



# Genetic Medicines, Redefined

Corporate Presentation

May 2026

# Legal Disclaimer

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This Presentation contains forward looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this Presentation, including statements regarding our clinical development plans, strategy, future operations, future financial position, prospects, plans, objectives of management, and implied and express statements regarding the therapeutic potential, clinical benefits of and market potential of our product candidates are forward looking statements. The words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “target,” “should,” “would,” and similar expressions are intended to identify forward looking statements, although not all forward looking statements contain these identifying words. We may not actually achieve the plans, intentions, or expectations disclosed in these forward looking statements, and you should not place undue reliance on these forward looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward looking statements. In addition, the forward looking statements included in this Presentation represent our views as of the date of this Presentation. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward looking statements in the future, we specifically disclaim any obligation to do so. These forward looking statements should not be relied upon as representing our views as of any date subsequent to the date of this Presentation.

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# ***REDEFINING GENETIC MEDICINES:***











**Durable & disease-targeted therapeutics  
for large market diseases**

**Lead Product: 4D-150**

# Next Generation, Locally Delivered AAV Genetic Medicines Pipeline: Focused on Rapidly Advancing 4D-I50 to Global Commercialization

THERAPEUTIC AREA VECTOR	PRODUCT CANDIDATE	INDICATION	PRE-CLINICAL	PHASE I	PHASE 2	PIVOTAL	BLA FILING	PARTNERS
<b>RETINA</b> <b>R100</b>  Intravitreal	<b>4D-I50</b>	Wet AMD						 Otsuka APAC Rights  <b>4DMT:</b> <b>U.S./EU/ROW</b>
		DME						
	<b>4D-I75</b>	Geographic Atrophy						Open IND, evaluating strategic funding alternatives
<b>PULMONOLOGY</b> <b>A101</b>  Aerosol	<b>4D-710</b>	CF lung disease						 CYSTIC FIBROSIS FOUNDATION Fully Funded
	<b>4D-725</b>	AIAT lung disease						<b>CIRM</b> CALIFORNIA INSTITUTE FOR REGENERATIVE MEDICINE Fully Funded through IND

# 4DMT's Innovation is Redefining Genetic Medicines to Empower Broad Commercial Adoption

Characteristics:	Conventional Genetic Medicine Barriers	4DMT Medicines Target Profile
Diseases(s) Targeted	 Rare diseases	 <b>Large market diseases:</b> sustainable commercial markets
Route of Delivery & Safety Risk	 Complex (surgical, systemic), with challenging safety management	 <b>Simple delivery and best-in-class safety</b>
Pivotal Trial	 Negotiated & non-standard regulatory pathways	 <b>Global regulatory alignment</b>
Manufacturing	 High COGS	 <b>Low COGS</b>
Commercial Potential	 High prices, payer barriers & limited global potential	 <b>Low prices, fewer payer barriers &amp; broad global potential</b>



4D-150 

The text "4D-150" is in a large, blue, sans-serif font. To its right is a blue wireframe polyhedron icon, similar to the one in the logo, with a white line drawing of a syringe inside it.

## Potential Backbone Therapy for Treatment of Retinal Vascular Diseases

Wet Age-related Macular Degeneration (Wet AMD)

Diabetic Macular Edema (DME)



**4D-150**

**GOAL:** To transform the standard of care for large market retinal vascular diseases with a safe, in-office & durable lifelong backbone therapy

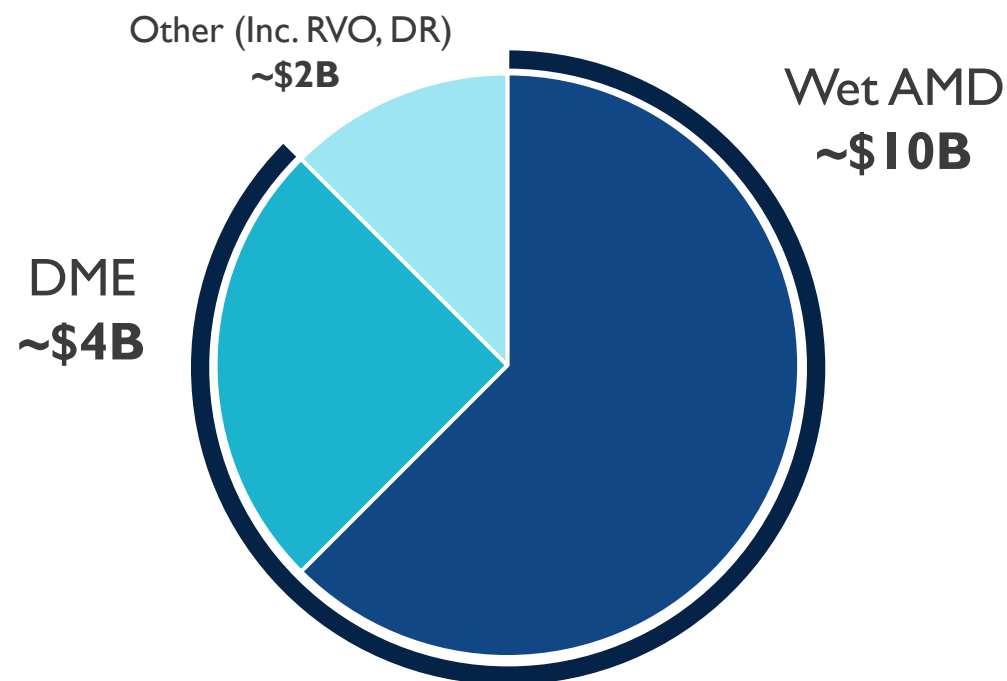
1. **Continuous disease control** enabled by **durable** retinal expression of **aflibercept**
2. **Global Phase 3 program** for Wet AMD & DME
3. **Paradigm-shifting durability** from incremental interval extension to potential **lifelong disease control & vision preservation**

# 4D-150 Potential to be Highly Disruptive in a Rapidly Growing, \$14B+ Market

## Prevalence (2025E)

- **Wet AMD:**
  - ~5M prevalence in U.S., Europe, Japan
  - ~300K new cases diagnosed annually
- **Diabetic Macular Edema (DME):**
  - ~4M prevalence in U.S., Europe & Japan
  - ~300K new cases diagnosed annually
- Top causes of **permanent vision loss**
- **Rapidly growing population driven by aging demographics**

## \$16B Global Branded Retinal Vascular Disease Anti-VEGF Market (2025E)

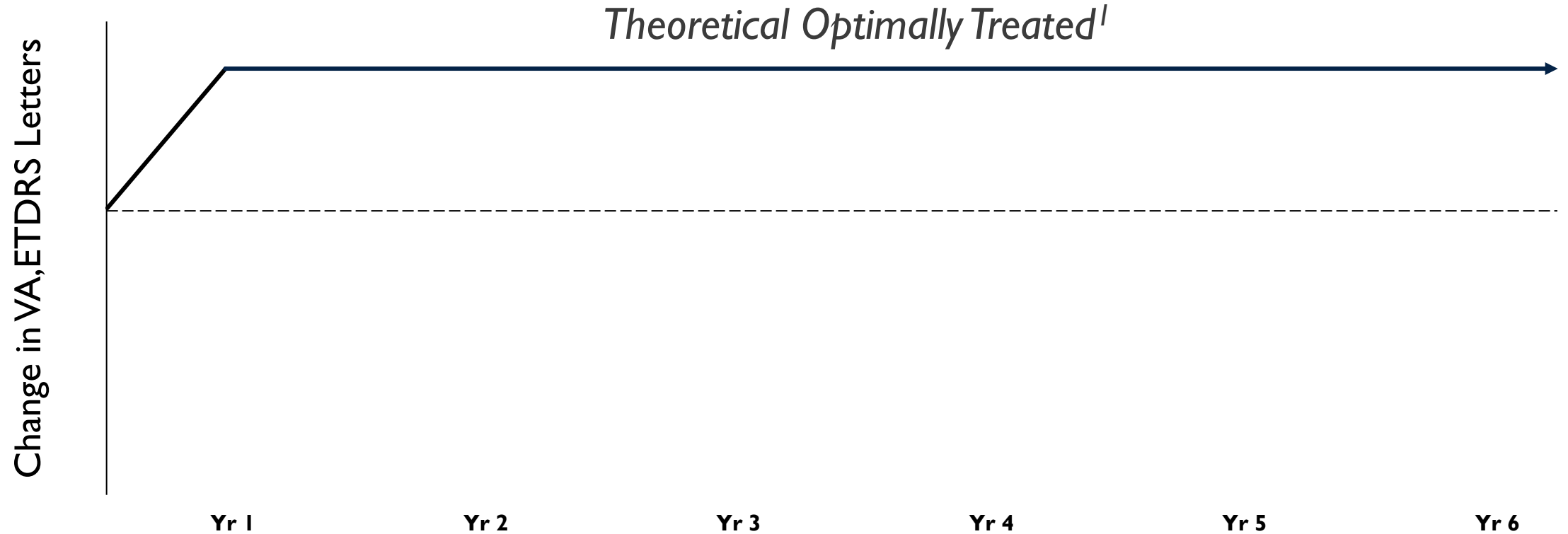
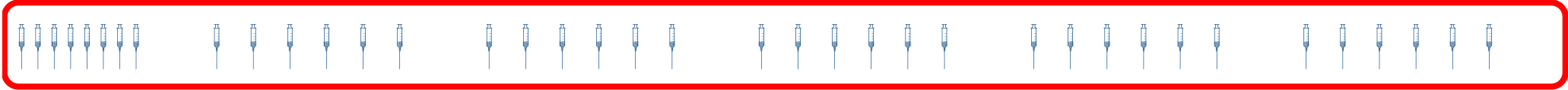


**Wet AMD + DME: ~\$14B**

Prevalence sourced from Marketscope Retina Market Report 2023. Anti-VEGF market sourced from GlobalData, GrandView Research.

# Lifelong Burdensome Bolus Anti-VEGF Injections Are Needed to Preserve Vision: ~30 Injections over 5 Years

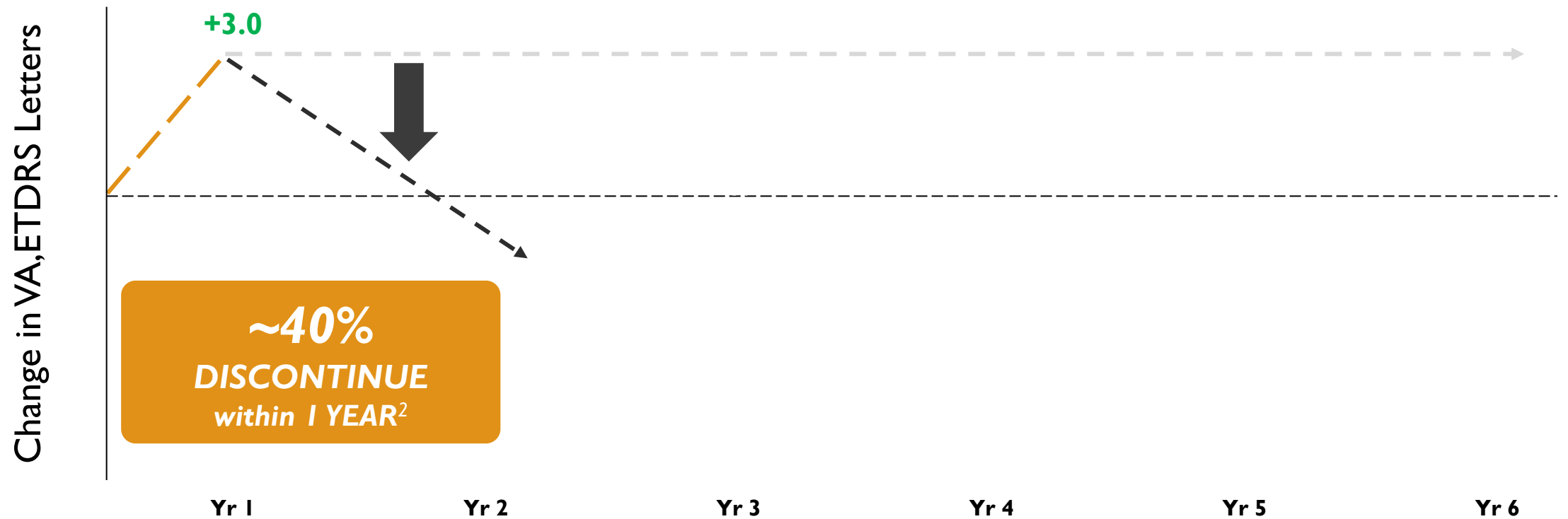
**LIFELONG**  
Bolus Anti-VEGF



1. Holz FG, et al. *British Journal of Ophthalmol* 2015;99:220-226. More visits and injections appeared to be correlated with more successful maintenance of visual acuity gains, including in SEVEN-UP (Seven Year Observational Update of Macular Degeneration Patients Post-MARINA/ANCHOR and HORIZON Trials),

# In Real World, Treatment Discontinuation is Common: Current Bolus Treatment Regimens are NOT Sustainable

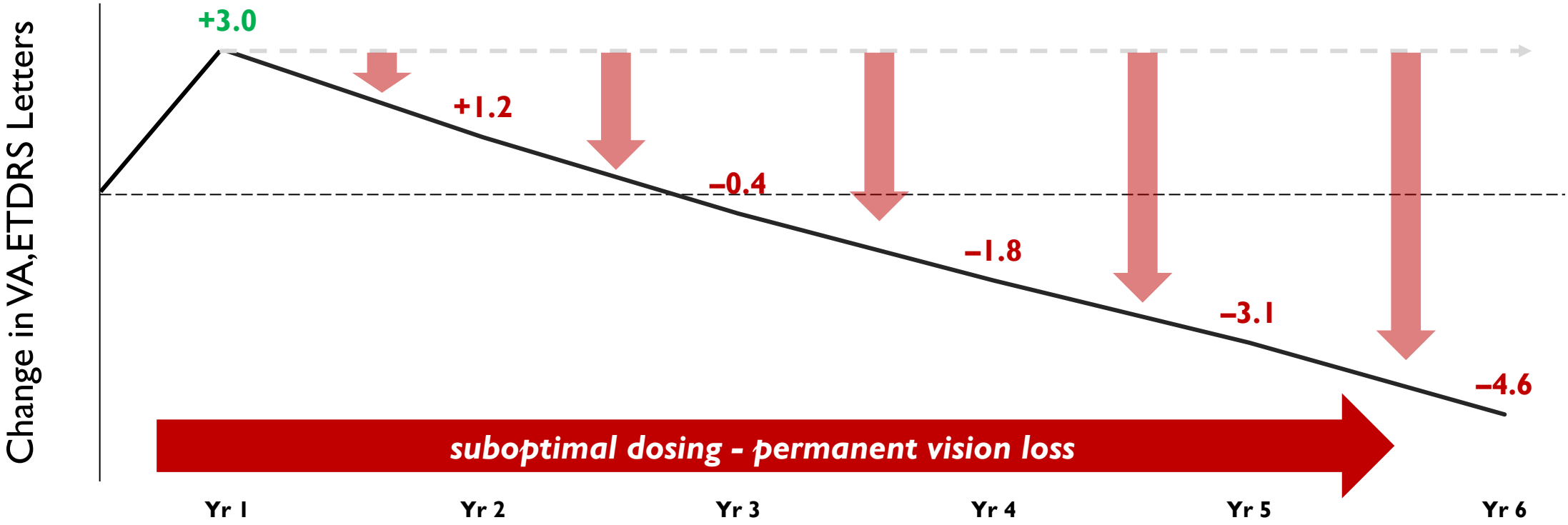
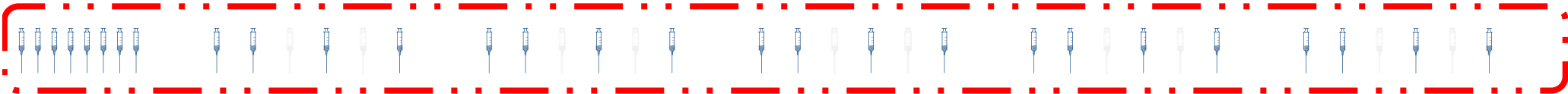
**LIFELONG**  
Bolus Anti-VEGF



1. Wykoff et al.: *Ophthalmol Sci.* 2023 Oct 31;4(2):100421.; n=135,384 at Yr 1; 6,878 at Yr 6. 2. Khanani AM, et al. *Ophthalmol Retina.* 2020;4(2):122-133.

# In Real World, Patients Remaining on Treatment: Inability to Maintain Burdensome Injection Regimen Leads to Unrelenting Vision Loss<sup>1</sup>

**LIFELONG**  
Bolus Anti-VEGF



1. Wykoff et al.: Ophthalmol Sci. 2023 Oct 31;4(2):100421.; n=135,384 at Yr 1; 6,878 at Yr 6

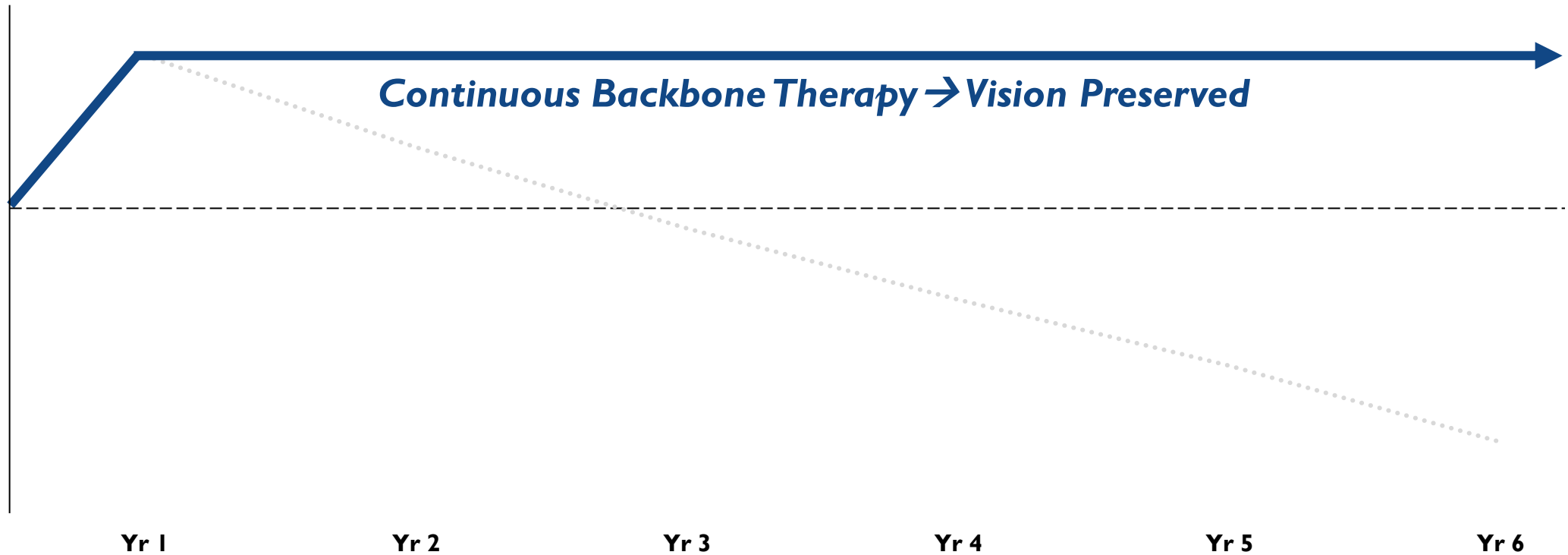
# Solving the Unmet Need: Continuous Backbone Treatment to Control Disease & Protect Vision Without Lifelong Burdensome Injections



**BACKBONE**  
Anti-VEGF



Change in VA, ETDRS Letters

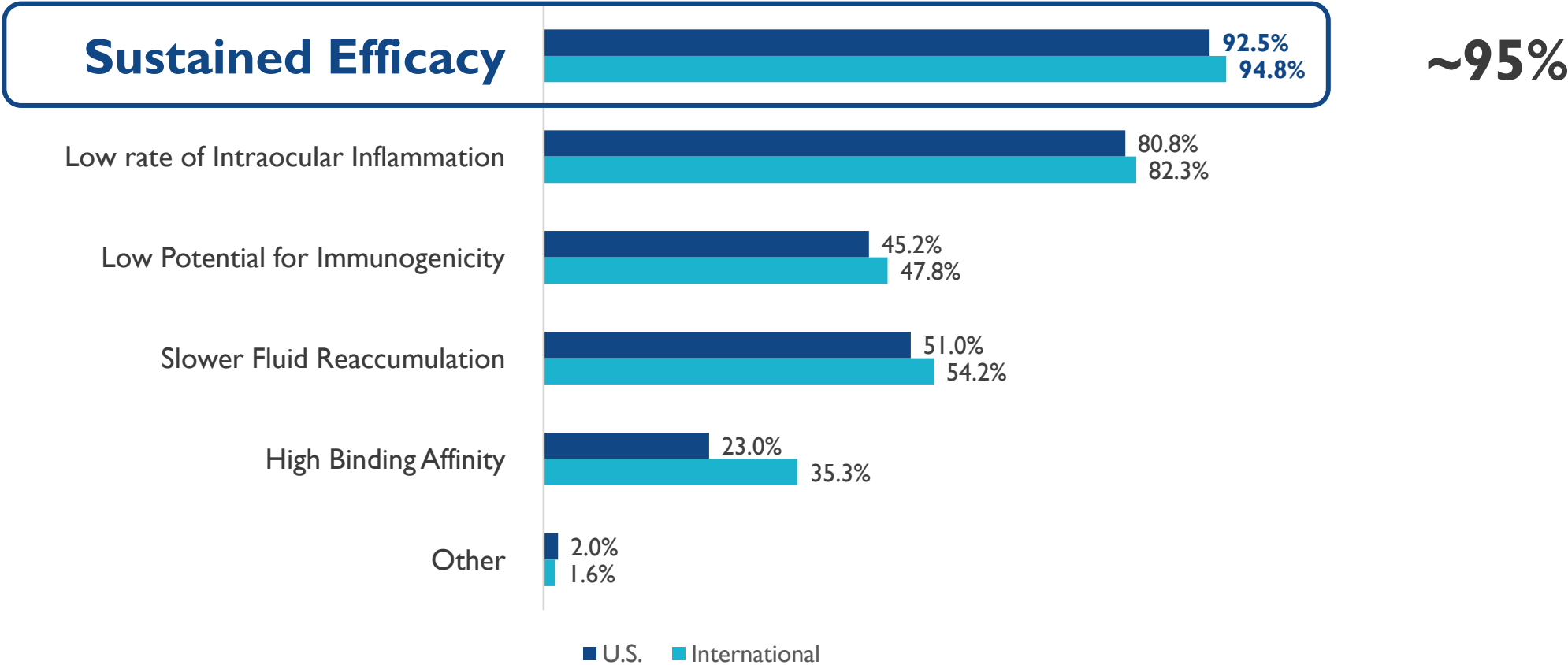


Wykoff et al.: Ophthalmol Sci. 2023 Oct 31;4(2):100421.; n=135,384 at Yr 1; 6,878 at Yr 6

# Durability Remains the Priority for Retina Doctors & Patients: Long-term Disease Control is Still the #1 Unmet Need

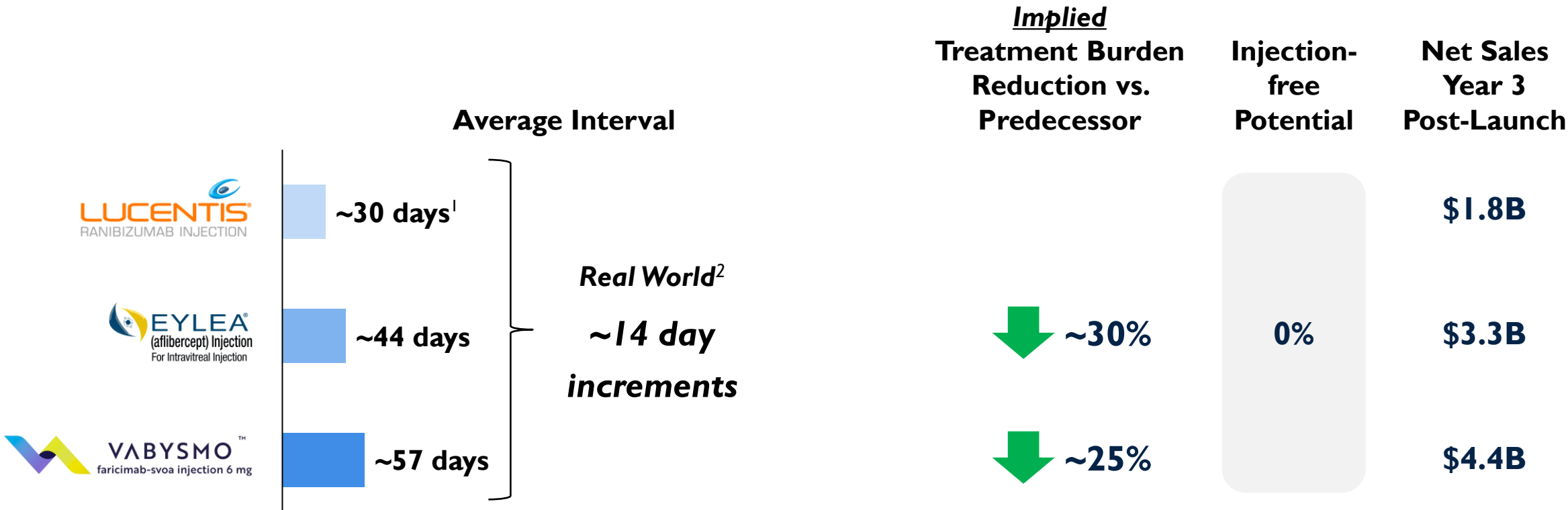
## ASRS Preferences and Trends (PAT) Survey 2025

Which factors are most important to you when selecting anti-VEGF agent?



Hahn P, ed. ASRS 2025 Preferences and Trends Membership Survey. Chicago, IL. American Society of Retina Specialists; 2025

# Despite Incremental Durability Improvements, Eylea & Vabysmo Had Rapid, Blockbuster Commercial Success

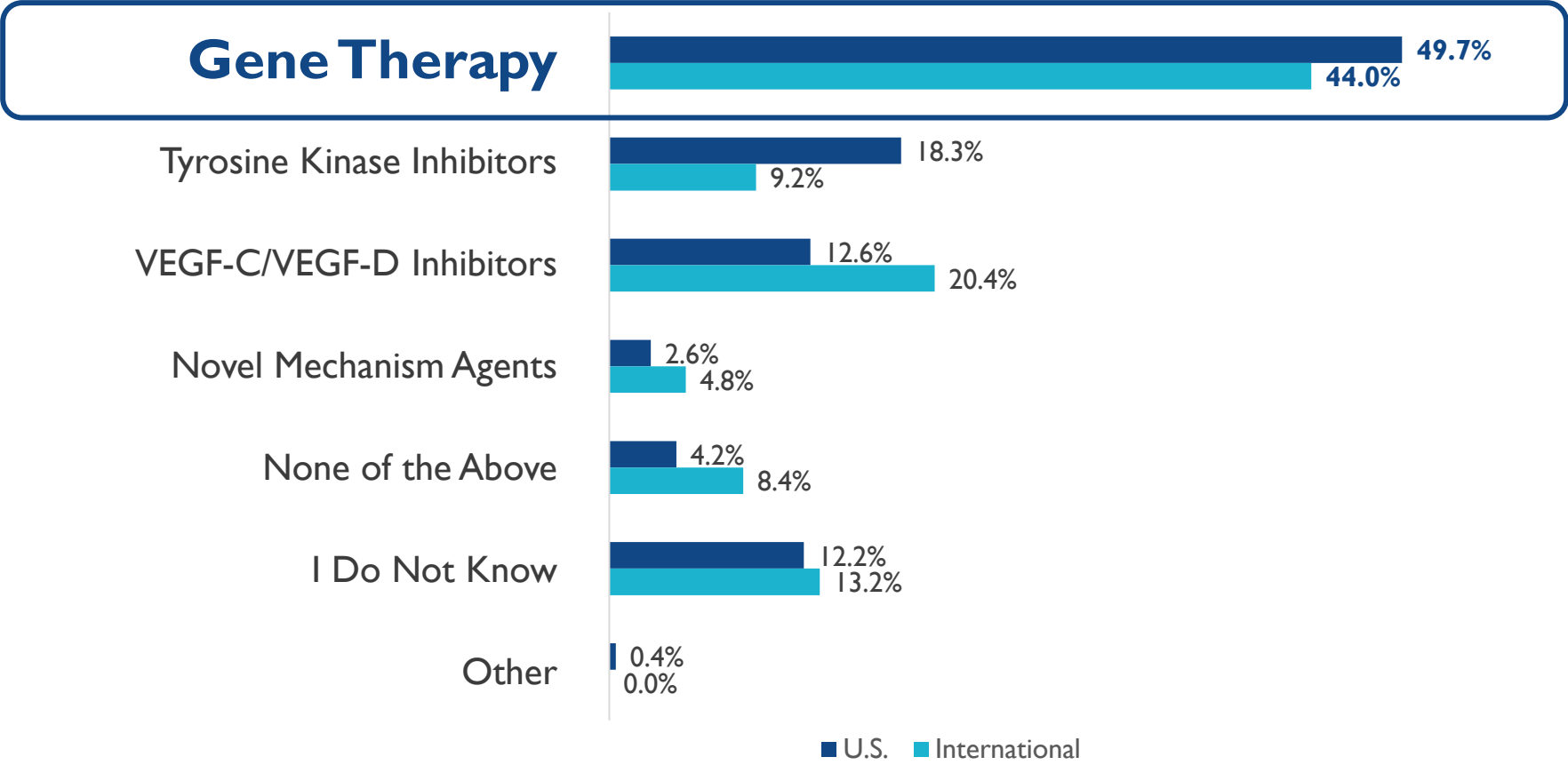


1. Lucentis package insert; 2. Real-World Evidence (TRUCKEE Study). Injection Burden Reduction vs. prior therapy implied based on difference calculated annual injections based on TRUCKEE durability.

# Gene Therapy is the Most Exciting Pipeline Treatment: Highest Potential to Achieve True Continuous Disease Control

## ASRS Preferences and Trends (PAT) Survey 2025

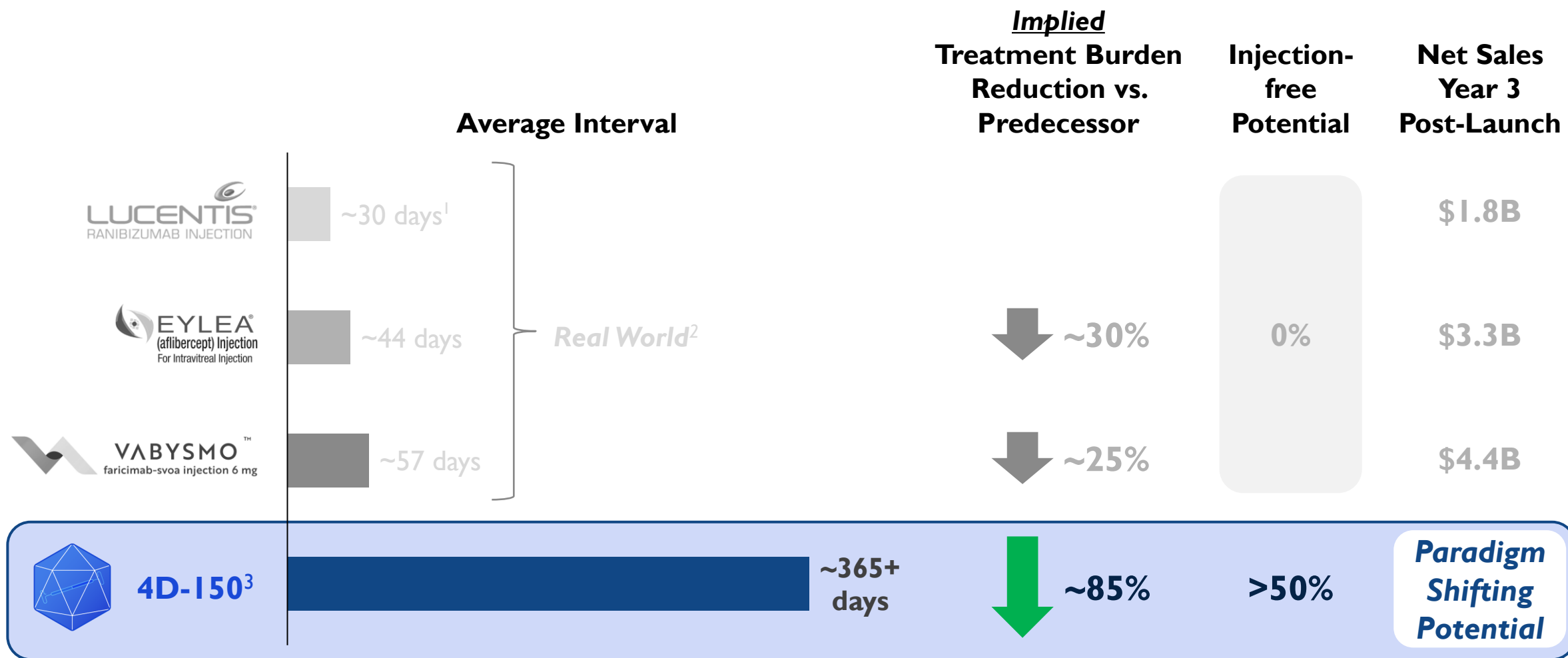
Which pipeline treatment for wet AMD excites you most?



~50%

Hahn P, ed. ASRS 2025 Preferences and Trends Membership Survey. Chicago, IL. American Society of Retina Specialists; 2025

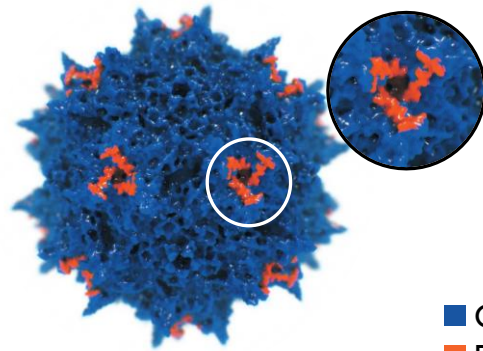
# 4D-I50 Durability Profile would be Paradigm-Shifting



1. Lucentis package insert; 2. Real-World Evidence (TRUCKEE Study). Injection Burden Reduction vs. prior therapy implied based on difference calculated annual injections based on TRUCKEE durability. 3. 4DMT PRISM Phase 2b data, average interval based on 1.0 mean supplemental injections through 1 year in 3E10 vg/eye arm.

# 4D-I50 is Designed as Backbone Therapy to Provide Safe & Continuous Disease Control with Lifelong Anti-VEGF Expression Potential

## R100 Capsid



■ Capsid base  
■ Peptide insertions

- ✓ Robust delivery to multiple retinal layers
- ✓ Low doses and minimal inflammation potential



## Anti-VEGF Transgenes



Aflibercept  
(VEGF Trap)

- ✓ >64 million doses administered WW since launch\*



VEGF-C RNAi

- ✓ Enhanced aflibercept expression in preclinical studies<sup>1</sup>

## 4D-I50 Backbone Therapy Target Profile

Single, in-office IVT Injection

Predictable prophylactic steroid eyedrop taper

Potential for lifelong durability<sup>2</sup>

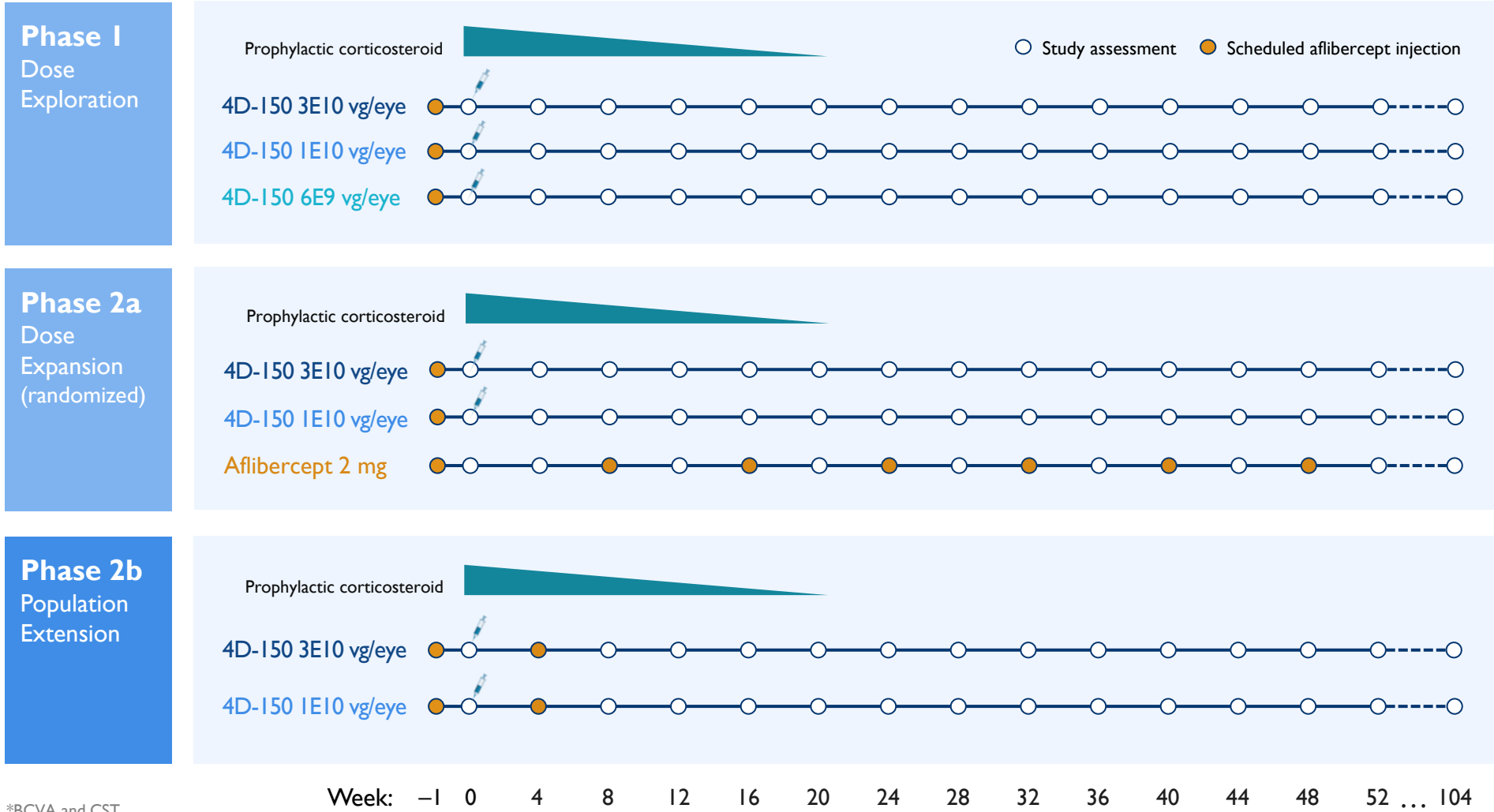
\*Regeneron data on file. 1. Calton et al. *Invest Ophthalmol Vis Sci* 2024;65:1. 2. Based on 4DMT and other AAV-based retinal gene therapies.

# 4D-I50 Wet AMD Development Program: Comprehensive Strategy Studying Increasingly Early-Stage Populations



\*Phase 3 dose. \*\*≤0.5 years with previous treatment.

# Wet AMD Phase 1/2 Schemas



## Supplemental Injection Criteria

**Reference Values\***

Average of Week -1 and Day 1

**Disease Activity**

BCVA: Loss of  $\geq 10$  letters attributable to retinal fluid,  
OR

CST: Increase of  $\geq 75 \mu\text{m}$   
OR

New vision-threatening hemorrhage due to wet AMD per investigator

\*BCVA and CST.  
CST, central subfield thickness; BCVA, best corrected visual acuity

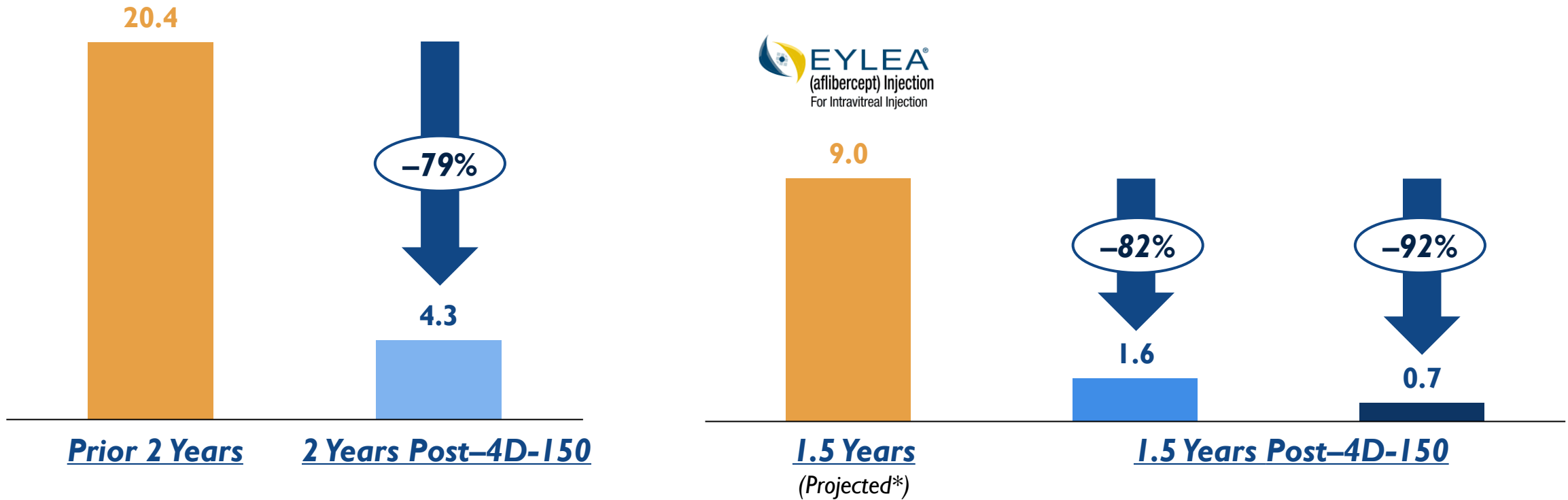
# 4D-150 Demonstrated Transformative Treatment Burden Reduction Through 1.5 to 2 Years in Multiple Wet AMD Patient Populations

**Phase 3 Dose (3E10 vg/eye): Mean Supplemental Anti-VEGF Injections Required**

Severe, Recalcitrant

Broad Disease

Recently Diagnosed



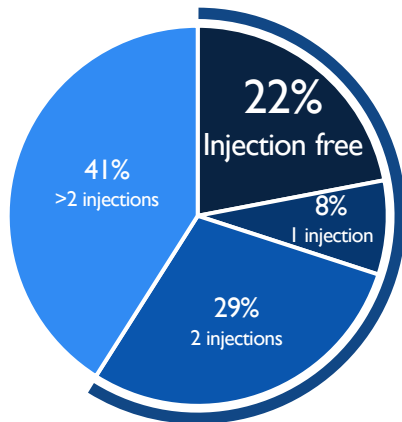
Data cutoff of August 22, 2025. \*Projection based on last loading dose in Phase 2b and approved dosing schedule for aflibercept in wet AMD.

# 4D-I50 Demonstrated Transformative Treatment Burden Reduction Through 1.5 to 2 Years in Multiple Wet AMD Patient Populations

## PRISM Phase I/2

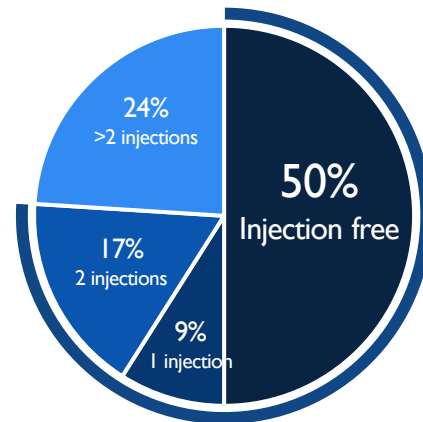
Phase 3 Dose (3E10 vg/eye): Supplemental Anti-VEGF Injections Post-4D-I50

Severe, Recalcitrant



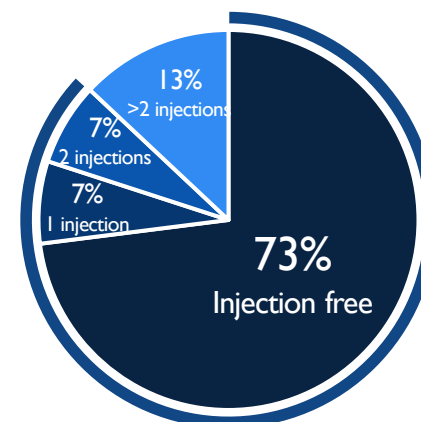
**59%**  
≤2 injections  
over 2 years

Broad



**76%**  
≤2 injections  
over 1.5 years

Recently Diagnosed



**87%**  
≤2 injections  
over 1.5 years

4FRONT-1  
4FRONT-2

Phase 3

Treatment Naïve &  
Recently Diagnosed

**Topline 1-year data  
expected:**

**4FRONT-1 H1 2027**

**4FRONT-2 H2 2027**

Data cutoff of August 22, 2025.

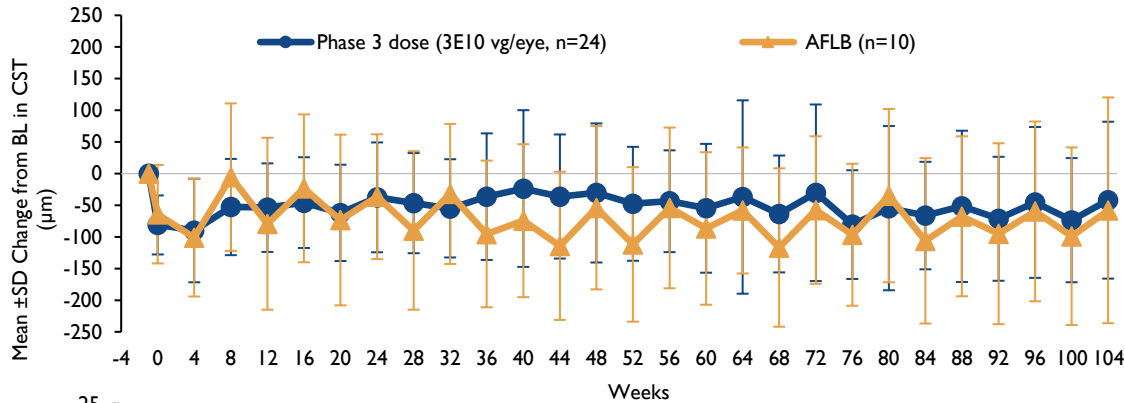
# Results Through 2 Years Post-4D-150 in a Severe, Recalcitrant Population

## Visual Acuity & Anatomy Comparable to Q8W AFLB 2mg with Robust Reduction in Treatment Burden

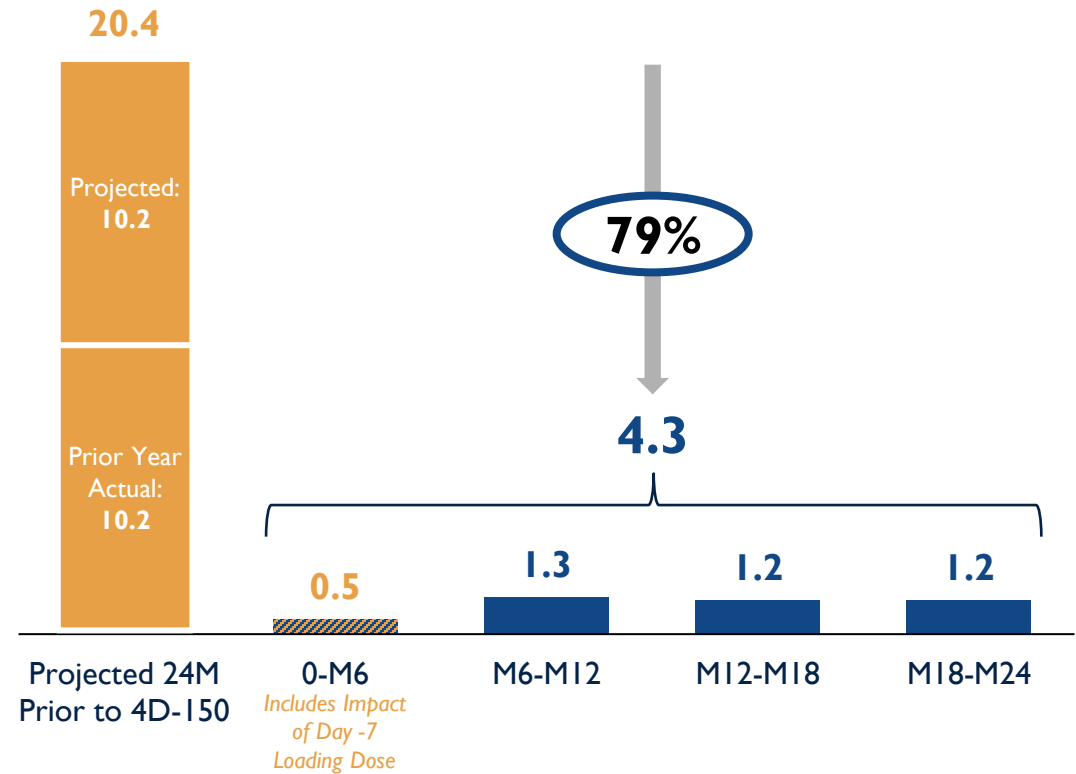
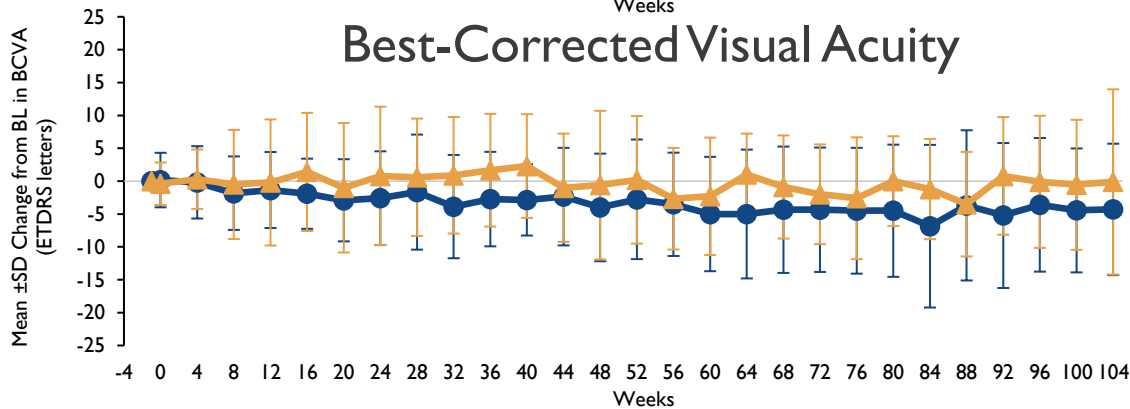
### Anatomy & Visual Acuity 4D-150 vs. Aflibercept

### Treatment Burden Reduction Post-4D-150 (Phase 3 Dose): 6-month Segments

#### Central Subfield Thickness



#### Best-Corrected Visual Acuity

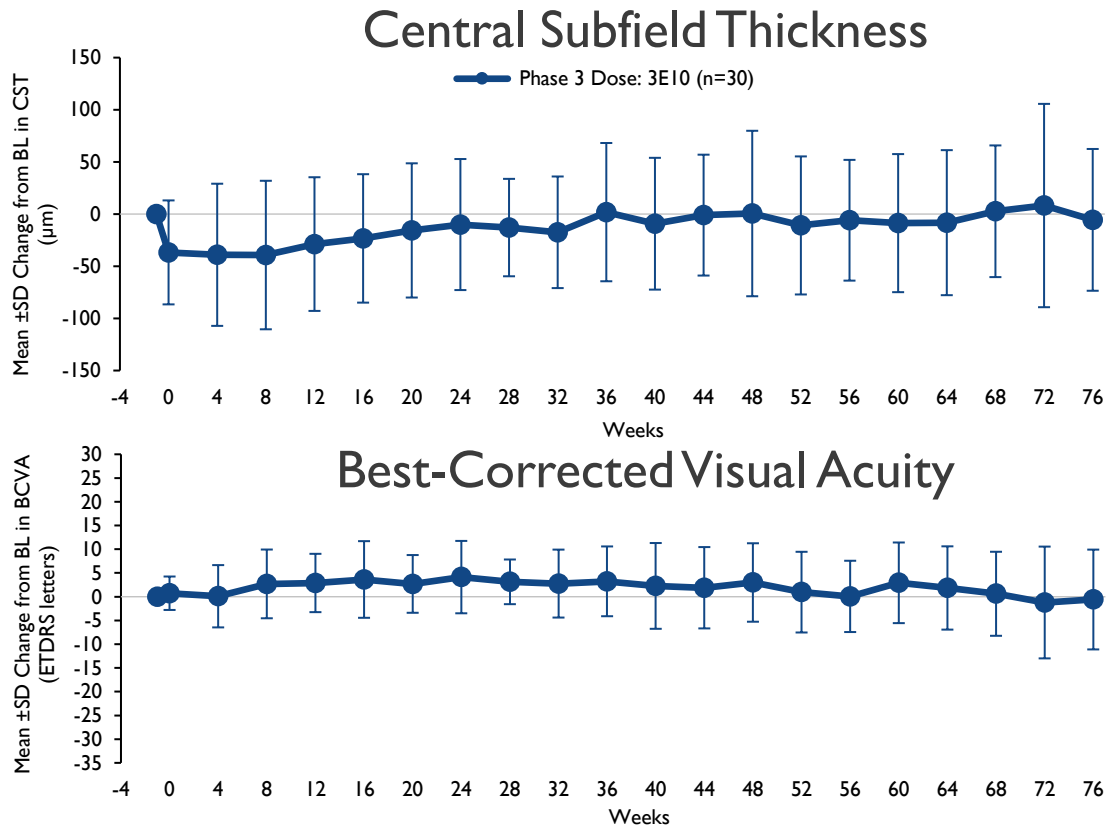


Data cutoff of August 22, 2025.  
 CST, central subfield thickness; BCVA, best corrected visual acuity; ETDRS, Early Treatment Diabetic Retinopathy Study; AFLB, aflibercept.

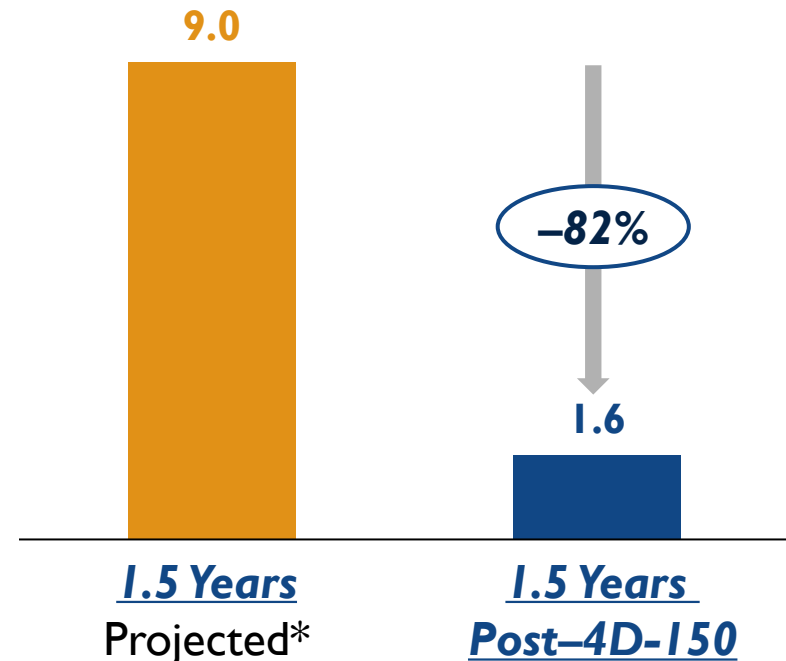
# Results Through 1.5 Years Post-4D-150 in a Broad Population

## Visual Acuity & Anatomy Stable With Robust Reduction in Treatment Burden

### Anatomy & Visual Acuity Post-4D-150



### Treatment Burden Post-4D-150



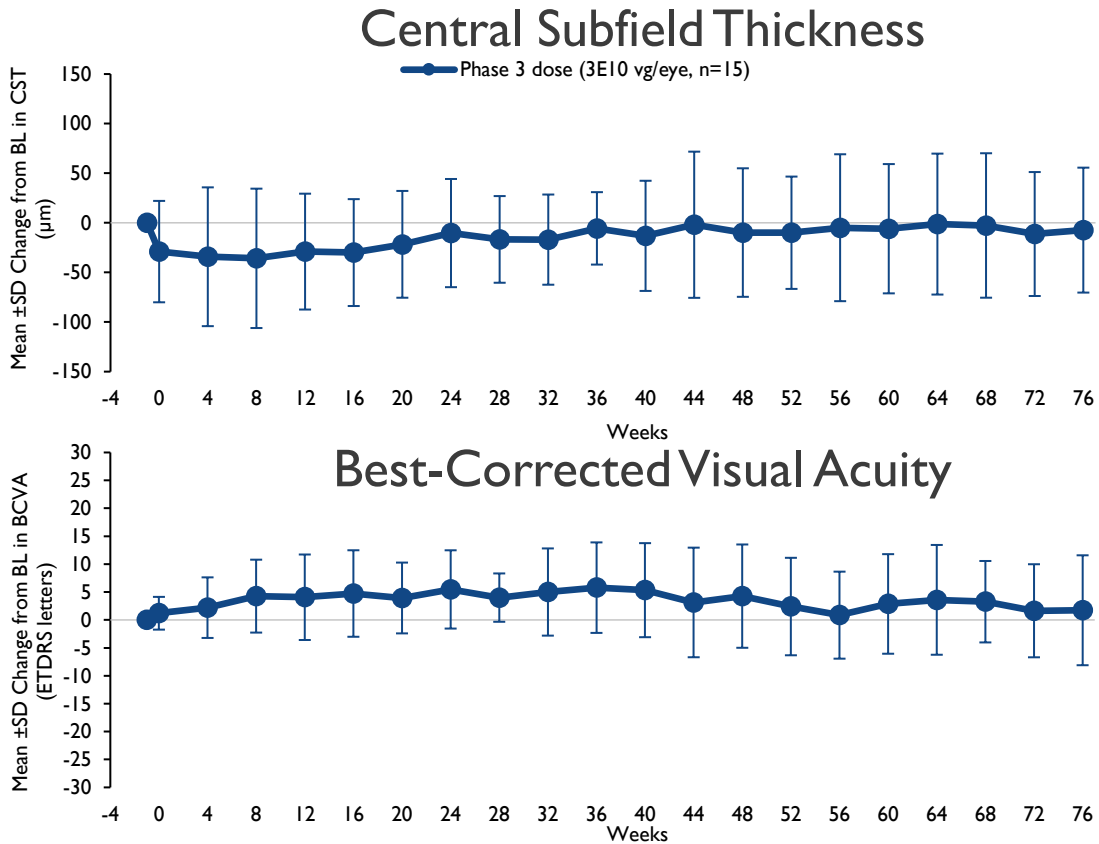
Data cutoff of August 22, 2025.

CST, central subfield thickness; BCVA, best corrected visual acuity; ETDRS, Early Treatment Diabetic Retinopathy Study. \*Projection based on last loading dose in Phase 2b and approved dosing schedule for aflibercept in wet AMD.

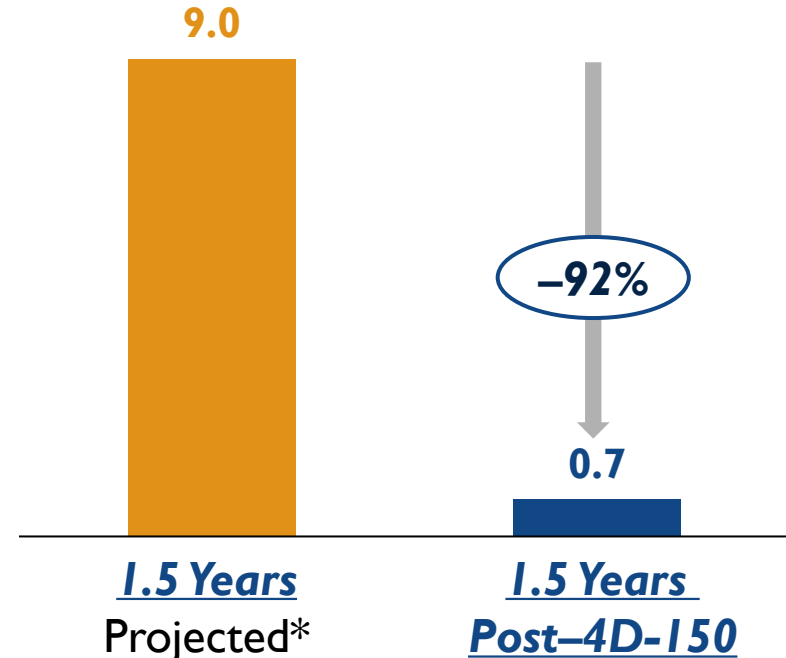
# Results Through 1.5 Years Post-4D-I50 in Recently Diagnosed Population

## Visual Acuity & Anatomy Stable With Robust Reduction in Treatment Burden

### Anatomy & Visual Acuity Post-4D-I50



### Treatment Burden Post-4D-I50

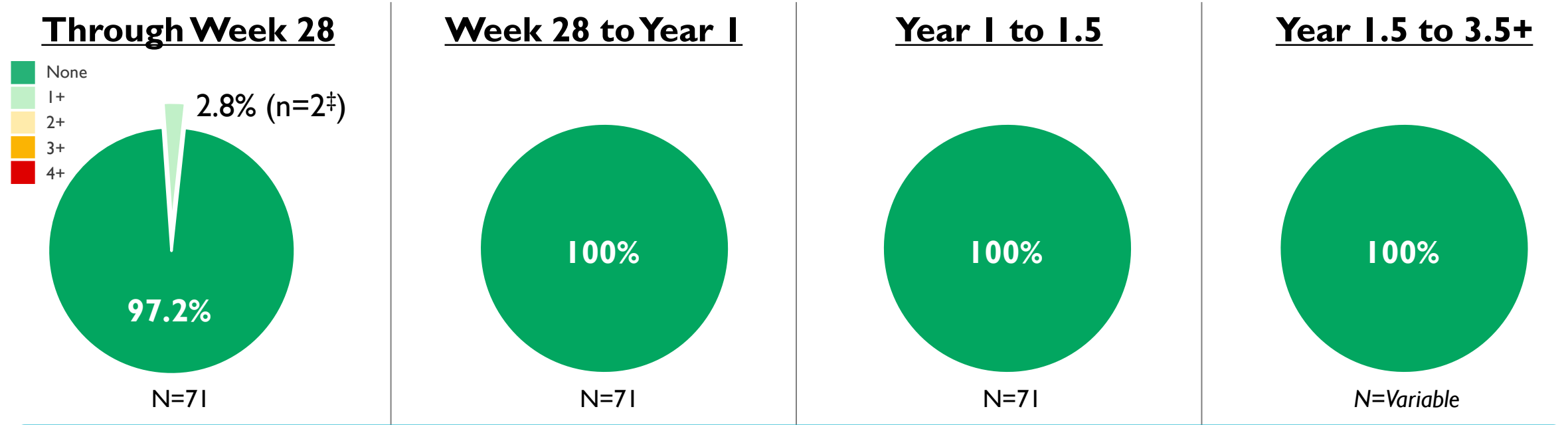


Data cutoff of August 22, 2025.

CST, central subfield thickness; BCVA, best corrected visual acuity; ETDRS, Early Treatment Diabetic Retinopathy Study. \*Projection based on last loading dose in Phase 2b and approved dosing schedule for aflibercept in wet AMD.

# Wet AMD: Consistent and Predictable Safety To-date in Phase 1/2

Highest SUN/NEI Score<sup>†</sup> with 4D-150 Phase 3 Dose, 3E10 vg/eye (N=71)



**99% (70 of 71)** completed prophylactic steroid taper on schedule and remain completely off steroids

Prophylactic corticosteroid (~20 weeks)

Data cutoff of August 22, 2025.  
<sup>†</sup>4D-150-related. <sup>‡</sup>1+ VC cell in 1 patient at Week 4 & 1 patient Week 28.  
 NEI, National Eye Institute; SUN, Standardization of Uveitis Nomenclature.

# Global 4FRONT Phase 3 Wet AMD Program Summary

**Primary Objective** | Noninferiority in mean change in BCVA from baseline to Week 52 for a single injection of 4D-I50 vs. aflibercept 2mg (Q8W) after 3 loading doses



**4FRONT-1**   
**North America**  
N=480  
*100% Treatment naïve*

✓ **Enrollment completed**



**4FRONT-2**   
**Global**  
N=480  
*60% Treatment naïve*  
*Up to 40% Previously treated\**

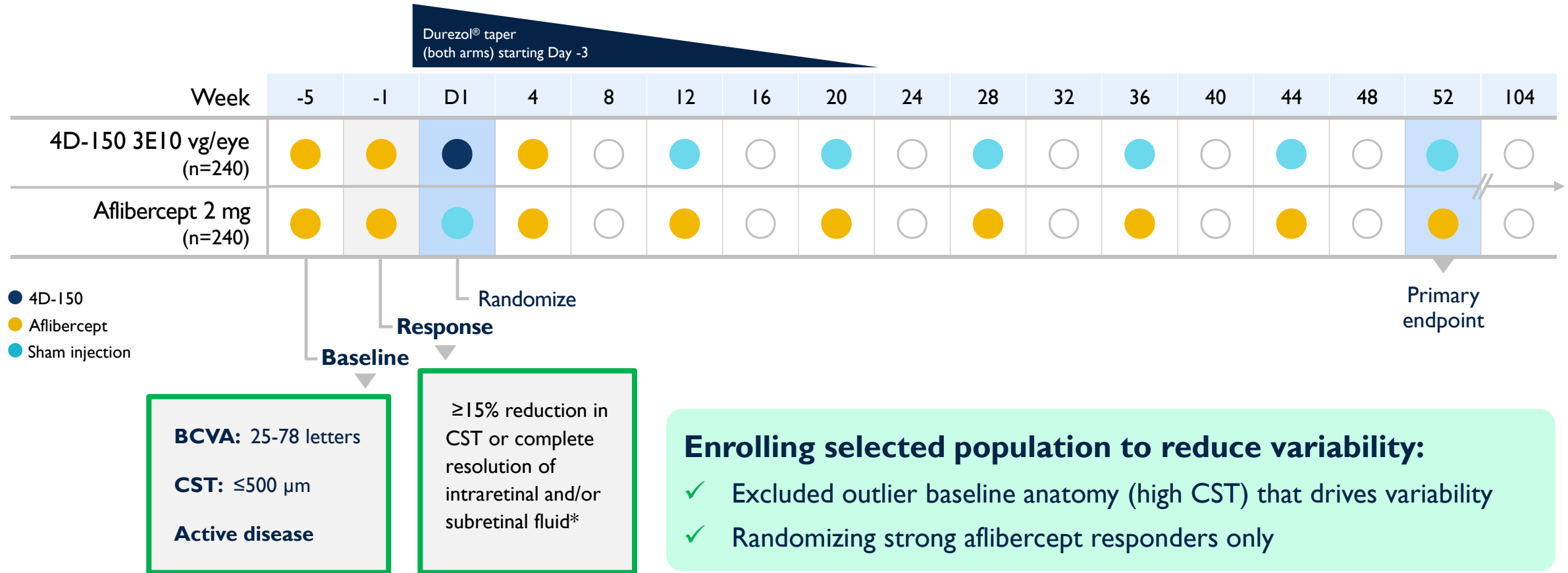
**Enrolling**

- ✓ **Regulatory alignment:**
  - FDA RMAT designation
  - EMA PRIME designation
  - Japan PMDA interactions
- ✓ **Robustly powered for global approval standards (~4 letter noninferiority margin)**

\*1-4 prior injections, diagnosed within 6 months.  
RMAT, Regenerative Medicine Advanced Therapy; PRIME, Priority Medicines; PMDA, Pharmaceuticals and Medical Devices Agency.

# Global 4FRONT Phase 3 Trial Design: Enrolling an Optimized Population

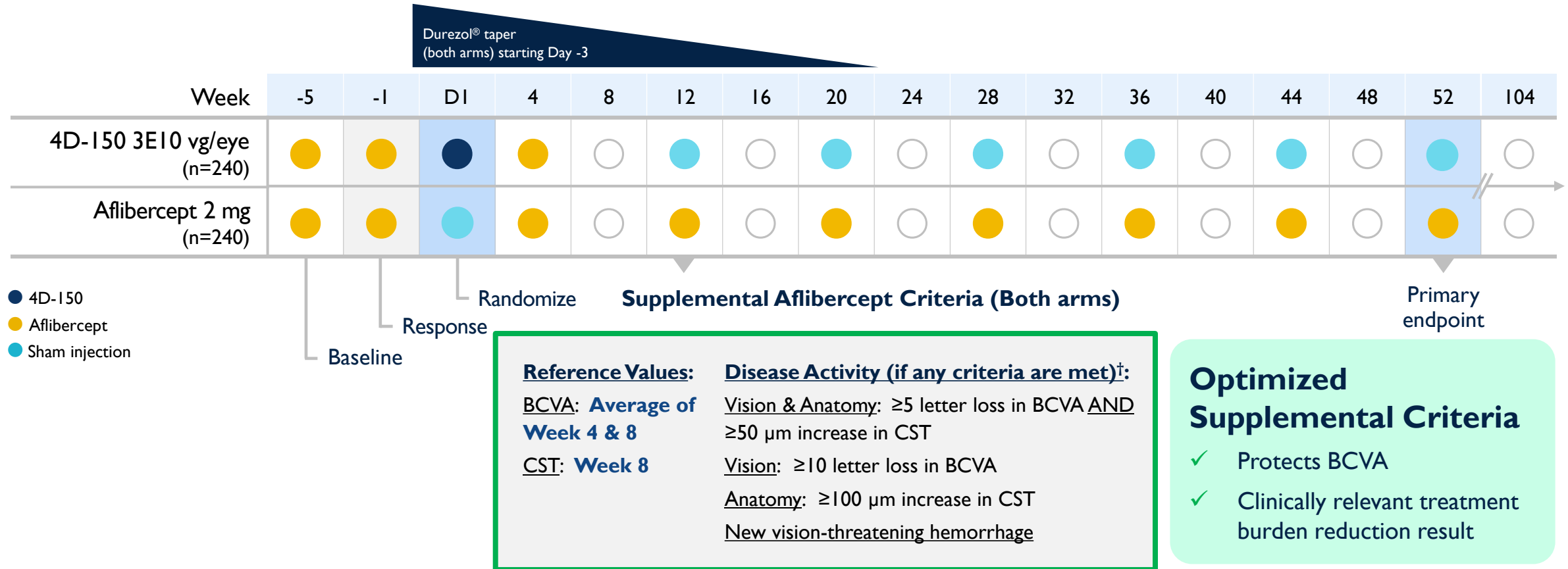
**Global, Multicenter, Randomized, Double Masked, Aflibercept Q8W Comparator Controlled Studies**



\*Determined by SD-OCT and confirmed by an independent Reading Center.

# Global 4FRONT Phase 3 Trial Design: Studying Clinically Relevant Endpoints

**Global, Multicenter, Randomized, Double Masked, Aflibercept Q8W Comparator Controlled Studies**



\*Determined by SD-OCT and confirmed by an independent Reading Center. †PI discretion not allowed.

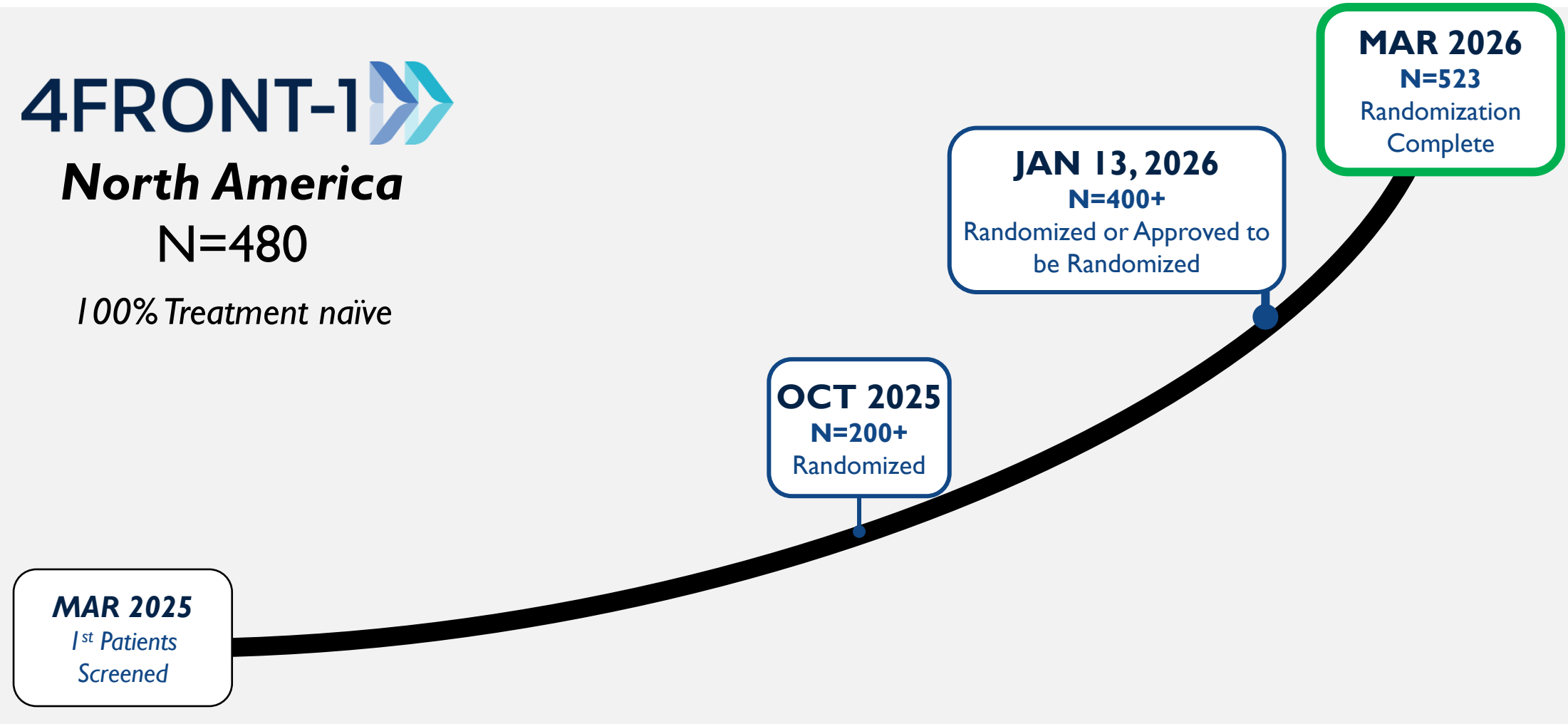
# 4FRONT-1 Enrollment Completed, Significantly Exceeding Initial Expectations while in a Treatment-Naïve Population

**4FRONT-1** 

**North America**

**N=480**

*100% Treatment naïve*



# 4FRONT-2 Rapidly Executing & Enrolling Globally: U.S., EU & Japan Open

**4FRONT-2** 

**Global**

**N=480**

*60% Treatment naïve*

*40% Previously treated\**

**H2 2026**  
Expected  
Enrollment Completion

**JAN 2026**  
U.S., EU + APAC  
Sites open &  
screening rapidly

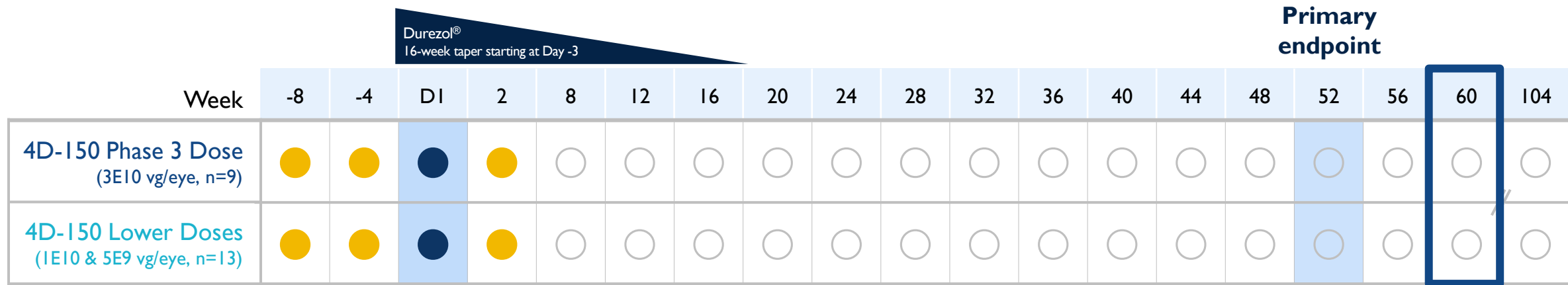
**Jun 2025**  
Trial initiation in  
U.S. sites

\*1-4 prior injections, diagnosed within 6 months.

# SPECTRA Enrolled DME Patients with Focus on Safety & Dose Selection

**Key Eligibility Criteria**

- Diagnosis within 2 years, CST  $\geq 350 \mu\text{m}$  (includes treatment naïve)
- Confirmed anti-VEGF response (CST decrease  $\geq 40 \mu\text{m}$  at Week -1 versus Week -8)
  - Assessed by SD-OCT and confirmed by independent reading center.



● 4D-I50  
● Afibercept 2mg

Baseline  
Reference for Supplemental Afibercept

**Supplemental Afibercept Criteria (starting at Week 8)**

- CST increase  $\geq 50 \mu\text{m}$
- Injections continue** until change in CST is  $\leq 30 \mu\text{m}$  on 2 consecutive visits **or** CST is  $\leq 325 \mu\text{m}$

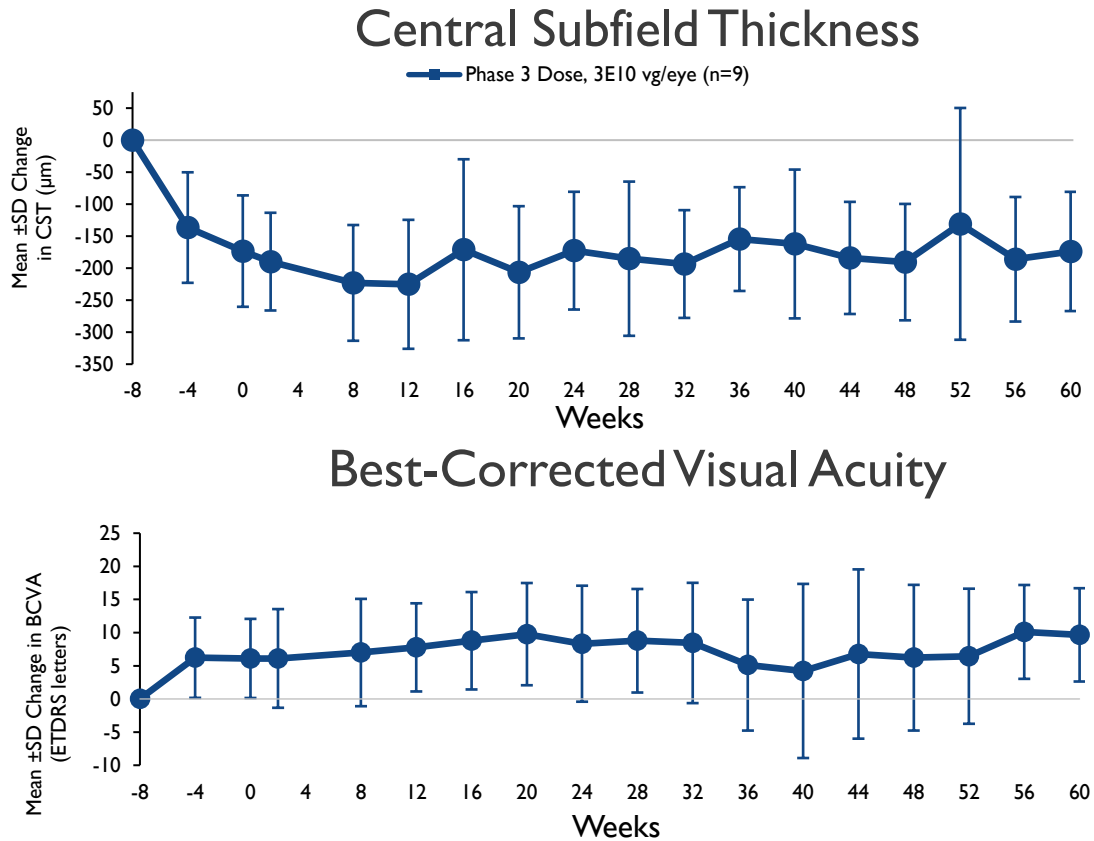
All patients reached 60 weeks as of the cutoff date (May 2, 2025)

CST, central subfield thickness: defined as thickness of 1mm area from ILM to BM; DME: Diabetic Macular Edema; VEGF: Vascular Endothelial Growth Factor Receptor; vg/eye: viral genomes/eye.

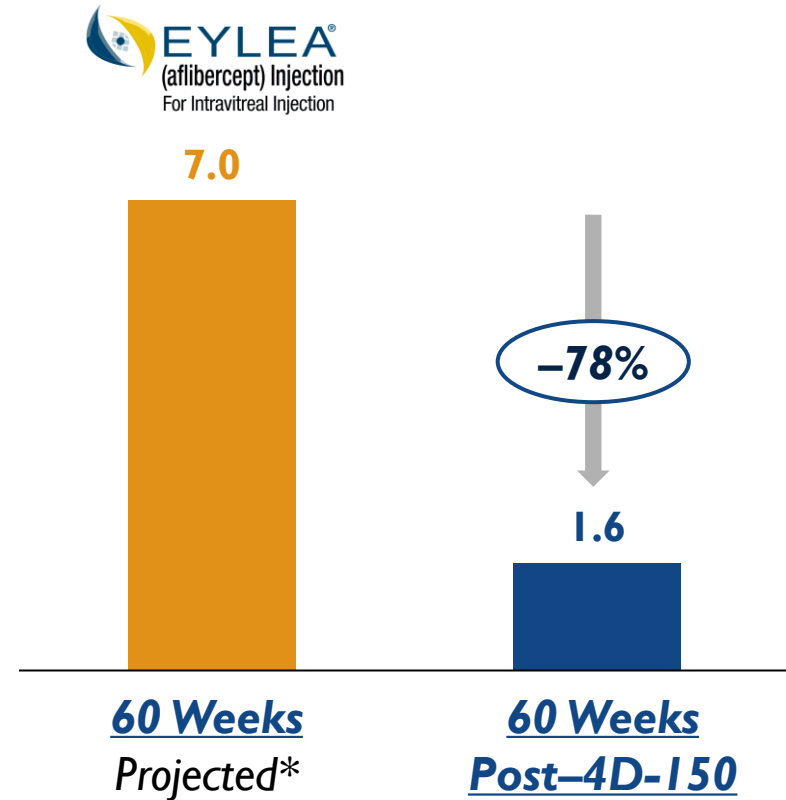
# Results Through 60-weeks Post-4D-I50 in DME

## Visual Acuity & Anatomy Stable With Robust Reduction in Treatment Burden

### Anatomy & Visual Acuity 4D-I50



### Treatment Burden Post-4D-I50

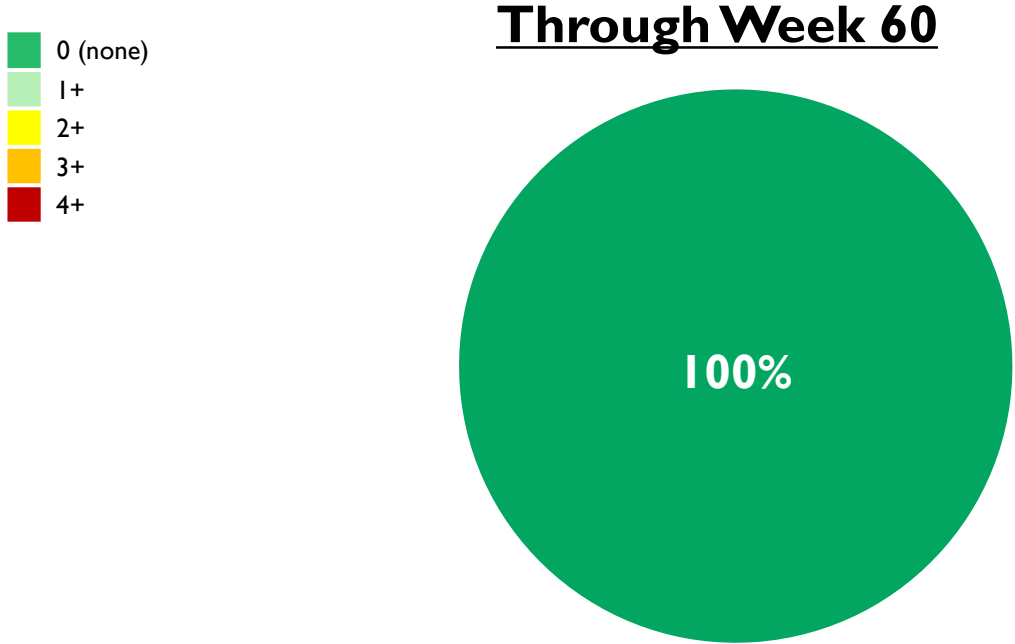


Data cutoff as of May 2, 2025.

CST: Central Subfield Thickness; SD: Standard Deviation. BCVA, best corrected visual acuity; ETDRS, Early Treatment Diabetic Retinopathy Study. \*Projection based on approved dosing schedule post-loading for aflibercept in DME.

# DME: Consistent & Predictable Safety Data To-date

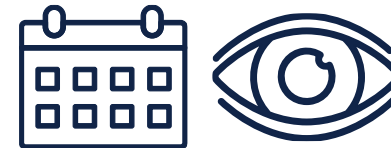
Highest SUN/NEI Score with 4D-150 Phase 3 Dose, 3E10 vg/eye (N=9)



Prophylactic corticosteroid (~16 weeks) **100% (9 of 9) completed on schedule and remain completely off**

Data cutoff as of May 2, 2025.  
 NEI: National Eye Institute; SUN: Standardization of Uveitis Nomenclature.

# Commercial Model: Designed for Seamless Adoption & Global Scalability



## GLOBAL SCALABILITY

- **Manufacturing** scalability
- **Favorable COGS** margin
- **Efficient commercial infrastructure in U.S.** to reach ~2,500 retina specialists (<100 field reps)
- **Otsuka** infrastructure in APAC

## PAYERS

- **Unique value proposition** aligns incentives to long-term disease control and **vision protection**
- **Buy & bill model** fit (U.S.)
- **Flexible pricing** enabled by low COGS

## PRACTICE WORKFLOW & ECONOMICS

- **In-office routine IVT dosing**
- **Standard refrigeration**
- **Practice economics enhanced**
- **Clinic capacity increased**

# Exclusive License Agreement with Otsuka Pharmaceutical for Development & Commercialization of 4D-I50 in Asia-Pacific Region



## 4D-I50 APAC License

- **\$85M** upfront
- **At least \$50M** cost sharing expected over next three years
- **Up to \$336M** in potential regulatory and commercial milestones
- **Tiered, double-digit** royalties on net sales in Otsuka territory

### ✓ Complementary Strengths:

- **4DMT** expertise in AAV genetic medicine, retina product development and manufacturing
  - **Otsuka** global pharma with expertise in APAC regulatory strategy & execution, and commercialization
- ✓ 4DMT retains full development and commercialization rights for 4D-I50 outside the APAC region
  - ✓ 4DMT continues to **lead global Phase 3 clinical development and manufacturing**
  - ✓ Upfront proceeds and cost reimbursement expected to support **global Phase 3 clinical trial in DME and retina pre-commercial activities**
  - ✓ APAC territory represents **~10% of global retinal anti-VEGF market**

# Key Catalysts: Poised for Strong Clinical Data & Phase 3 Execution

## Milestones followed by Topline Phase 3 Data

### Wet AMD

- ✓ **Feb 2026:** 4FRONT-1 Phase 3 enrollment complete
- **Q3 2026:** PRISM Phase 2b 2-year data
- **H2 2026:** 4FRONT-2 Phase 3 enrollment complete
- **H1 2027:** 4FRONT-1 Phase 3 topline data
- **H2 2027:** 4FRONT-2 Phase 3 topline data

### Diabetic Macular Edema

- **Mid-2026:** Finalize global Phase 3 design
- **Q3 2026:** Initiate global Phase 3 trial
- **H2 2026:** SPECTRA Trial 2-year data

**\$458M Cash\*, Runway Expected into H2 2028**

\*Cash, cash equivalents and marketable securities as of March 31, 2026.



4D-710



Potential Durable, Variant-Agnostic,  
Disease-Modifying Treatment for  
Cystic Fibrosis Lung Disease

# Cystic Fibrosis Lung Disease: High Unmet Need Despite Modulators

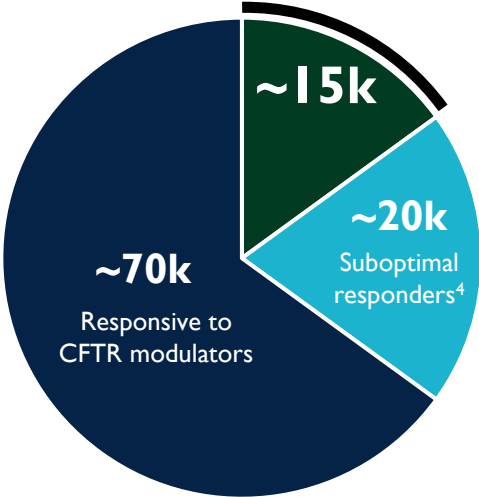
## Lung Disease Burden



**Burdensome Daily Supportive Care:**  
Airway clearance (~100 mins), inhaled antibiotics & bronchodilators

- **Persistent symptoms** with cough, shortness of breath, infections & reduced exercise tolerance
- Pulmonary exacerbations, often requiring **hospitalization and IV antibiotics**
- **Lung transplantation** as a last resort
- **Median survival** (pre-modulator era): ~40 years<sup>1</sup>

## CF Epidemiology<sup>2,3</sup>



**~105,000 People** with CF in 94 Countries

**CFTR Modulator Market Size**

**Ineligible or Intolerant to CFTR modulators**

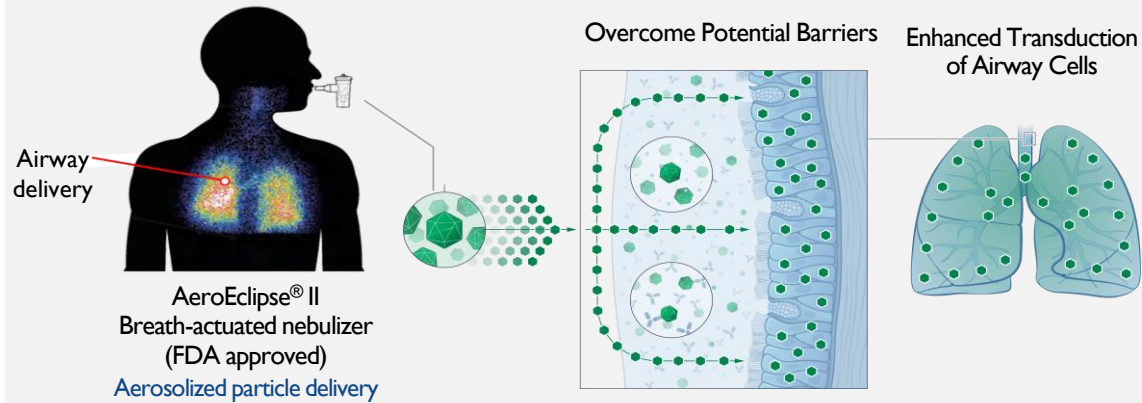
*Initial study population evaluating 4D-710 as monotherapy*

**~\$11 Billion (2024)<sup>5</sup>**

1. Ramsey & Welsh. *Am J Respir Crit Care Med* 2017;195(9):1092–9. 2. Guo J et al. *Journal of Cystic Fibrosis* 2022; 21:456-62. 3. Cystic Fibrosis Foundation. 4. Based on assumptions derived from Middleton, 2019 and CFF registry analysis. 5. Vertex Pharmaceuticals FY 2024 financial results.

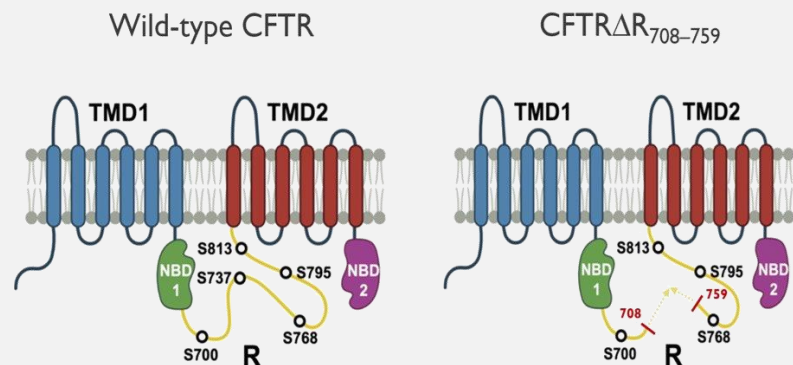
# 4D-710 Design: Durable, Redosable, Variant-agnostic Disease-modifying Therapy for CF Lung Disease

## Novel AAV Vector: A101



- ✓ Mucus penetrant
- ✓ Transduction of multiple airway cell types
- ✓ Resistance to pre-existing immunity

## Payload: *CFTR*Δ<sub>R</sub> Transgene



- Partial deletion in the regulatory domain
- **Normal channel structure, function and regulation**<sup>1,2</sup>
- Corrected disease phenotypes in CF pig model<sup>3</sup>

## 4D-710



## Therapeutic Objective:

Durable, redosable, variant-agnostic disease-modification via introduction of functional CFTR to lung airway cells

1. Ostedgaard et al. *PNAS* 2002;99:3093-8; 2. Calton et al. *AJRCMB* 2015; 3. Steines et al. *JCI Insight* 2016.

# Dose Selection Framework for Further Development of 4D-710

## Focus of Phase 1: Dose Finding

Safety ✓

Physiologically relevant  
CFTR expression levels  
(ISH, IHC) ✓

Clinical activity  
(ppFEV<sub>1</sub>, LCI<sub>2.5</sub>, CFQR-R-R) ✓

Phase 2  
Dose:  
2.5E14 vg

## Focus of Phase 2 (Enrolling): Characterize Clinical Activity

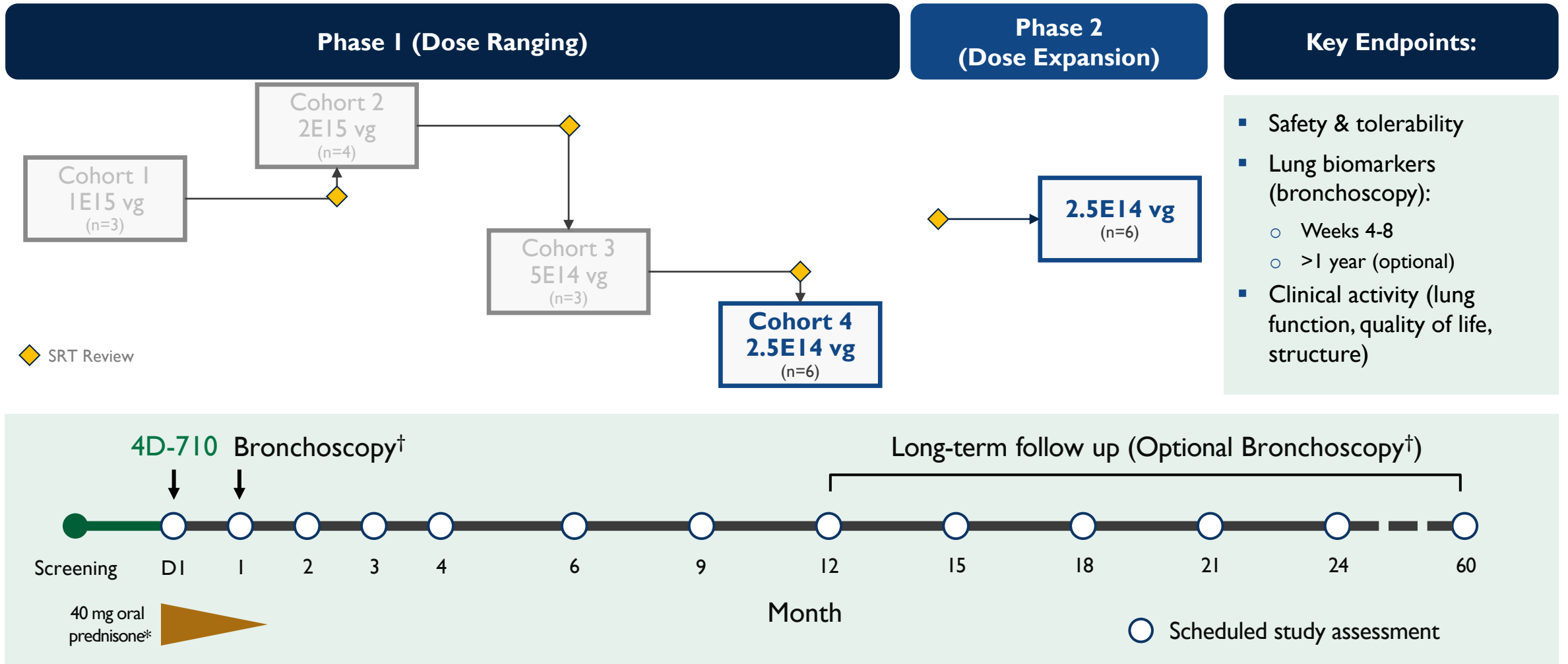
Stability or improvement in  
**large-/mid- airway disease**  
(ppFEV<sub>1</sub>)

Improvement in **small airway disease**  
(LCI<sub>2.5</sub>)

Improvements in **respiratory symptoms**  
(CFQ-R-R)

Exploratory: evidence of **decreased mucus burden** (HRCT)

# Protocol Amended with Novel Lung Endpoints to Enhance Clinical Activity Assessments, Additional Biopsy to Assess Durability



\*28-day taper. †Endobronchial biopsy (4D-710 transgene and protein expression). ppFEV<sub>1</sub>, percent predicted forced expiratory volume in 1 second; SRT, Safety Review Team; MBW, Multiple Breath Washout; LCI<sub>2.5</sub>, Lung Clearance Index at 2.5% of starting concentration; HRCT, High Resolution Computed Tomography.

# AEROW Clinical Trial: Lower Dose Cohorts 3 & 4 (N=9)

## Demographics & Baseline Characteristics

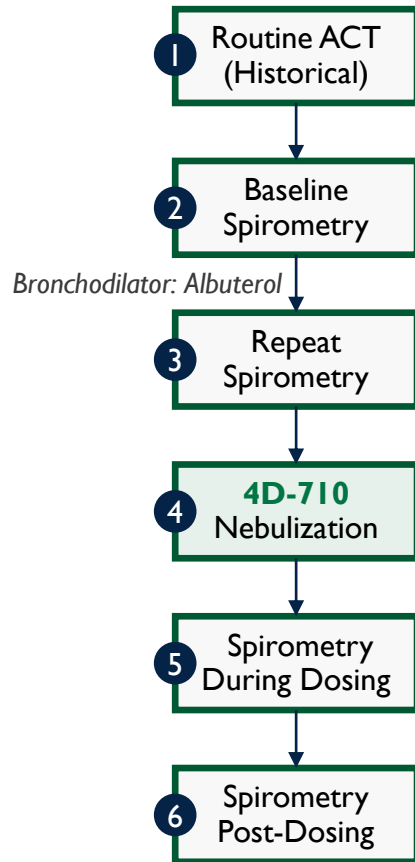
	Cohort 3: 5E14 vg			Cohort 4: 2.5E14 vg					
Participant Number	1	2	3	1	2	3	4	5	6
Age, y	42	40	34	26	54	37	56	33	37
Sex	Female	Female	Male	Male	Female	Female	Male	Male	Male
CFTR mod. status	Intolerant	Ineligible	Ineligible	Ineligible	Ineligible	Ineligible	Ineligible	Ineligible	Ineligible
CFTR Variants	F508del/ R751L	4209TGTT>AA/ 3120+1G>A	Q220X/ Q493X	c.2184_2185insA/ c.2184_2185insA	1471delA/ 1717-1G>A	W1282X/ H1079P	3659delC/ 5T	S466X/ 1342-1delG	G542X/ W1282X
ppFEV <sub>1</sub>	100	77	62	58	89	50	90	76	63
LCI <sub>2,5</sub> (Normal: <7)	N/A	14.7	18.2	14.3	13.2	N/A	N/A	15.8	13.0
CFQ-R-R score (0-100)	72	78	44	28	72	56	93	89	61

Impairment: **Mild/Normal**, **Moderate/Severe/Abnormal**.

CFTR, cystic fibrosis transmembrane conductance regulator; CFQ-R-R, Cystic Fibrosis Questionnaire–revised (respiratory domain); FEV<sub>1</sub>, forced expiratory volume in 1 second.

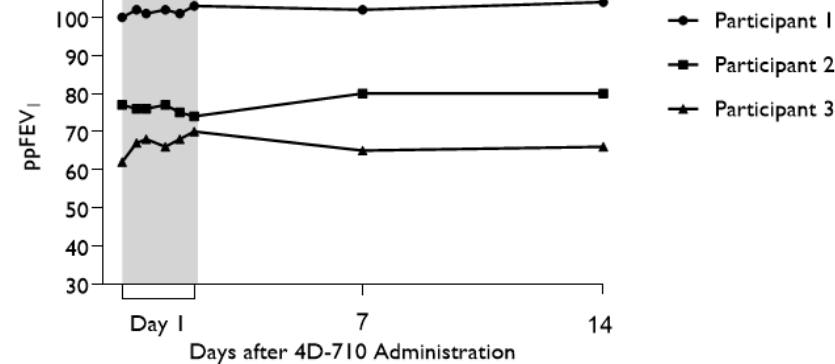
# 4D-710 Safety & Tolerability Day 1-14: Well-Tolerated in Lower Dose Cohorts with Transient & Generally Mild AEs Typical of Nebulized Therapies

## Day 1 Dosing Activities



## ppFEV<sub>1</sub>

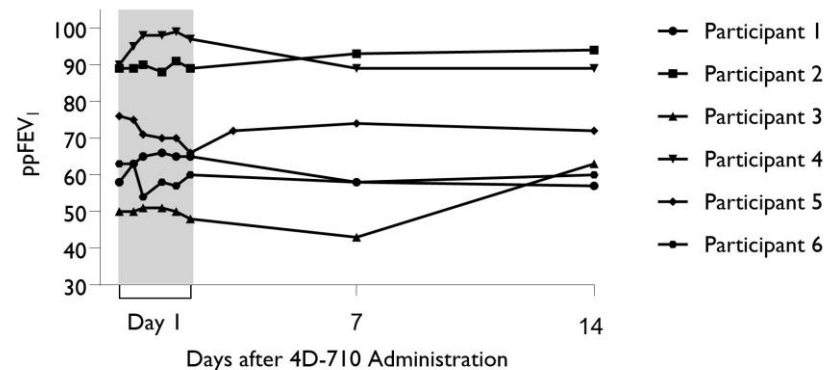
**5E14 vg**  
Admin. Time  
~90 Mins



## 4D-710-Related AE

- Participant 1: **throat irritation** after dosing (Grade 1, ~5 sec), increased **productive cough** (Grade 1, Day 4-13)

**2.5E14 vg**  
Admin. Time  
~45 Mins



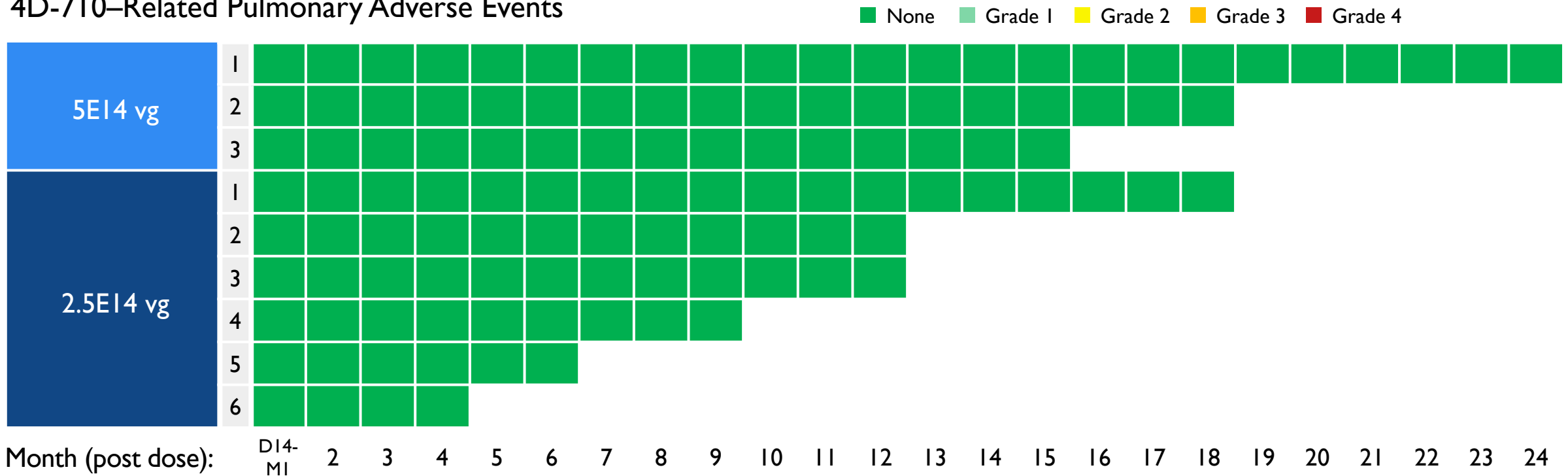
- Participant 5: increased **cough and lightheadedness** during dosing (Grade 1, resolved Day 1 without intervention), **chest tightness and decrease in FEV<sub>1</sub>** (Grade 2, Day 1-8)

AE, Adverse Event; ACT, Airway Clearance Technique.

# 4D-710 Safety & Tolerability: Well-Tolerated in Lower Dose Cohorts

## No Pulmonary 4D-710–related AEs After Day 14

### 4D-710–Related Pulmonary Adverse Events

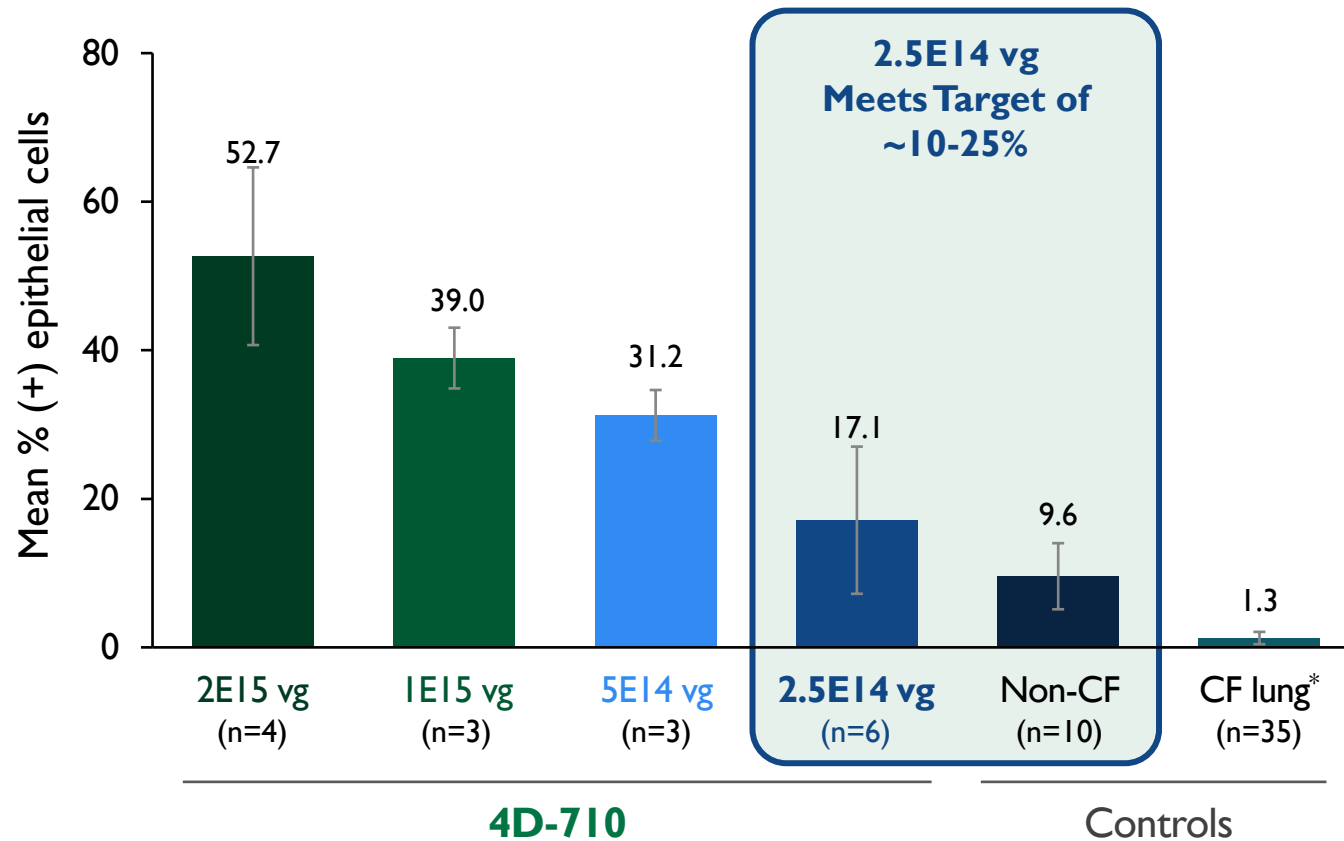


- Higher dose cohorts (1E15 & 2E15 vg): NO new related AEs since last update (up to 3.5 years of follow up)
- Non-Pulmonary 4D-710–Related AEs:
  - 5E14 vg (Participant 3): 1) Mental Fogginess: Grade 2, started Day 24 and resolved Day 35; 2) Stuttering: Grade 2, started Day 25 and resolved Day 35
  - 2.5E14 vg (Participant 5): 1) Elevated AST & GGT: Grade 1, identified at IM visit (Day 36) and resolved by 2M visit (Day 57). Participant with history of elevated LFTs at baseline

AEs from 2E15 and 1E15 doses previously disclosed.

# Dose-dependent *CFTR* Transgene RNA Expression Following 4D-710 Administration: Cohort 4 (2.5E14 vg) Meets Target Expression Profile

## *CFTR* RNA (ISH): Airway Epithelial Cells

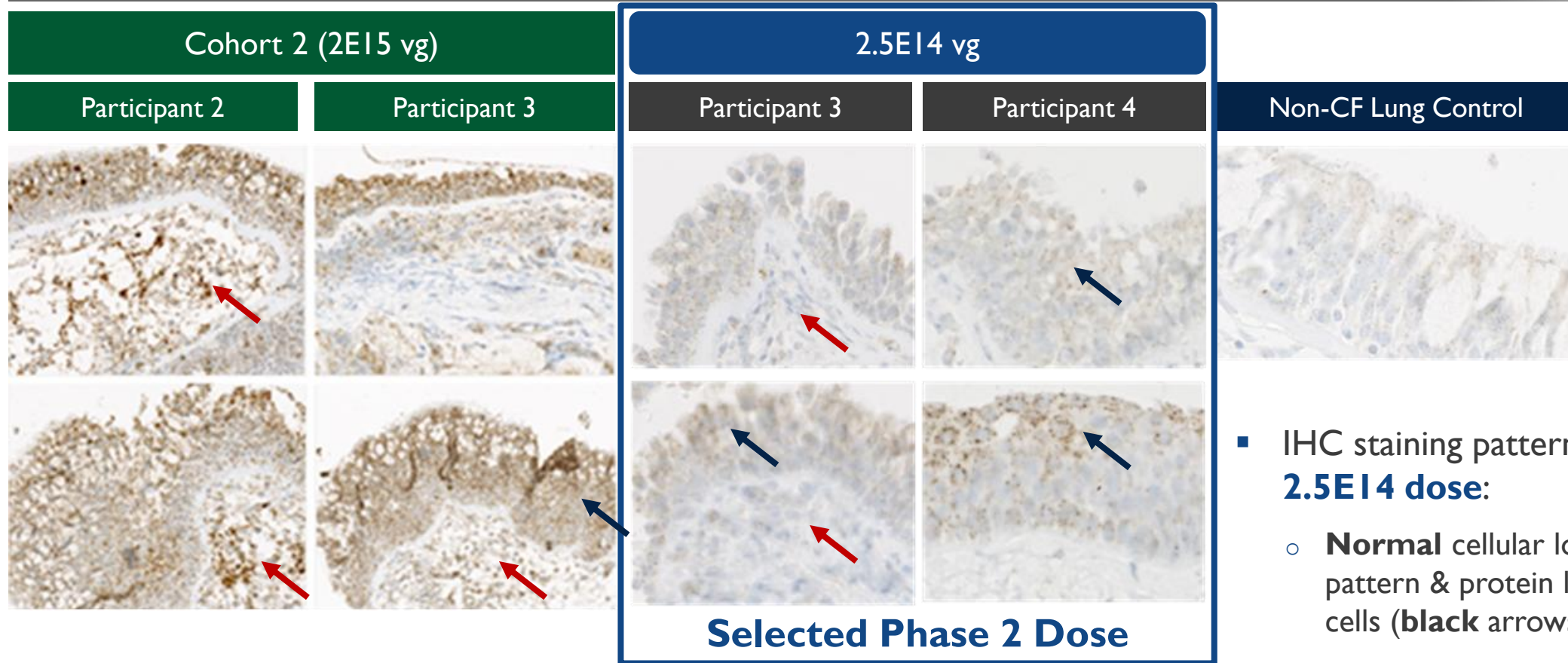


- Dose-dependent *CFTR* $\Delta$ R mRNA expression in airway cells
- **2.5E14 vg dose (Cohort 4) meets target expression profile<sup>1,2</sup>**

4D-710 biopsies analyzed Day 28 – Day 56

*CFTR*, cystic fibrosis transmembrane conductance regulator; ISH, *in situ* hybridization. Quantification by Visiopharm® AI machine Learning analysis. \*Attempts to genotype commercial CF samples yielded results for 13/35 samples; of these, a majority were  $\Delta$ F508 homozygous mutations. 1. Dannhoffer L et al. Am J Respir Cell Mol Biol 2009; 40:717–23. 2. Bell S et al. Lancet Res Med 2020; 8:65–124.

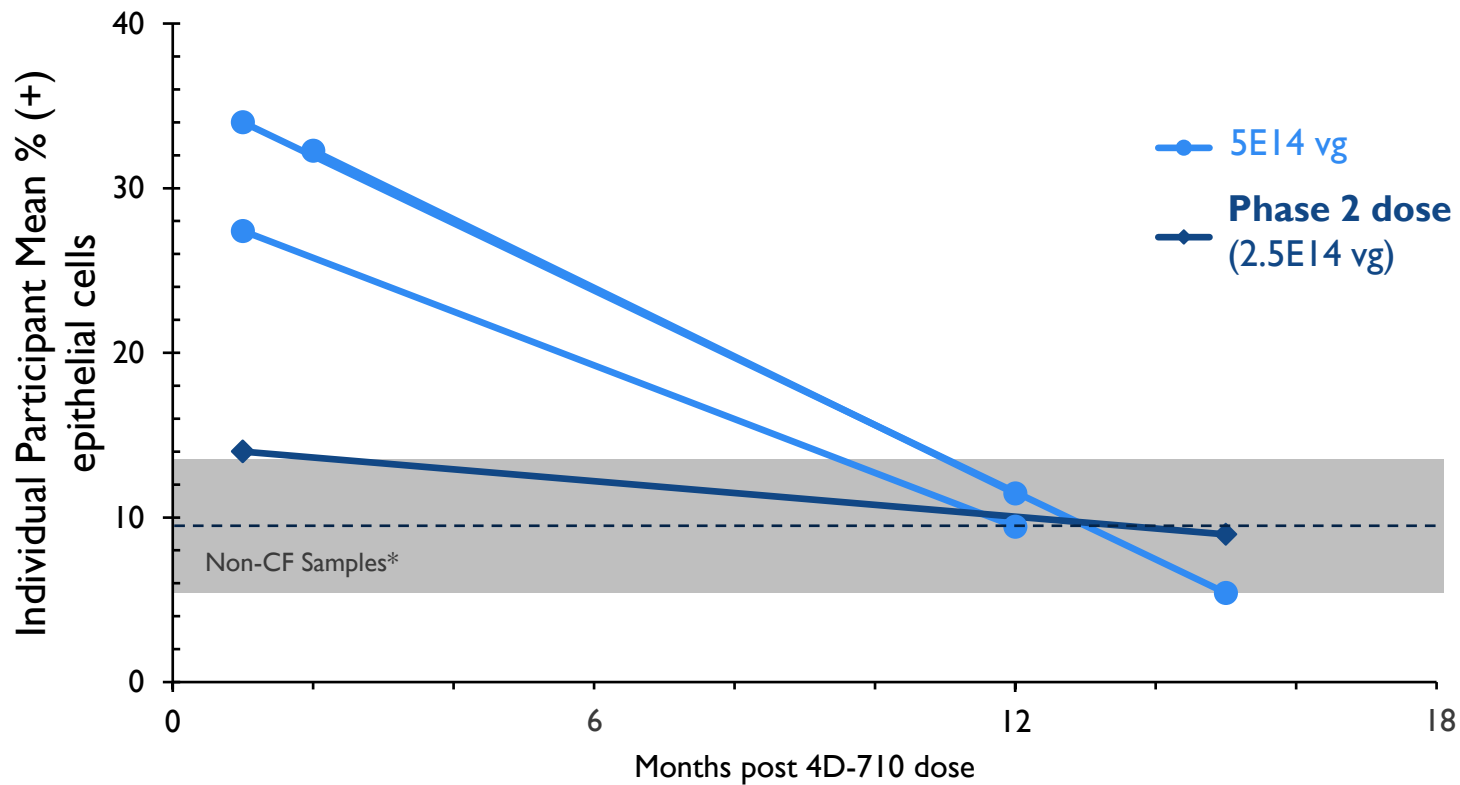
# CFTR Protein Expression Meets Target Expression Pattern in Airway & Interstitial Areas at 2.5E14 vg Dose (Cohort 4)



- IHC staining pattern improved at **2.5E14 dose**:
  - **Normal** cellular localization pattern & protein levels in airway cells (**black arrows**)
  - **Minimal/no protein** in interstitial areas of lung (**red arrows**)

# Durability of 4D-710–mediated CFTR Expression in Airway Biopsies: Persistent within Target Therapeutic Range through Over 1 Year

**Durability of 4D-710–Mediated *CFTR* $\Delta$ R Expression (ISH): Mean % of Airway Epithelial Cells (+) in Individual Patients with Optional Paired Biopsies**



## Population & Methods

Participants in 1E15, 5E14, and 2.5E14 vg dose cohorts elected to a bronchoscopy to collect paired lung biopsies at  $\geq 1$ -year post-4D-710 dosing. 5E14, 2.5E14 vg data shown here (*1E15 vg data in appendix*)

## Key Findings

Durable expression with levels consistent with the non-CF % (+) epithelial cells and expression levels over 1 year

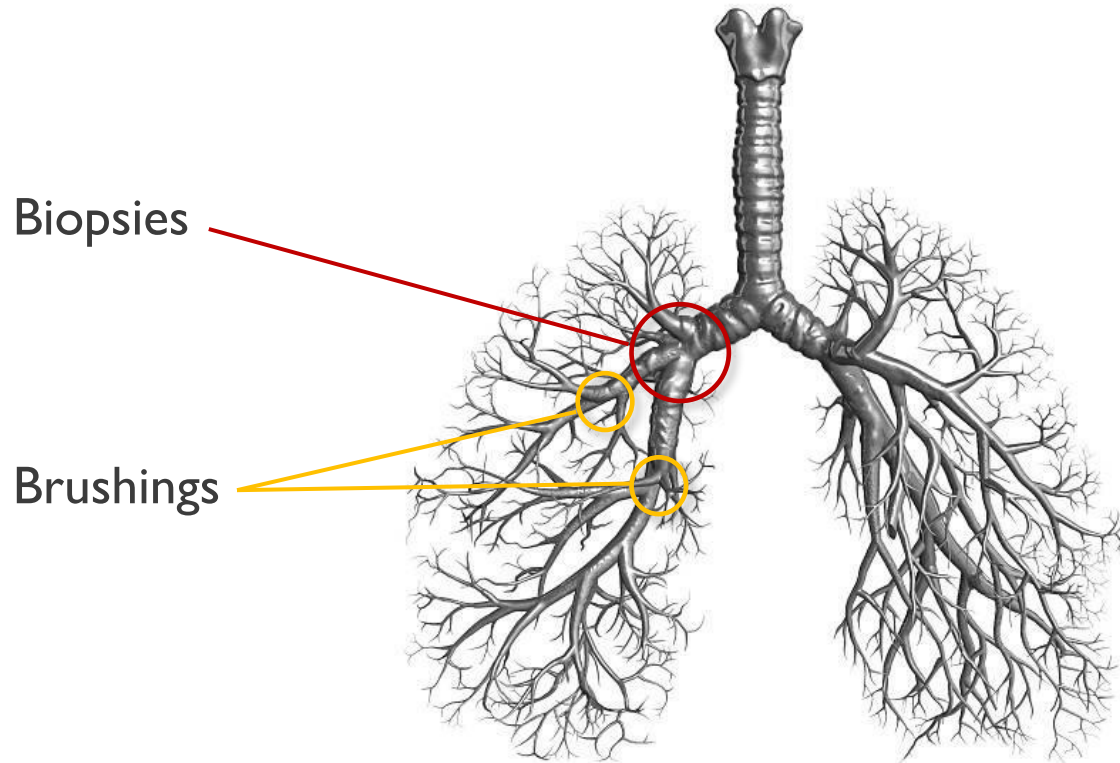
## Next Steps

Collect additional paired biopsy data alongside clinical activity measures with focus on Phase 2 dose to inform redosing strategy

Quantification by Visiopharm® AI machine Learning analysis. \*Mean ( $\pm$ SD) in non-CF samples = 9.6% ( $\pm$ 4%). CFTR, cystic fibrosis transmembrane conductance regulator; ISH, *in situ* hybridization

# Integrated Biomarker & Clinical Endpoint Strategy to Demonstrate Mechanism of Action & Clinical Activity in AEROW Phase I Trial

## Lung Tissue Biomarkers



## Pulmonary Clinical Activity Endpoints

### Larger Airways

- ppFEV<sub>1</sub>

### Small Airways

- Lung Clearance Index (LCI<sub>2.5</sub>)

*New in Lower Dose Cohorts*

### Pulmonary Symptoms

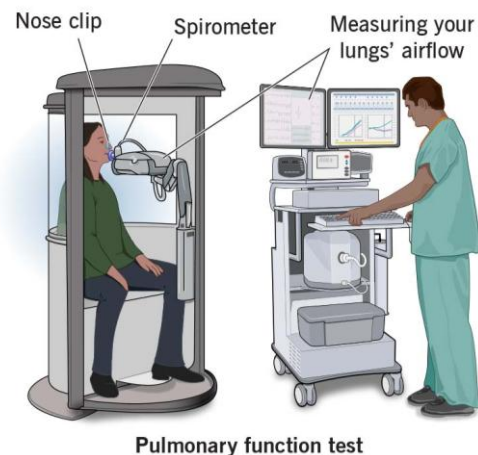
- CFQ-R-R

### Structural/Functional Changes

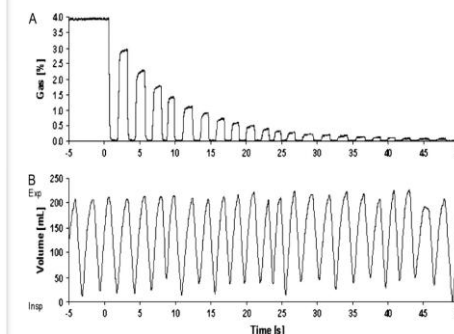
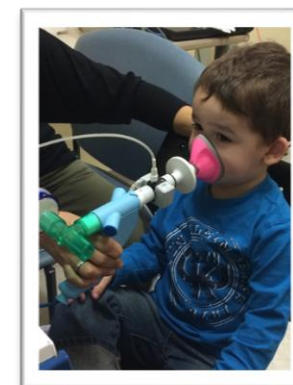
- HRCT (analyses pending)

ppFEV<sub>1</sub>, percent predicted forced expiratory volume in 1 second; LCI<sub>2.5</sub>, Lung Clearance Index at 2.5% of starting concentration; CFQ-R-R, Cystic Fibrosis Questionnaire–revised respiratory domain; HRCT, High Resolution Computed Tomography.

# ppFEV<sub>1</sub> & LCI<sub>2.5</sub>: Complementary Measures of Lung Function



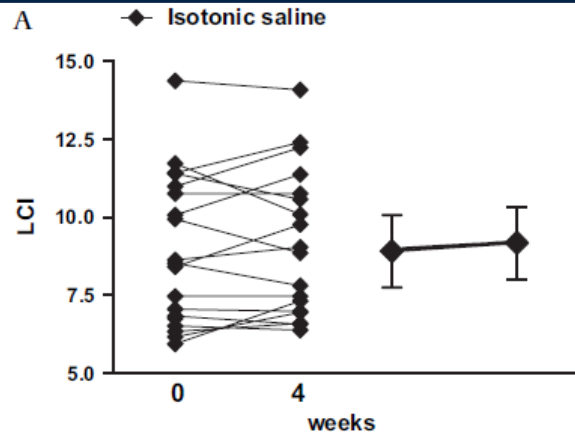
Cleveland Clinic ©2024



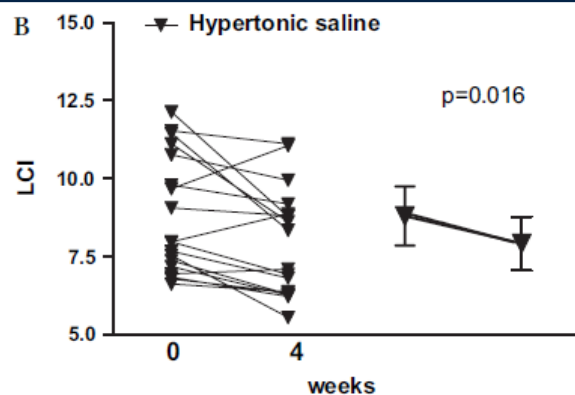
Measure / Endpoint	Spirometry: ppFEV <sub>1</sub>	Multiple Breath Washout: LCI <sub>2.5</sub>
Measures	Lung restriction/obstruction, marker of <b>larger airway disease</b>	Ventilation inhomogeneity, marker of <b>small airway disease</b>
Effort Dependent	<b>Yes</b>	<b>No</b>
Sensitivity to Early Disease	<b>Low</b>	<b>High</b>
Responsiveness to Intervention	<b>Medium</b> <i>may miss subtle improvement in early/mild disease</i>	<b>High</b>
Correlation to Clinical Outcomes (Survival, Exacerbations, QoL)	<b>Yes</b>	<b>Yes</b>
Regulatory Acceptance	<b>Gold Standard in Adults</b>	<b>EMA Primary in Pediatrics</b> <b>FDA Key Efficacy Endpoint in Pediatrics</b>

# LCI<sub>2.5</sub> Demonstrated Significantly Greater Sensitivity than ppFEV<sub>1</sub> for Treatment Effect: Required <19 Subjects vs ~350

## Inactive Control



## Modestly Active Treatment



Treatment effect size:  
 $1.16 \pm 0.94$   
 $[0.27, 2.05]$   
 $p=0.016$

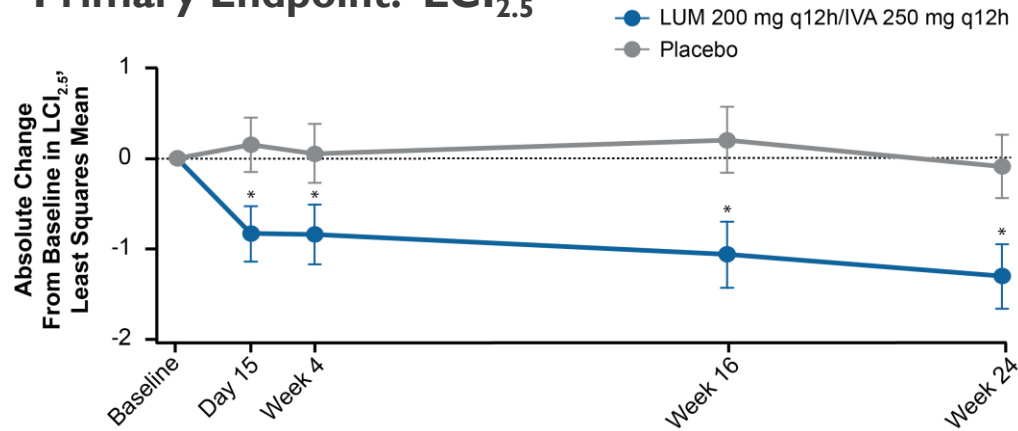
Outcome Analysis	HS vs. IS Treatment Effect*	Required Sample Size†
<b><u>Spirometry:</u></b>		
ppFEV <sub>1</sub>	$1.8 \pm 12.0$	351
ppFEF <sub>25-75</sub>	$5.3 \pm 22.3$	141
<b><u>CFQ-R Questionnaire:</u></b>		
Respiratory Domain	$5.2 \pm 14.2$	61
<b><u>Multiple-Breath Washout</u></b>		
LCI <sub>2.5</sub>	$1.16 \pm 0.94$ (p=0.016)	≤19

**LCI<sub>2.5</sub> able to detect subtle treatment effects**

Amin et al, *Thorax* 2010. \*Absolute difference for isotonic saline vs hypertonic saline, Values are expressed as means ± SD. †Required number of patients for a crossover trial to achieve 80% power at a 5% significance level.

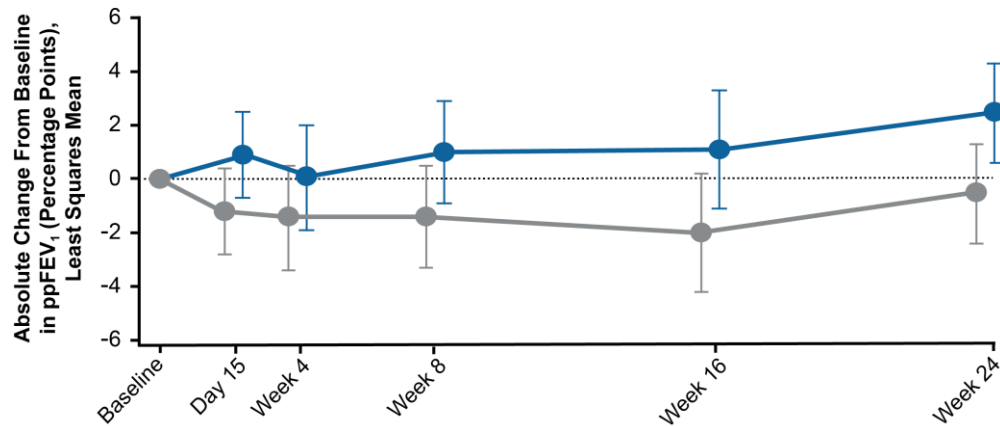
# In Orkambi<sup>®</sup> Trial in Children, LCI<sub>2.5</sub> Demonstrated Robust Treatment Response at Every Timepoint vs. Placebo in Contrast to ppFEV<sub>1</sub>

## Primary Endpoint: LCI<sub>2.5</sub>



Endpoint	Placebo (n=101)	LUM/IVA (n=103)	Treatment Difference vs Placebo
Absolute change in LCI <sub>2.5</sub> through week 24	0.08 (-0.18 to 0.34)	-1.01 (-1.27 to -0.75)	<b>-1.09</b> <b>(-1.43 to -0.75)</b> <b>P&lt;0.0001</b>

## Secondary Endpoint: ppFEV<sub>1</sub>



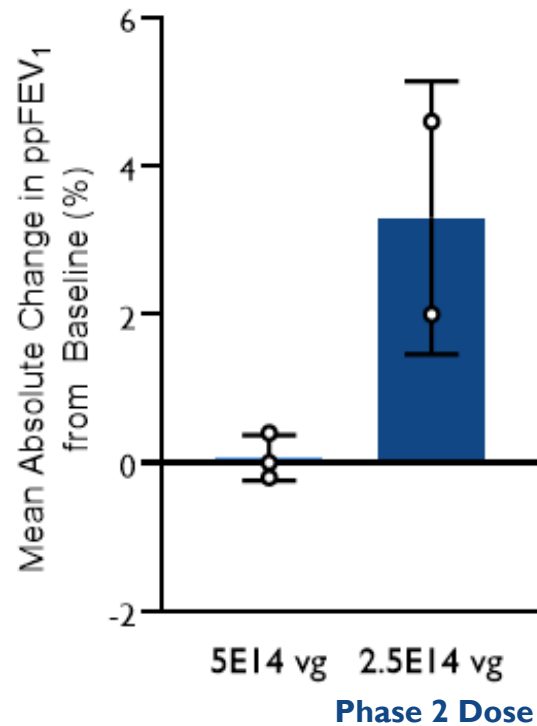
Endpoint	Placebo (n=101)	LUM/IVA (n=103)	Treatment Difference vs Placebo
Absolute change in ppFEV <sub>1</sub> through week 24	-1.3 (-2.8 to 0.2)	1.1 (-0.4 to 2.6)	<b>2.4</b> <b>(0.4 to 4.4)</b> <b>P=0.0182</b>

\*Ratjen F et al, *Lancet Respir Med* 2017

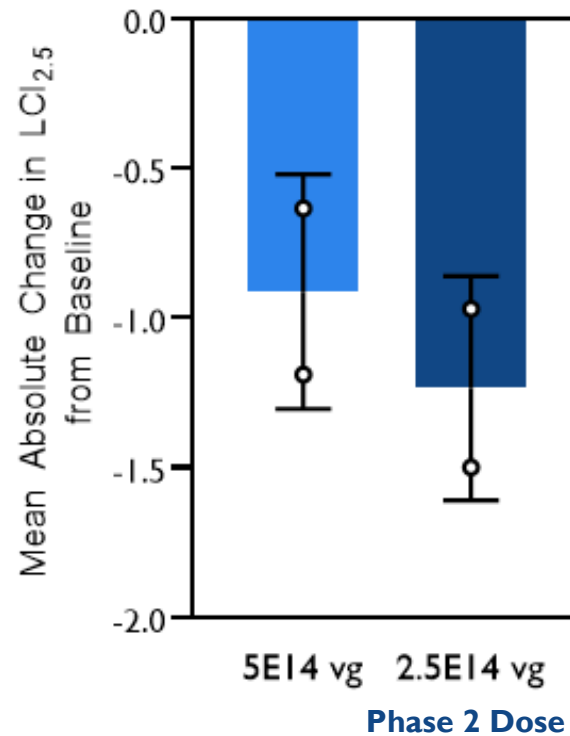
P<0.0001 vs placebo; all values in table are least squares mean (95% confidence interval [CI]). LCI, lung clearance index; LUM/IVA, lumacaftor/ivacaftor.

# Clinical Activity: Mean Change in ppFEV<sub>1</sub>, LCI<sub>2.5</sub> & CFQ-R-R in Lower Dose Cohorts From Baseline Through 1 Year of Follow-up (Months 3 to 12\*)

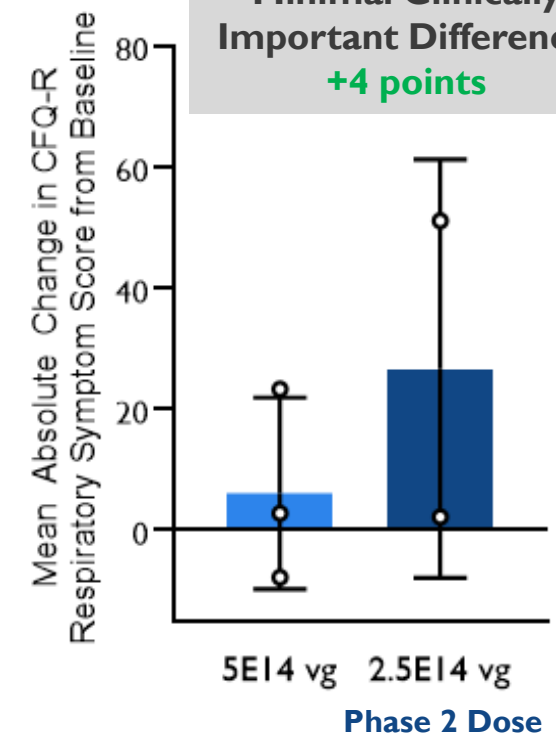
## ppFEV<sub>1</sub>



## LCI<sub>2.5</sub>



## CFQ-R-R



\*Post-Hoc analysis of evaluable data: Mean values for each participant calculated from 3M to 12M values, excluding non-evaluable time points with acute pulmonary AEs within 14 days of a study visit. If Month 12 visit was missed or non-evaluable then Month 15 timepoint was used. Note: Analysis for participants in cohort who had at least 12 months of follow-up. Excludes 2.5E14 vg Participant 3.

# Phase I Interim Data: Key Takeaways from Lower Dose Cohorts 3 & 4



## 4D-710

***Durable, Redosable, Variant-Agnostic, Disease-Modifying Treatment Potential for People with CF Lung Disease with Remaining High Unmet Need***

**SAFETY DATA: Well Tolerated** with 4 to 24 Months follow-up

**LUNG FUNCTION: Clinically Meaningful Activity** (FEV<sub>1</sub>, LCI<sub>2.5</sub>)

**QUALITY-OF-LIFE: Clinically Meaningful Activity** (CFQ-R-R)

**PHASE 2: Enrollment Underway** at Cohort 4 dose level

**DURABILITY:** 4D-710-mediated CFTR transgene expression through at least 1 year

***AEROW Phase I/2 clinical trial & program update expected H2 2026***



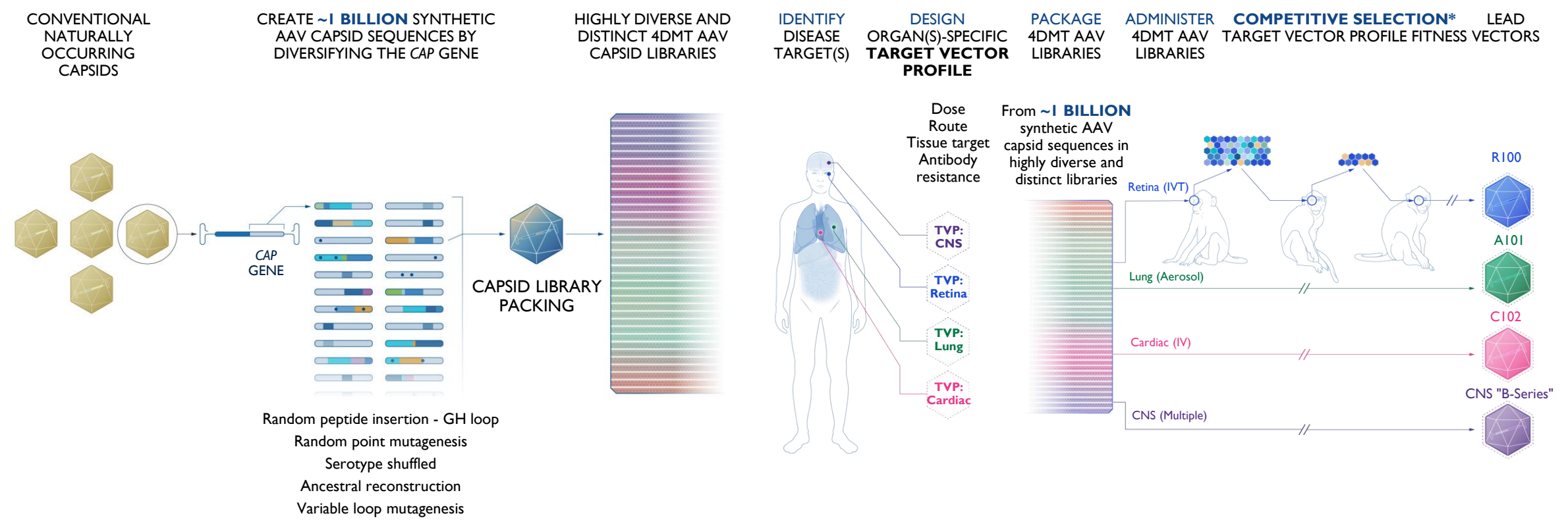
# THANK YOU

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(510) 505-2680 | [Investor.Relations@4DMT.com](mailto:Investor.Relations@4DMT.com)

[IR.4DMT.com](http://IR.4DMT.com) | [LinkedIn](#)

# Platform Solution: ~1 Billion Synthetic Capsid Sequences and Competitive Selection in NHP



\*Capsid library placed under varying selective pressures // Actual number of selection rounds varies by target

# 4FRONT Supplemental Criteria Optimized for Phase 3 Success & Clinically Meaningful Treatment Burden Reduction



Reference Measurement	Post 1 loading dose: ▪ <u>BCVA &amp; CST</u> : Average of Week -1 and Day 1	Post 2-3 loading doses: ▪ <u>BCVA</u> : <b>Average of Week 4 &amp; 8</b> ▪ <u>CST</u> : <b>Week 8</b>
Vision & Anatomy	None	<b>≥5 letter loss in BCVA AND ≥50 μm increase in CST</b>
Vision Only	≥10 letter loss in BCVA <b>OR</b>	≥10 letter loss in BCVA <b>OR</b>
Anatomy Only	≥75 μm increase in CST <b>OR</b>	≥ <b>100 μm</b> increase in CST <b>OR</b>
Hemorrhage	Presence of vision-threatening new macular hemorrhage <b>OR</b>	Presence of vision-threatening new macular hemorrhage
PI Discretion	Allowed	<b>Not Allowed</b>