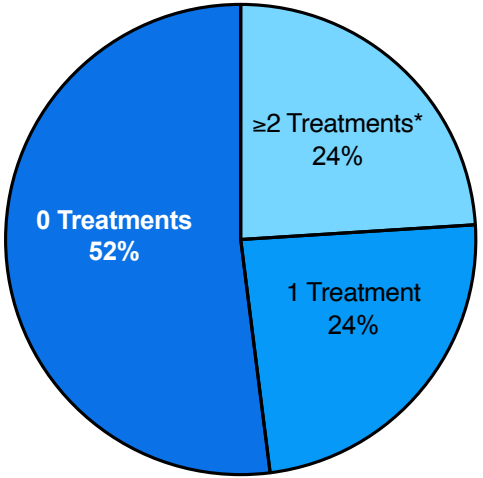
* *Post hoc* analysis expanding on *a priori* hypothesis

Source: f_14_2_3_17; t_14_2_3_17

ENVISION: Durability of effect of UBX1325

Majority of patients went 24 weeks without requiring anti-VEGF treatments

of aVEGF Treatments over 24 Weeks

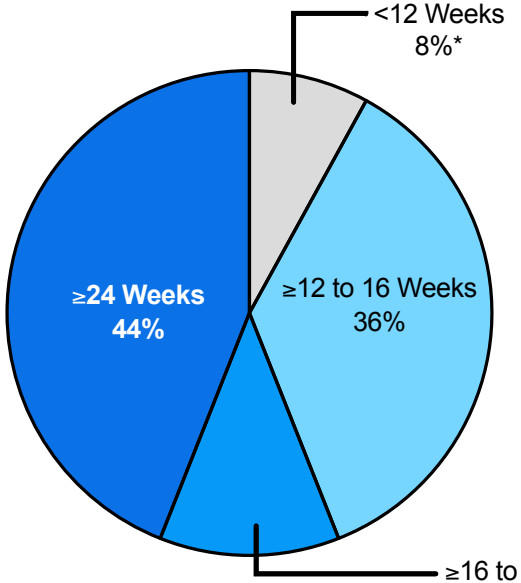


* Includes single patient misdosed with monthly aflibercept after first treatment

UBX1325
ITT Population

Treatment Criteria (either):
- Loss of 10 letters from any highest value (peak)
- Gain of 75 µm CST from any lowest value (trough

Maximal aVEGF-Free Interval



* Single patient misdosed with monthly aflibercept after first treatment

Total ≥16 weeks = 56%

UBX1325
ITT Population

Source: f_14_2_4_1; f_14_2_4_4_all_aflib_swimmer

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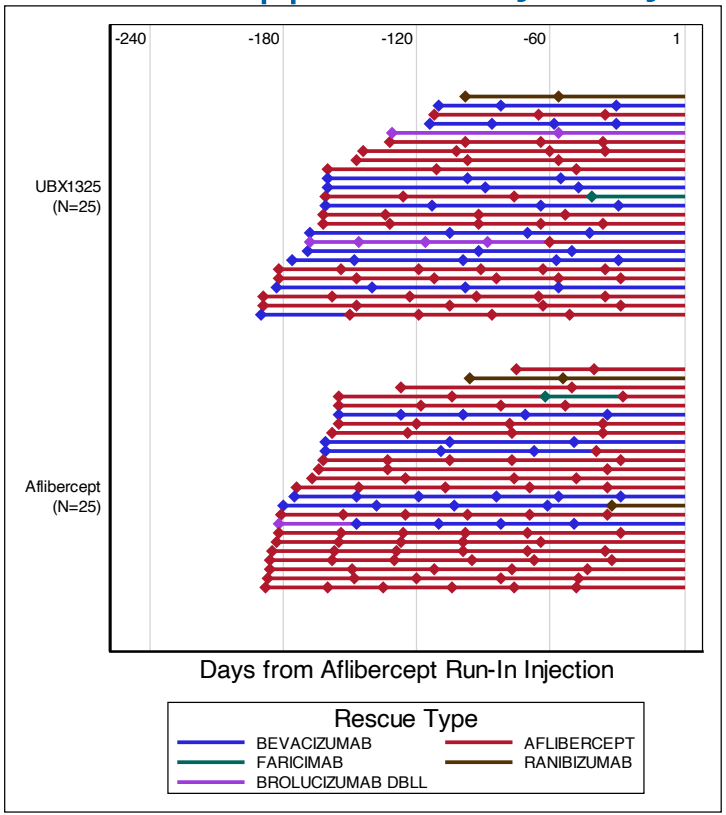
Patients in ENVISION were high-need patients with active disease requiring anti-VEGF treatment approximately every 6 weeks

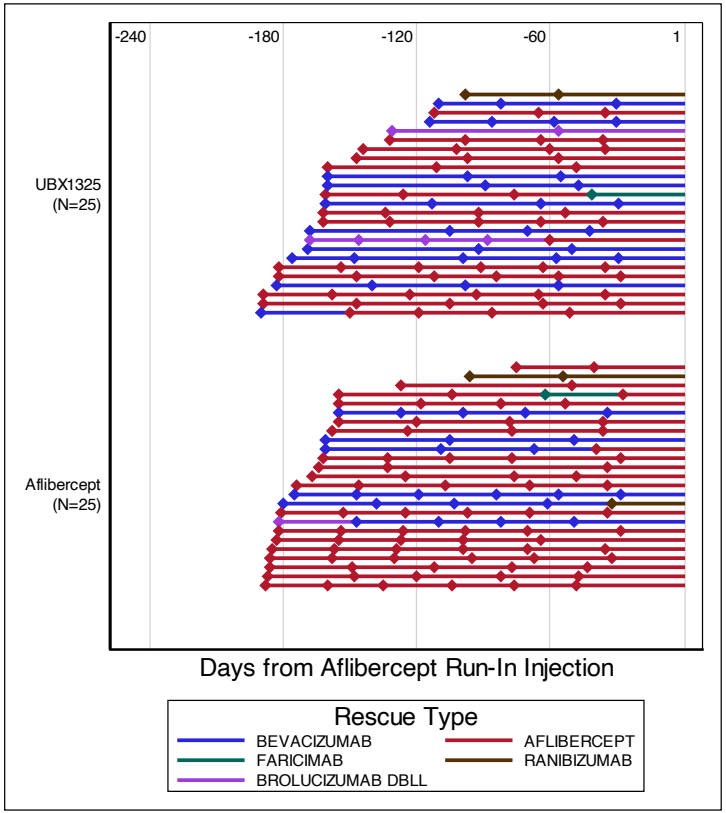


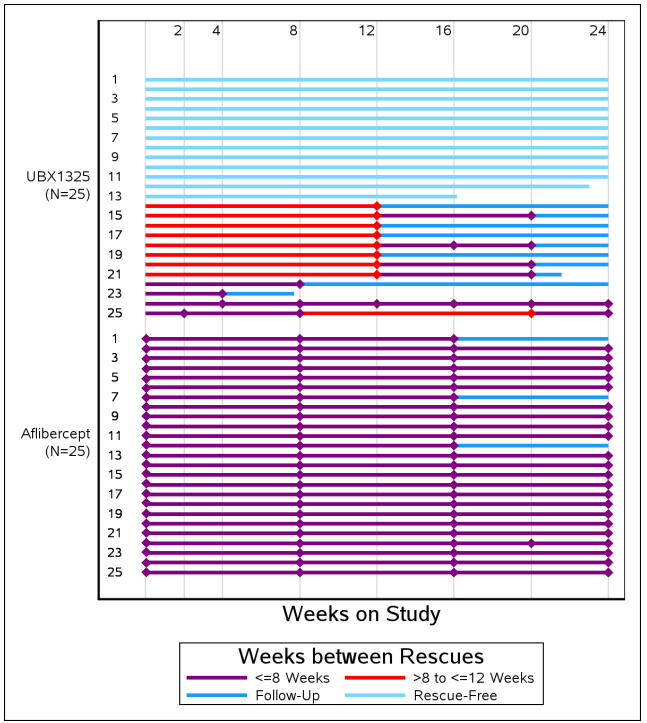
Avg prior aVEGF use from -190d: 4.0
CST 370.8 µm

Avg prior aVEGF use from -190d: 4.5
CST 367.5

Source: f_prior_avegf; f_correlation_tranch1_tables

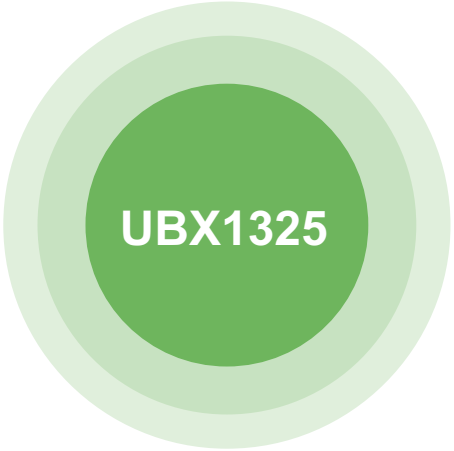
In UBX1325-treated patients 52% went without requiring anti-VEGF





Source: f_prior_avegf; f_correlation_tranch1_tables

Summary of UBX1325 ENVISION Phase 2 Study in nAMD



In the ENVISION Study, UBX1325:

- Was generally well tolerated with no intraocular inflammation
- Maintained visual acuity through 24 weeks in patients with active disease; there was a 3.5 letter gain in aflibercept arm at 2 weeks and non-inferiority to aflibercept was not met
- Allowed 52% of patients to avoid anti-VEGF treatment for at least 6 months
- May have greater treatment effect in patients with AMD diagnosis greater than two years based on post-hoc assessments

Part B of ENVISION study is exploring the potential benefit of UBX1325 in combination with anti-VEGF

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Summary and Development Plans for UBX1325

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UBX1325 maintained visual acuity in patients with ongoing active disease through 24 weeks with less than one letter mean decrease from baseline

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Additional Insights from Secondary Analysis

- A single dose of run-in aflibercept may not have been sufficient to get patients entering study to anti-VEGF BCVA plateau
- UBX1325 may be more effective in patients with longer disease duration who may have greater senescence burden

Company to share 48-week BEHOLD DME data in April and intends to initiate Phase 2b study in DME in second half of 2023

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Backup

Financials: Market Snapshot

$94.8 million cash, cash equivalents and marketable securities as of December 31, 2022

Focused capital allocation to extend cash runway into first quarter of 2024, funding UBX1325 Phase 2 proof-of-concept studies, 48-week long-term extension in DME and 48-week Part B study in nAMD