# Suprachoroidal Delivery of Sura-vec (ABBV-RGX-314): 2-Year Results in Non-Proliferative Diabetic Retinopathy

## The Phase II ALTITUDE® Study and Long-Term Follow-Up

August 7, 2025

ABBV-RGX-314 is an investigational product that has not been approved by any regulatory authority. No conclusions regarding the safety and efficacy of the product can be made.



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# Diabetic Retinopathy is a Global Public Health Problem

**20M**

Is the expected DR patient population in US,EU,JP in the next 5 years[1]

**<1%**

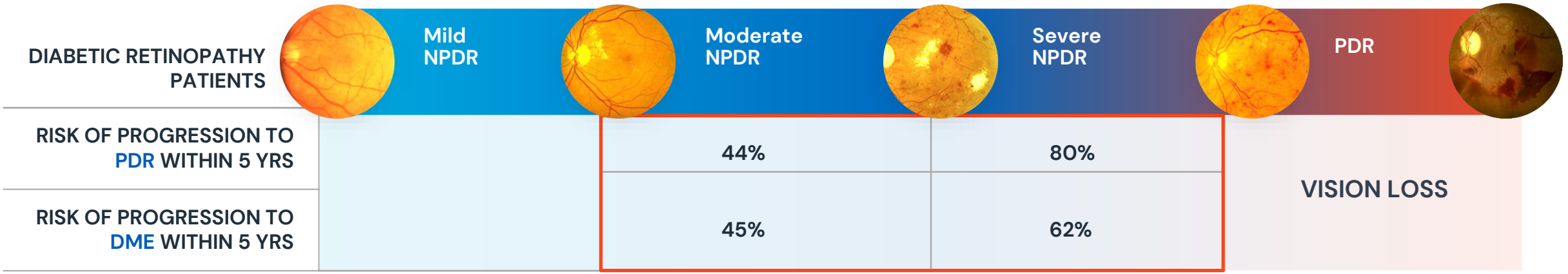
Of patients with early DR are treated due to high treatment burden[3]

**45–50 YRS**

Median age of disease onset

Early treatment with longer lasting therapy can potentially modify and prevent disease progression


▸ INCREASING RISK OF DEVELOPING VISION THREATENING COMPLICATIONS[4,5] ▸



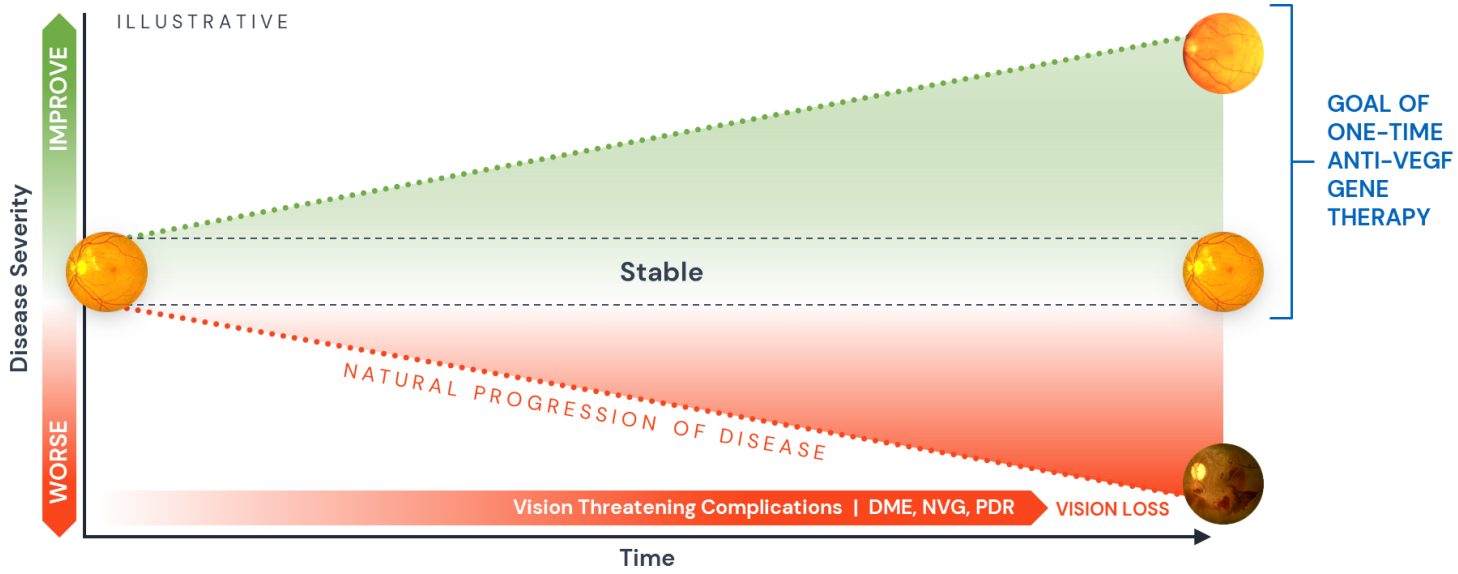

1. DR Market, Reports and Data 2022; 2. Market Scope 2022 Retinal Pharmaceuticals; 3. Market Scope Q4-2022 Retina Quarterly Summary Report; 4. ETDRS Trial Report 12, 1991; 5. Moshfeghi, 2020

DME: diabetic macular edema; DR: diabetic retinopathy; NPDR: non-proliferative diabetic retinopathy; PDR: proliferative diabetic retinopathy.

# One time, in-office injection of gene therapy could potentially provide long-lasting improvement in DR severity and reduce risk of vision-threatening complications

## Potential Advantages of Suprachoroidal Space (SCS) Delivery

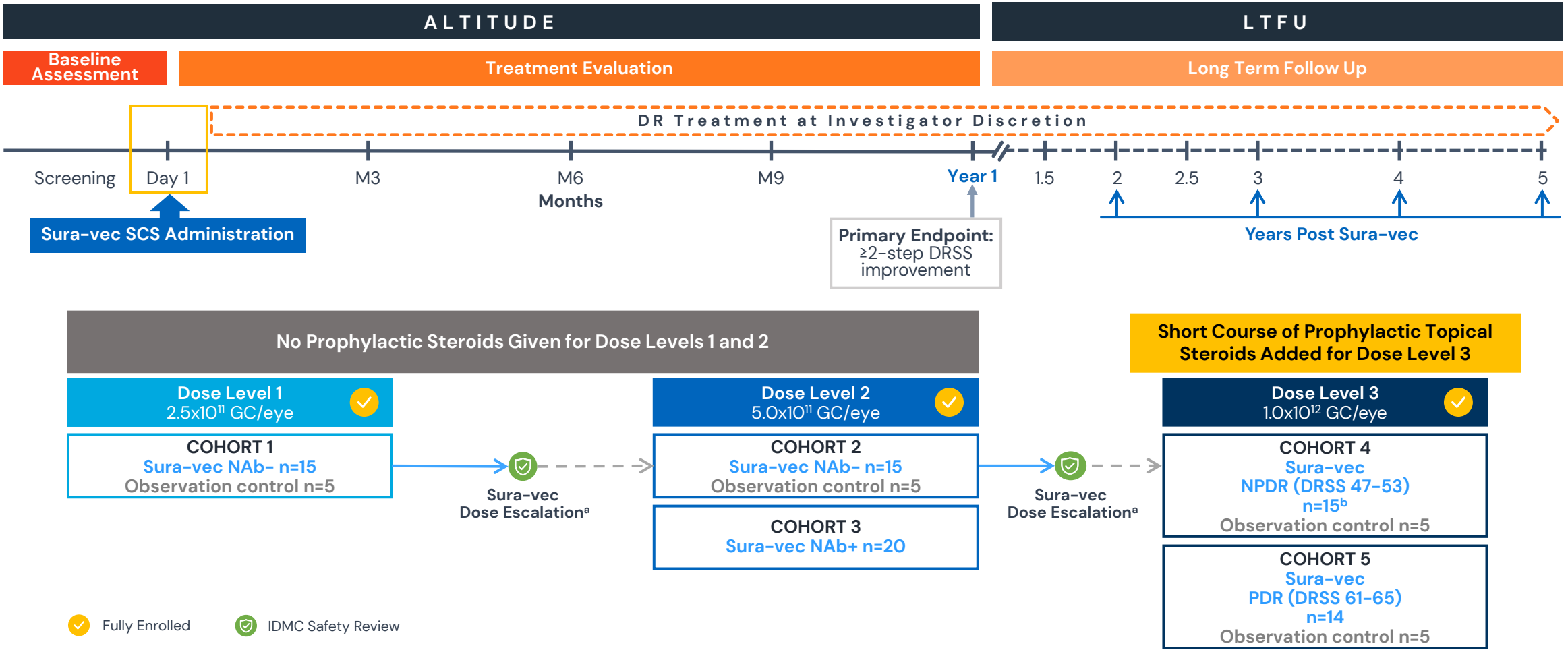
- SCS injection is a fast, simple and convenient in-office procedure
- Targeted access to retinal cells with minimal exposure to vitreous and anterior segment[1]
- Broad transduction of retinal cells observed in pre-clinical studies[1]
- Ideal for targeting retinal vascular diseases[1]




[1]Ding, K., et al. *Journal of Clinical Investigation.* 2019;129(11):4901-4911.
DME: diabetic macular edema; DR: diabetic retinopathy; NVG: neovascular glaucoma; PDR: proliferative diabetic retinopathy; VEGF: vascular endothelial growth factor.

# Phase II ALTITUDE® Study Design

## Moderately Severe NPDR, Severe NPDR, or Mild PDR Subjects without active CI-DME




a. Dose escalation safety review to occur two weeks after final subject in each cohort has been dosed.
b. One subject in Cohort 4 was randomized and dosed but was later found to have baseline confounding disease that made them ineligible for assessment.
CI-DME: center-involved diabetic macular edema; DRSS: Diabetic Retinopathy Severity Scale; GC: genome copies; LTFU: long term follow up; NAb+: AAV8 neutralizing antibody positive; NAb–: AAV8 neutralizing antibody negative/low; NPDR: non-proliferative diabetic retinopathy; PDR: proliferative diabetic retinopathy; SCS: suprachoroidal space; Year 1 = 48 weeks.



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# Baseline Characteristics

## NPDR (DRSS 47–53)

| | VARIABLE | Observational Control (N=12) | Dose Level 1 (N=6) | Dose Level 2 (N=24) | Dose Level 3 (N=14[b]) | Total (N=56) |
|---|---|---|---|---|---|---|
| BASELINE[a] | **Mean Age** (Years) | 54.9 | 57.2 | 60.1 | 54.4 | **57.2** |
| | **Gender – Female** | 3(25.0%) | 4 (66.7%) | 10 (41.7%) | 4 (28.6%) | **21 (37.5%)** |
| | **Hemoglobin A1c- Mean** | 7.7 | 7.9 | 7.8 | 7.7 | **7.7** |
| | **DR Category at Baseline** | | | | | |
| | DRSS 47 (Moderately Severe NPDR) | 12 (100.0%) | 4 (66.7%) | 21 (87.5%) | 10 (71.4%) | **47 (83.9%)** |
| | DRSS 53 (Severe NPDR) | 0 | 2 (33.3%) | 3 (12.5%) | 4 (28.6%) | **9 (16.1%)** |
| | **Screening BCVA** (ETDRS letters) | 85.3 | 74.7 | 83.0 | 80.1 | **81.9** |
| | **Screening OCT CRT** (µm) | 273.7 | 250.5 | 272.2 | 279.4 | **272.0** |
| | **Lens Status – Phakic n** (%) | 10 (83.3%) | 5 (83.3%) | 15 (62.5%) | 13 (92.9%) | **43 (76.8%)** |

Data cut: June 09, 2025.
a. Ocular variables refer to study eye only.
b. One subject in Dose Lovel 3 was randomized and dosed but was later found to have baseline confounding disease that made them ineligible for efficacy assessment.
BCVA: best corrected visual acuity; CRT: central retinal thickness; DRSS: Diabetic Retinopathy Severity Scale: ETDRS: Early Treatment Diabetic Retinopathy Study; NPDR: non-proliferative diabetic retinopathy; OCT: optical coherence tomography.
This is an interim analysis performed by REGENXBIO for an ongoing trial.


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# Cumulative Safety Summary

## Dose Levels 1–3 Through 2 Years: NPDR (DRSS 47-53)

**Sura-vec has been well–tolerated in Dose Levels 1, 2 and 3 NPDR subjects (n=45)**

- 16 SAEs: none considered drug-related
- No cases of vasculitis, occlusion, hypotony, or chorioretinitis
- Zero IOI with short course of prophylactic topical steroids

| DOSE LEVELS 1–3: *Common Ocular TEAEs[a] in the Study Eye through 2 Years* | No prophylactic steroids | | Prophylactic short-course topical steroids |
|---|---|---|---|
| | Dose Level 1 $2.5x10^{11}$ DRSS 47-53 (N=6) | Dose Level 2 $5x10^{11}$ DRSS 47-53 (N=24) | Dose Level 3 $1x10^{12}$ DRSS 47-53 (N=15) |
| **Conjunctival hyperemia** | 1 (16.7%) | 7 (29.2%) | 0 (0%) |
| **Conjunctival hemorrhage** | 1 (16.7%) | 3 (12.5%) | 3 (20.0%) |
| **Cataract** | 2 (33.3%) | 3 (12.5%) | 1 (6.7%) |
| **Episcleritis[b]** | 0 (0.0%) | 3 (12.5%) | 3 (20.0%) |
| **IOP increase[c]** | 0 (0.0%) | 2 (8.3%) | 3 (20.0%) |
| **Intraocular inflammation[d]** | 1 (16.7%) | 2 (8.3%) | 0 (0%) |

Data cut: June 09, 2025.
a. Common TEAEs include AEs for total group ≥10% + intraocular inflammation, with onset through the 2-year visit; includes 2 subjects who missed the 2-year visit but had data at 2.5 years.
b. All cases were mild to moderate (grade 1 - 2) and have resolved on topical corticosteroids based on slit lamp examination.
c. All cases were mild to moderate (grade 1 - 2) and resolved after steroid discontinuation and are off IOP lowering medications, except one case of bilateral Primary Angle Closure Glaucoma (grade 2) unrelated to drug which was treated with bilateral iridectomy.
d. All cases were mild (range +0.5 to +1) and most presented 2-6 weeks post injection, predominantly as anterior cells on slit lamp examination. Resolved on topical corticosteroids.
AE: adverse event; DRSS: Diabetic Retinopathy Severity Scale; IOI: intraocular inflammation; IOP: intraocular pressure; NPDR: non-proliferative diabetic retinopathy; SAE: serious adverse event; TEAE: treatment emergent adverse event.
This is an interim analysis performed by REGENXBIO for an ongoing trial.


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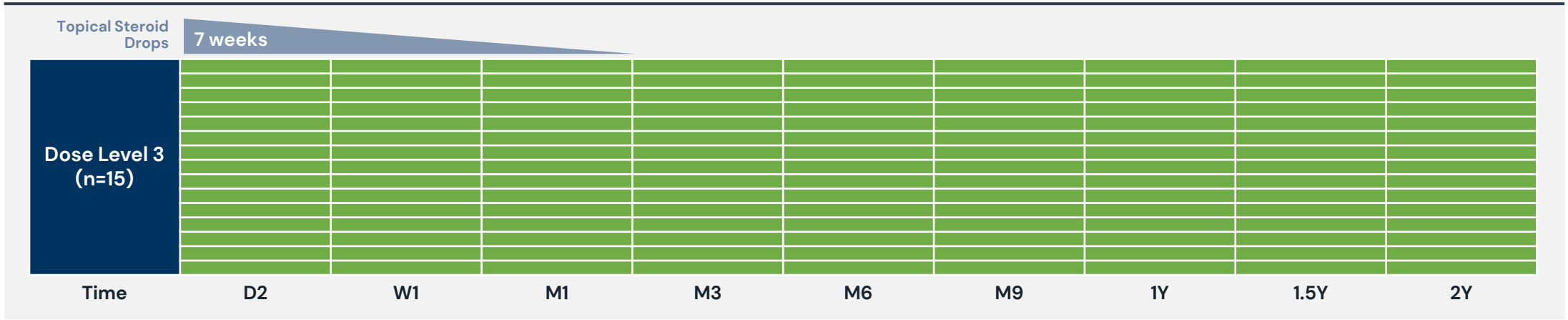
# No Intraocular Inflammation in Dose Level 3 NPDR Subjects at 2 Years with Short-course Prophylactic Topical Steroids

## ANTERIOR CHAMBER CELLS, FLARE, OR PIGMENTED CELLS

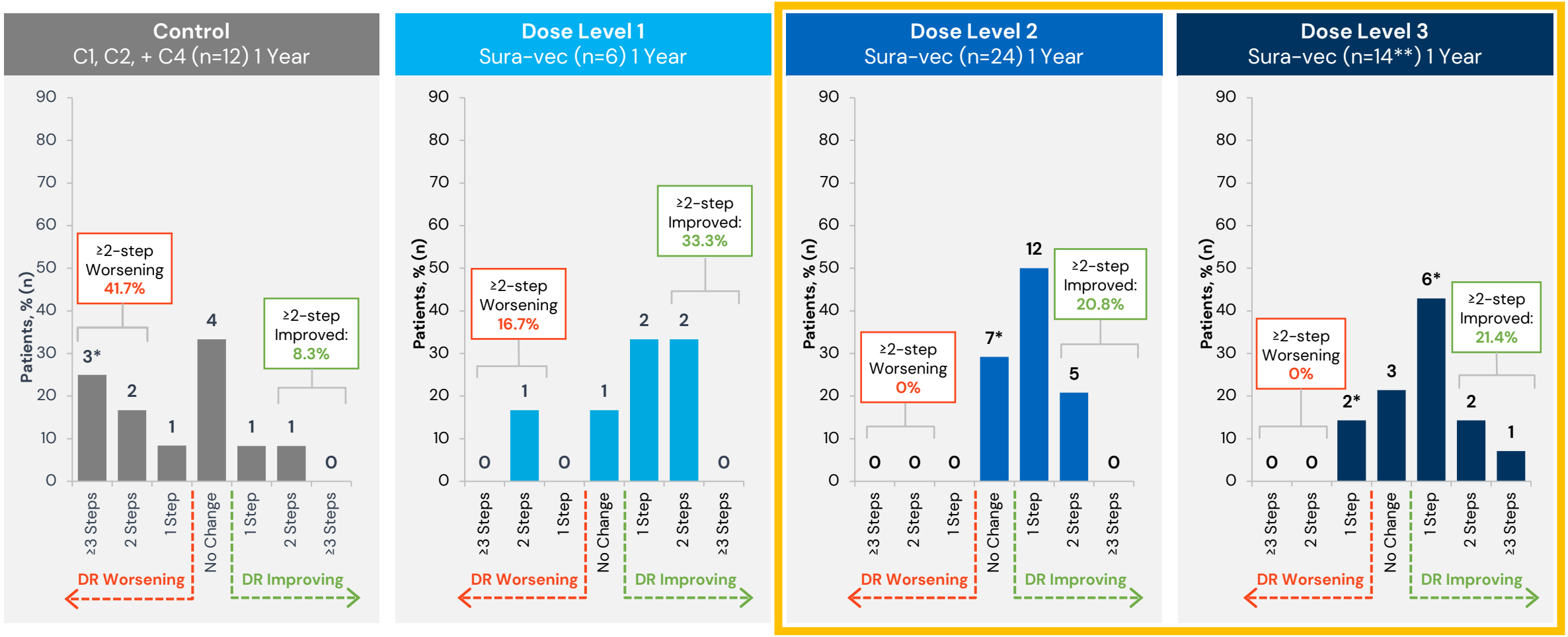



## VITREOUS CELLS, FLARE, OR PIGMENTED CELLS


Data cut: June 09, 2025.
Data shown is using LOCF (Last Observation Carried Forward) for missed visits.
This is an interim analysis performed by REGENXBIO for an ongoing trial.

# Change in DRSS at 1 Year

## Dose Level 2 and 3 sura-vec treated subjects outperform control with similar outcomes at 1 yr




Data cut: June 09, 2025. LOCF (Last Observation Carried Forward) data.
*Includes one subject who received on-study anti-VEGF.
**One subject in Dose Level 3 was found to have confounding disease at baseline and their data was excluded.
One subject each in Dose Levels 1 and 2 missed their 1-Year visit, so their 6-month results were used.
C: Cohort; DR: diabetic retinopathy; DRSS: Diabetic Retinopathy Severity Scale; VEGF: vascular endothelial growth factor.
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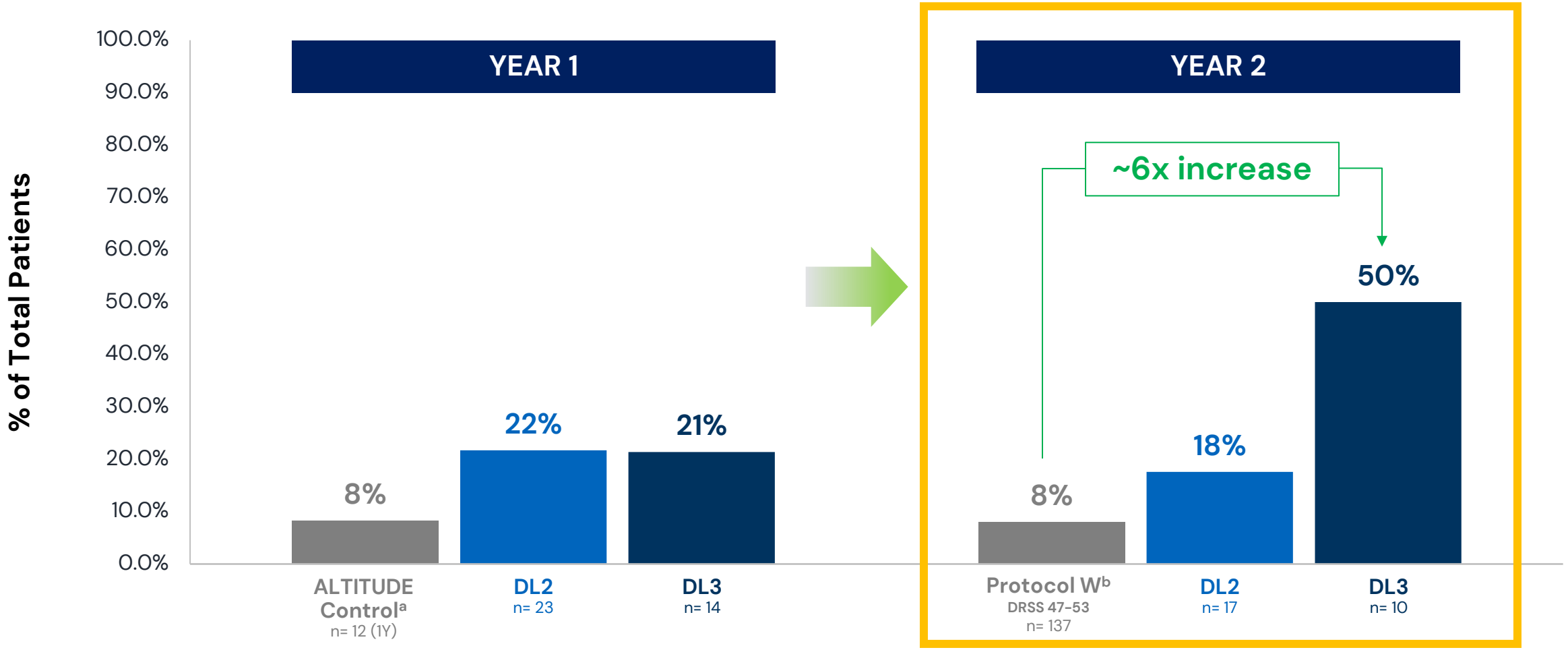
# ≥2-Step DRSS Improvement Without Additional DR Treatment at 2 Years

## Dose Level 3 sura-vec treated subjects outperformed all other groups




Data cut: June 09, 2025.
a. Control subjects crossed over to receive sura-vec at Year 1.
b. Maturi RK, et al. *JAMA Ophthalmology*. 2021;139(7):701–712. Protocol W results based on subgroup analysis of subjects with Baseline DRSS 47 and 53.
One subject in Dose Level 2 missed their 1-Year visit. One subject in Dose Level 3 was found to have confounding disease at baseline and their data was excluded.
DL: Dose Level; DRSS: Diabetic Retinopathy Severity Scale; IVT: intra-vitreal therapy.
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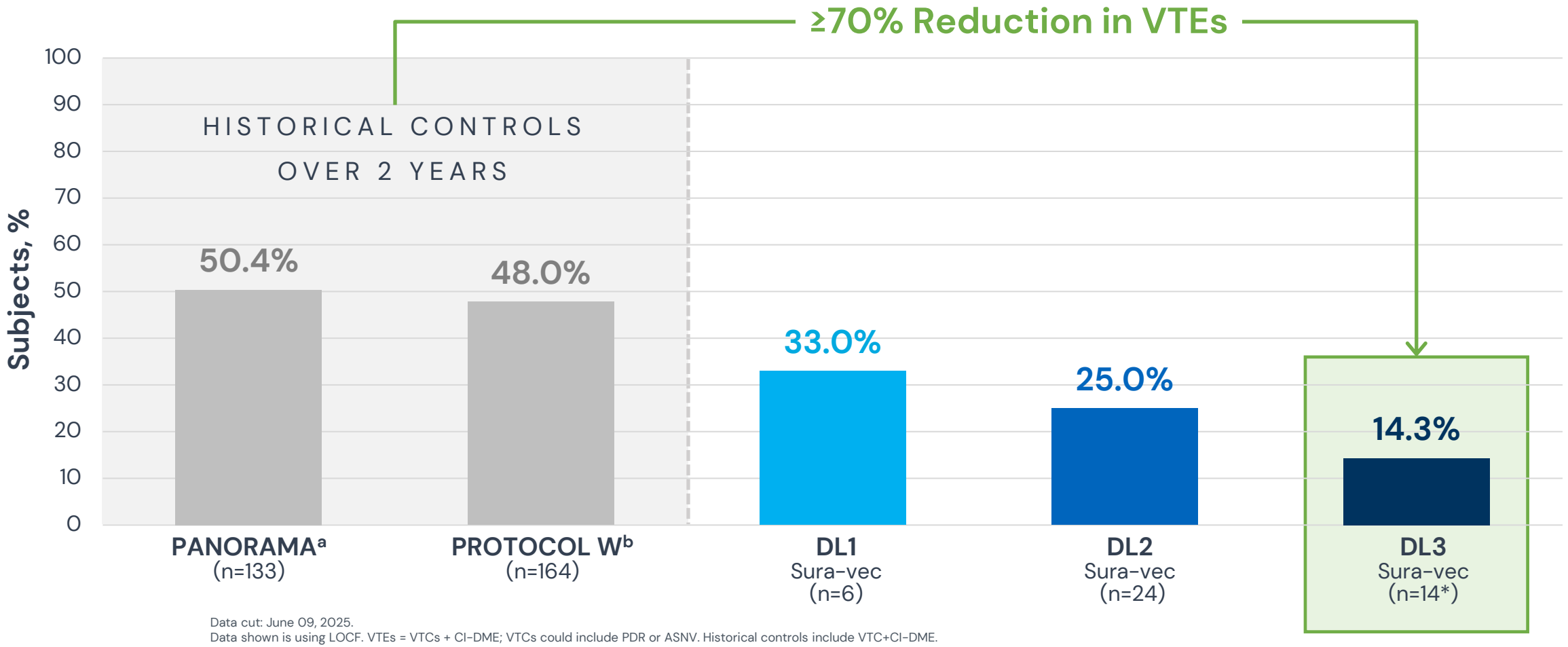
# DRSS Outcomes in Dose Level 3 Subjects over 2 Years

## Majority of subjects improved ≥ 2 steps with a single injection of sura-vec


Data cut: June 09, 2025.
*One subject without IVT missed their 2Y visit but had a 2-Step DRSS improvement at their 2.5Y visit.
This is an interim analysis performed by REGENXBIO for an ongoing trial.

# Vision Threatening Events Over 2 Years

## ≥ 70% risk reduction in VTEs observed in DL3 subjects treated with a single dose




Data cut: June 09, 2025.
Data shown is using LOCF. VTEs = VTCs + CI-DME; VTCs could include PDR or ASNV. Historical controls include VTC+CI-DME.
*One subject in Dose Level 3 was found to have confounding disease at baseline and their data was excluded.
a. Brown DM, et al. *JAMA Ophthalmology*. 2021;139(9):946-955. b. Maturi RK, et al. *JAMA Ophthalmology*. 2021;139(7):701-712. Protocol W results are based on the 2-year cumulative probability for development of PDR and CI-DME applied to the sub-population with Baseline DRSS 47 and 53.
ASNV: anterior segment neovascularization; CI-DME: center-involved diabetic macular edema; DL: dose level; LOCF: Last Observation Carried Forward; PDR: proliferative diabetic retinopathy; VTCs: vision-threatening complications; VTEs: vision-threatening events.
This is an interim analysis performed by REGENXBIO for an ongoing trial.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# Sura-vec 2 Year Results in NPDR Subjects from the Phase II ALTITUDE® Study

## Single in-office suprachoroidal injection of sura-vec

### **Well-tolerated** at Dose Levels 1, 2, and 3

- **No IOI** in Dose Level 3 NPDR subjects with **short-course topical steroids**
- No drug-related serious adverse events.
- No cases of vasculitis, occlusion, hypotony or cases of chorioretinitis.

### Durable, long-term efficacy observed in Dose Level 3

- **Majority** of subjects achieved **DRSS improvement**
  - **50%** achieved **≥2-step** improvement **without additional DR treatment**
- **Reduced** the risk of **disease progression**
  - **≥ 70% risk reduction** in vision-threatening events compared to historical controls

**Pivotal Phase IIb/III trial will be initiated**

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Data cut: June 09, 2025.
VTEs = VTCs + CI-DME.
CI-DME: center-involved diabetic macular edema; DRSS: Diabetic Retinopathy Severity Scale: IOI: intraocular inflammation; NPDR: non-proliferative diabetic retinopathy; VEGF: vascular endothelial growth factor; VTCs: vision-threatening complications; VTEs: vision-threatening events.
This is an interim analysis performed by REGENXBIO for an ongoing trial.