Kalaris Therapeutics

# Kalaris Company Overview

September 2026

# Forward-Looking Statements & Disclaimer

This presentation contains "forward-looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and Section 21E of the Securities Exchange Act of 1934, as amended, that involve substantial risk and uncertainties.

All statements, other than statements of historical fact, contained in this presentation, including statements regarding the strategy, future operations, prospects, plans and objectives of management of Kalaris, the therapeutic potential of TH103 for neovascular Age-related Macular Degeneration and other exudative and neovascular retinal diseases, the anticipated timeline for reporting data from the ongoing Phase 1b/2 clinical trial of TH103, plans to advance TH103 into Phase 3 clinical trials and to develop TH103 for additional indications, plans to improve the manufacturing process for TH103 and the sufficiency of Kalaris' cash resources for the period anticipated, are forward-looking statements. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "might," "plan," "potential," "predict," "project," "should," "target," "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These statements are based on current expectations and beliefs of the management of Kalaris as well as assumptions made by, and information currently available to, the management of Kalaris and are subject to risks and uncertainties. There can be no assurance that future developments affecting Kalaris will be those that it has anticipated. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements as a result of various important factors, including: risks associated with the clinical development and regulatory approval of TH103, including potential delays in the completion of clinical trials; expectations regarding the therapeutic benefits, clinical potential and clinical development of TH103; the timing of and Kalaris' ability to enroll patients in clinical trials; whether results from preclinical studies and initial data from early clinical trials will be predictive of the final results of the clinical trials or future trials; dependence on third parties for the development and manufacture of TH103; risks related to the inability of Kalaris to obtain sufficient additional capital to continue to advance its product candidate; uncertainties in obtaining successful clinical results for product candidates and unexpected costs that may result therefrom; risks related to the failure to realize any value from any product candidates being developed and anticipated to be developed in light of inherent risks and difficulties involved in successfully bringing product candidates to market; the ability to obtain, maintain, and protect intellectual property rights related to product candidates; changes in regulatory requirements and government incentives; Kalaris' competitive position and expectations regarding developments and projections relating to its competitors and any competing therapies that are or become available; the risk of involvement in current and future litigation; and such other factors as are set forth in Kalaris' public filings with the U.S. Securities and Exchange Commission, including, but not limited to, those described under the heading "Risk Factors".

Kalaris may not actually achieve the plans, intentions or expectations disclosed in its forward-looking statements, and you should not place undue reliance on its forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements Kalaris makes. The forward-looking statements contained in this presentation are made as of the date of this presentation, and Kalaris does not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

This presentation also contains estimates, projections and other statistical data made by independent parties and by Kalaris relating to market size and growth and other data about Kalaris' industry and business. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. Kalaris has not independently verified the accuracy and completeness of the information obtained by third parties included in this presentation. In addition, projections, assumptions and estimates of Kalaris' future performance and the future performance of the market in which Kalaris operates are necessarily subject to high degree of uncertainty and risk.

# Your Vision
# Our Mission

**Kalaris** is a clinical stage biopharmaceutical company dedicated to the development and commercialization of treatments for prevalent retinal diseases

Our lead asset, TH103, was **invented by Dr. Napoleone Ferrara**, whose pioneering research established the anti-VEGF class of therapies for retinal and oncology diseases, to address major remaining unmet needs

**TH103** is an anti-VEGF therapeutic specifically engineered to achieve extended intraocular retention with enhanced VEGF inhibition

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**VEGF =** Vascular Endothelial Growth Factor

# Potential best in class, dual-action, anti-VEGF therapeutic

- ✓ **>$15 Billion[1] and growing** retinal neovascular / exudative disease global branded market, with significant remaining unmet need
- ✓ **Invented by VEGF pioneer and scientific co-founder Dr. Napoleone Ferrara**, TH103 is a dual-action biologic targeting **VEGF**, the primary mediator of disease activity in the retina, and **HSPG**, abundant in retinal layers
- ✓ Phase 1a clinical data support molecular hypothesis with **strong clinical activity and suggest potential for extended treatment durability**
- ✓ **Phase 1b/2 clinical trial currently enrolling nAMD patients** with data expected in 1H 2027; cash runway anticipated to fund company into Q4 2027
- ✓ **Leadership team experienced in developing and commercializing retina therapeutics** and successfully building biopharma companies

Sources: 1) Based on publicly available sales data 2024.

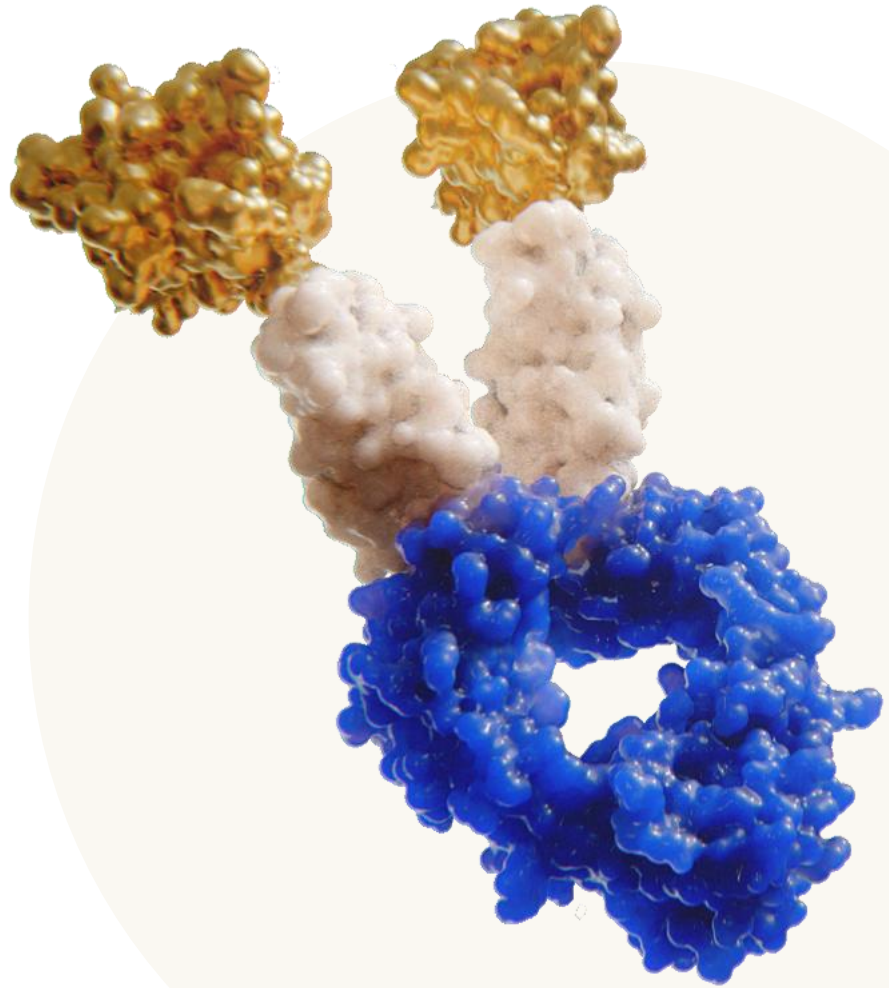
**HSPG** = Heparan Sulfate Proteoglycans
**nAMD**: neovascular Age-related Macular Degeneration

# TH103

Engineered to improve upon a drug class that has helped millions of patients, with **optimization built directly into the molecule itself.**

Fully humanized, recombinant fusion protein designed for intravitreal delivery, with **potential to be best-in-class for neovascular and exudative retinal diseases.**

Targets VEGF as a soluble decoy receptor with high affinity for both VEGF and HSPG, **engineered for increased and longer-acting activity.**



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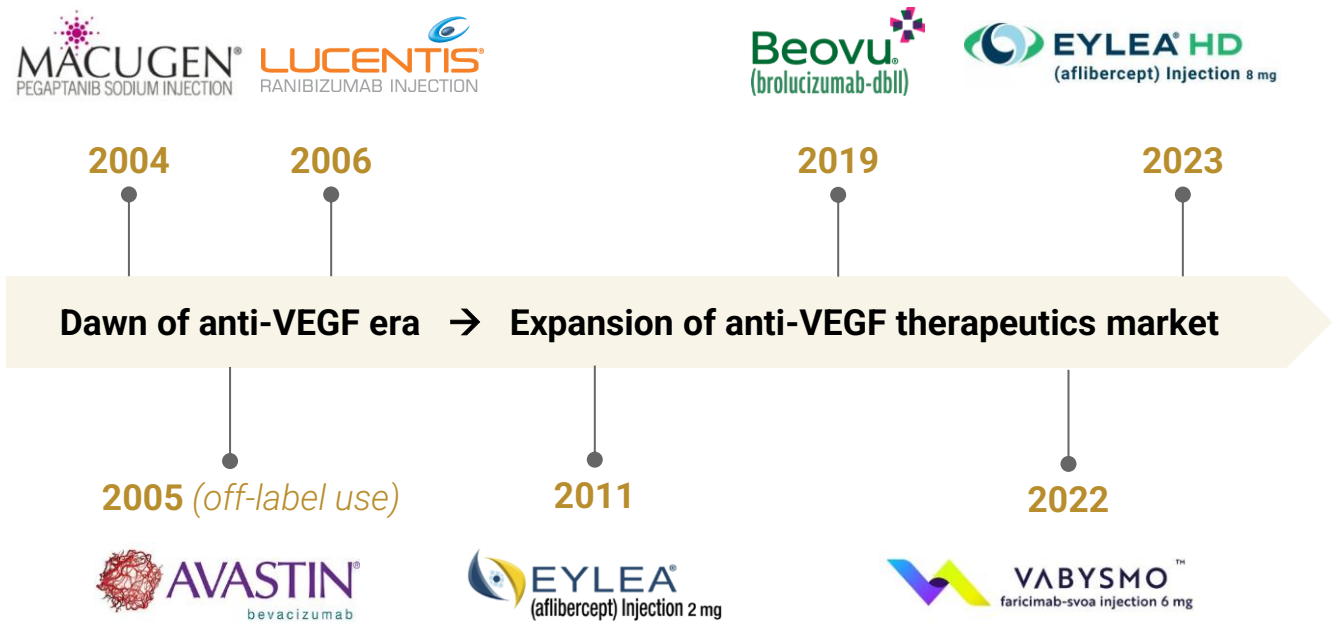
# Anti-VEGF Therapeutics Background

# Anti-VEGF therapy has revolutionized treatment for major retinal diseases, a global market projected to grow to over $18B by 2029

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**NEXT-GEN ANTI-VEGF**

## TH103

Kalaris is focused on driving the next wave of innovation for **retinal neovascular / exudative disease**

Sources: 2025 Retinal Pharmaceuticals Market Report, Market Scope October 2025; FDA Approvals

# Unmet need remains high, with suboptimal real-world outcomes

**Onerous visit frequency**

Best outcomes may require **clinic visits as frequently as every 1-2 months** for monitoring and injections.

**Current Solution**

Physicians attempt to **extend the time between patient visits,** reducing injection frequency.

**Suboptimal Outcomes**

Reduced injection frequency can lead to **undertreatment and reduced efficacy.**

*"Although multiple anti-VEGF therapies exist, unmet need remains high owing to treatment underutilization…"*[1]

*…regular treatment and monitoring requires substantial time commitment and may contribute to poor compliance. This treatment burden has been recognized by ophthalmologists; consequently, personalized treatment strategies attempt to balance the treatment burden against potentially reduced efficacy"*[1]

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Sources: 1) Mulligan, K., Seabury, S. A., Dugel, P. U., Blim, J. F., Goldman, D. P., & Humayun, M. S. (2020). Economic value of anti–vascular endothelial growth factor treatment for patients with wet age-related macular degeneration in the United States. JAMA ophthalmology, 138(1), 40-47.

# Recognizing persistent unmet need, our lead asset was developed by VEGF pioneering scientist, Napoleone Ferrara

- **Co-discoverer of VEGF and VEGF isoforms** while at Genentech
- **Scientist** behind Anti-VEGF Agents:

AVASTIN® bevacizumab  LUCENTIS® RANIBIZUMAB INJECTION  **TH103**

- **Winner** of Major Awards including Lasker Award, Champalimaud Vision Award and Breakthrough Prize in Life Sciences

**Napoleone Ferrara, MD**

Kalaris Co-Founder

Genentech Fellow | Professor, UCSD

# Our Solution: TH103

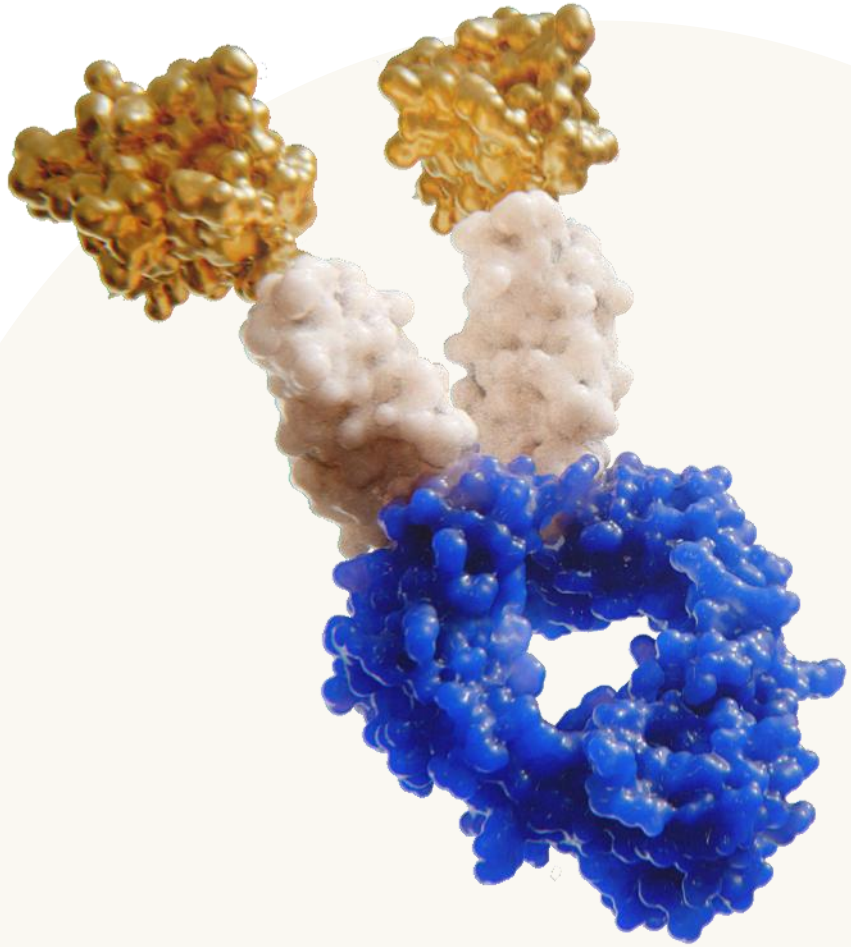
# TH103: Dual-targeting, next generation drug engineered to address major unmet needs in retina disease

**Optimized VEGF Binding:**

Leverages higher-affinity VEGFR1[1], potentially leading to enhanced VEGF inhibition

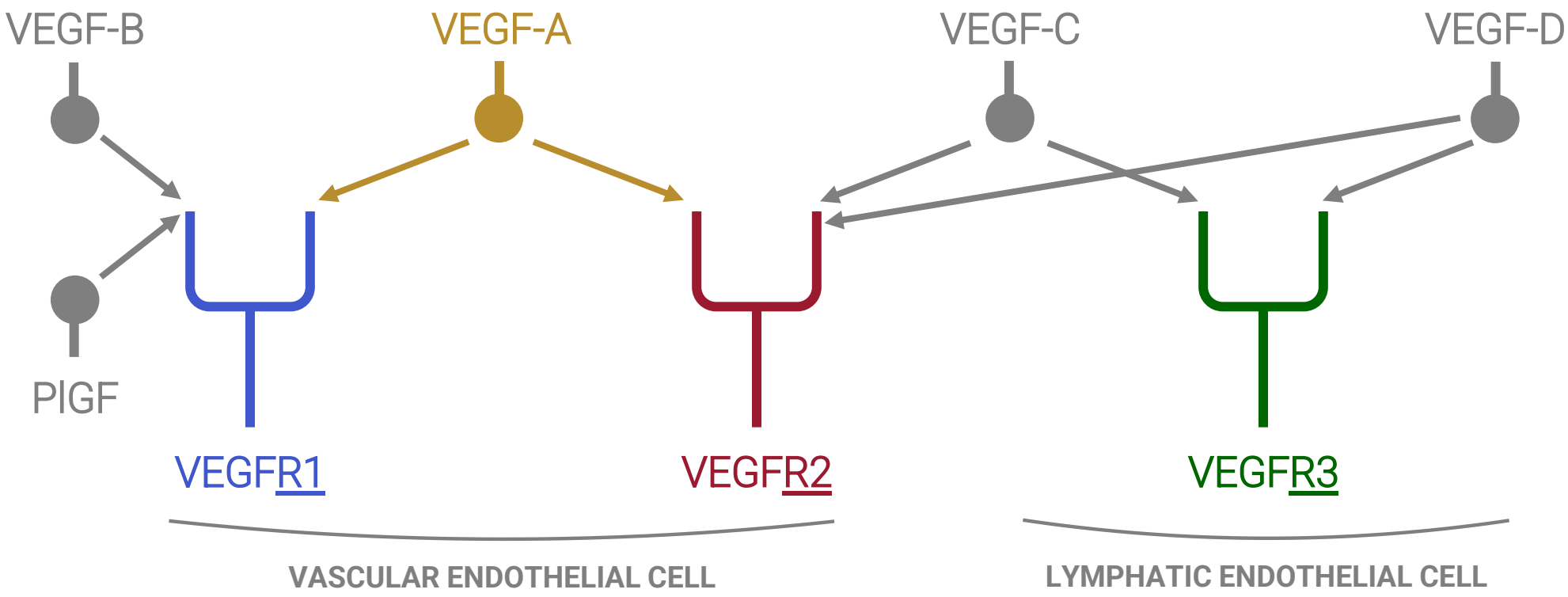
**Extended Ocular Retention:**

Leverages high-affinity binding to HSPG[2], potentially providing prolonged retinal retention and driving enhanced efficacy and/or durability



Source: 1) Holash, J., Davis, S., Papadopoulos, N., Croll, S. D., Ho, L., Russell, M., ... & Rudge, J. S. (2002). VEGF-Trap: a VEGF blocker with potent antitumor effects. Proceedings of the National Academy of Sciences, 99(17), 11393-11398. 2) Xin H, Biswas N, Li P, et al. 2021. 'Heparin-binding VEGFR1 variants as long-acting VEGF inhibitors for treatment of intraocular neovascular disorders', Proc Natl Acad Sci U S A, 118.

# VEGF-A is the primary mediator of neovascularization and exudation




**R#** = Receptor 1, 2, and 3

Source: Karkkainen, M. J., & Petrova, T. V. (2000). Vascular endothelial growth factor receptors in the regulation of angiogenesis and lymphangiogenesis. Oncogene, 19(49), 5598-5605.

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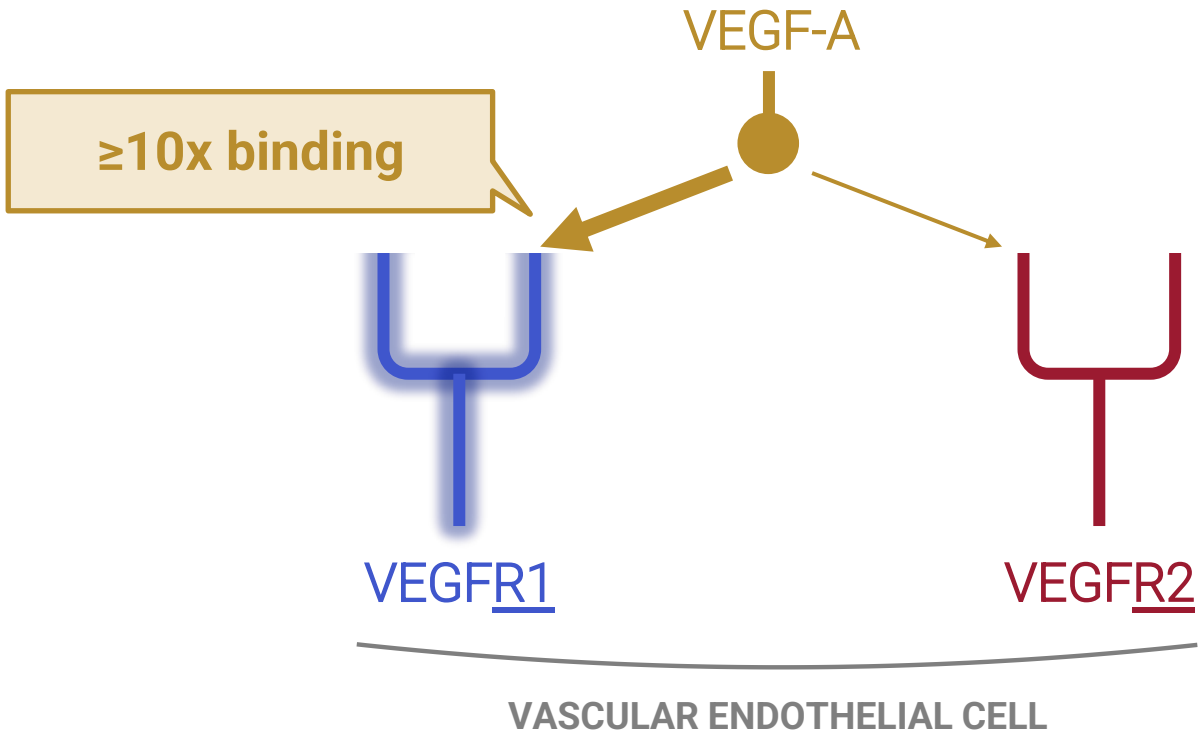
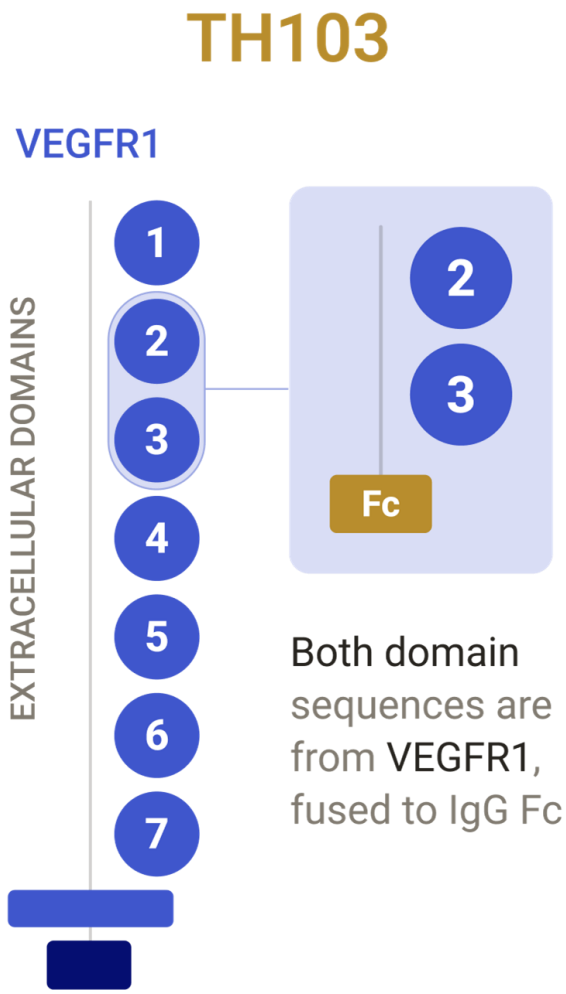
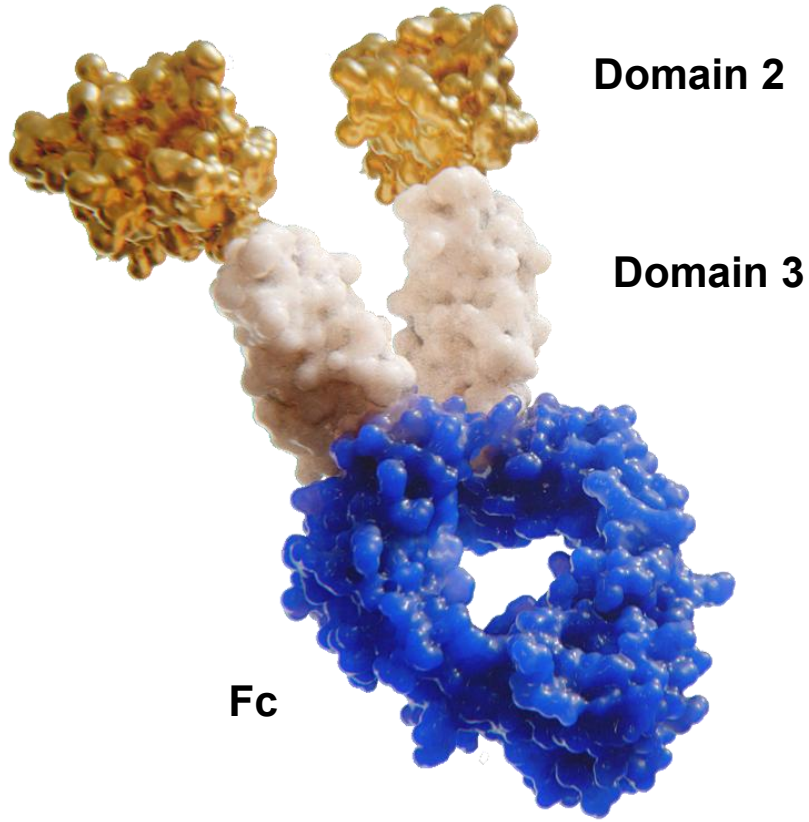
# VEGF binds to Receptor 1 with ≥10-fold greater affinity than Receptor 2




Sources: Karkkainen, M. J., & Petrova, T. V. (2000). Vascular endothelial growth factor receptors in the regulation of angiogenesis and lymphangiogenesis. Oncogene, 19(49), 5598-5605; Cudmore et al., Scientific Reports (2020); Wiesmann et al., Cell (1997); Ferrara et al., Nature Medicine (2003)

# TH103 leverages the key binding domains from VEGFR1

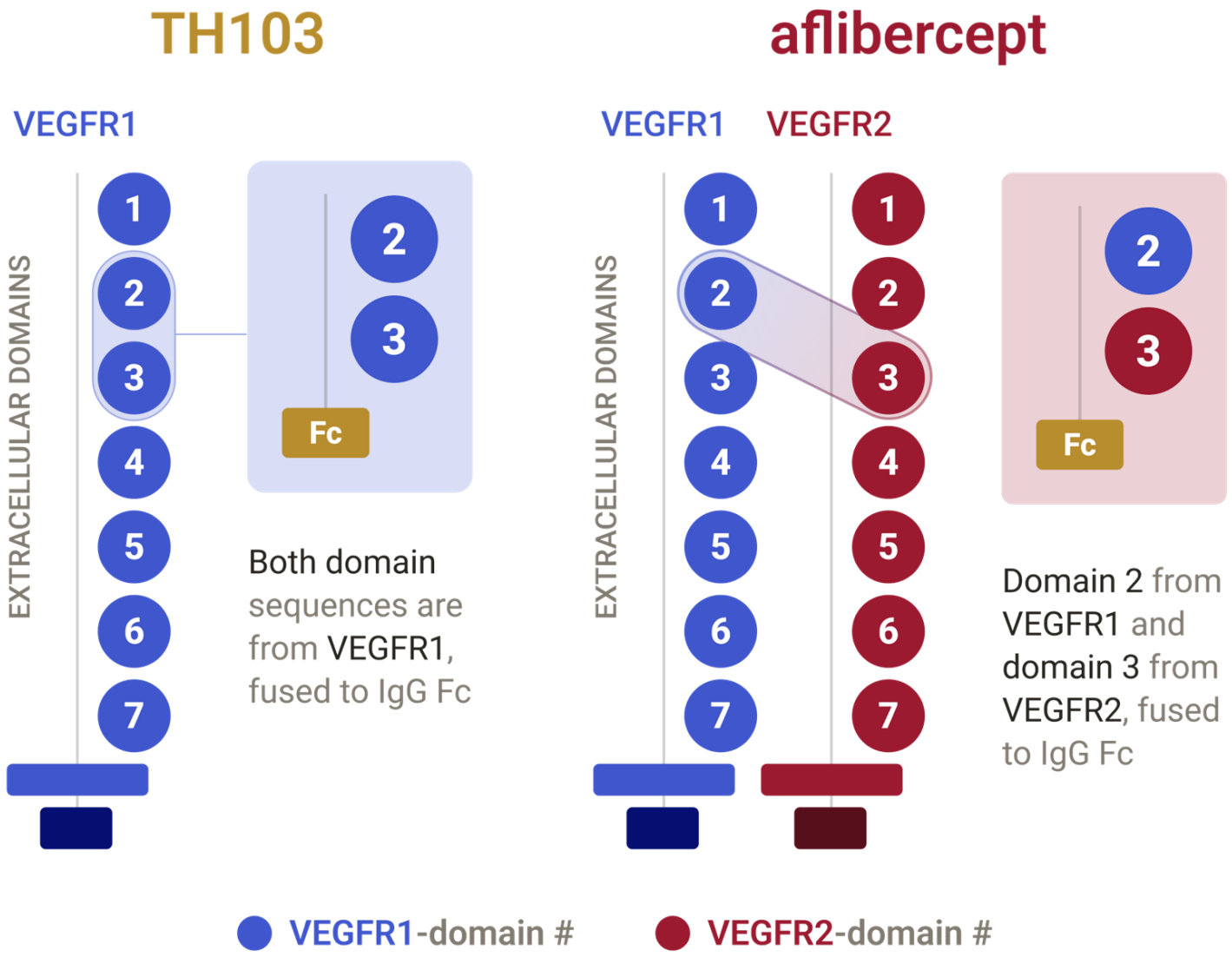



IgG= Immunoglobulin G; Fc =Fragment Crystallizable Region

Source: Xin, H., Biswas, N., Li, P., Zhong, C., Chan, T. C., Nudleman, E., & Ferrara, N. (2021). Heparin-binding VEGFR1 variants as long-acting VEGF inhibitors for treatment of intraocular neovascular disorders. Proceedings of the National Academy of Sciences, 118(21), e1921252118.

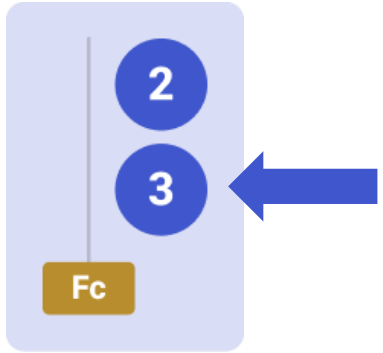
# Using higher affinity VEGFR1 may confer enhanced VEGF inhibition



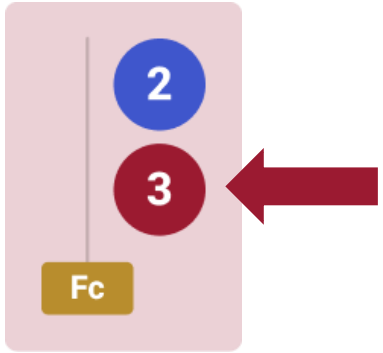

Source: Xin, H., Biswas, N., Li, P., Zhong, C., Chan, T. C., Nudleman, E., & Ferrara, N. (2021). Heparin-binding VEGFR1 variants as long-acting VEGF inhibitors for treatment of intraocular neovascular disorders. Proceedings of the National Academy of Sciences, 118(21), e1921252118.

# VEGFR1 domain 3 enables potential TH103 binding to retina

TH103




aflibercept




**Domain 3 from VEGFR1:**

Binds **strongly to HSPG** which are present in all retinal layers, thereby sequesteringTH103 in the eye

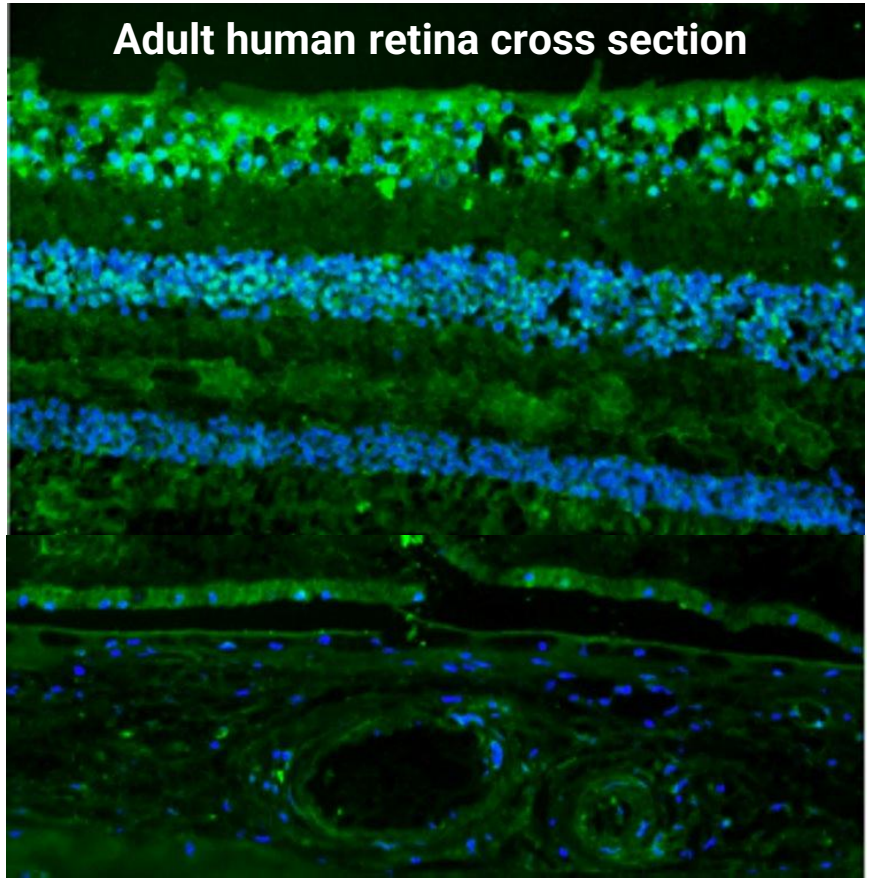
**In contrast, domain 3 from VEGFR2:**

Binds less strongly to HSPG, leading to reduced tissue sequestration (preferred for systemic circulation, e.g., ZALTRAP®, but suboptimal for ocular retention)[2]

VEGFR1-domain # VEGFR2-domain #

Source: 1) Xin H, Biswas N, Li P, et al. 2021. 'Heparin-binding VEGFR1 variants as long-acting VEGF inhibitors for treatment of intraocular neovascular disorders', Proc Natl Acad Sci U S A, 118.; 2) Holash, J., Davis, S., Papadopoulos, N., Croll, S. D., Ho, L., Russell, M., ... & Rudge, J. S. (2002). VEGF-Trap: a VEGF blocker with potent antitumor effects. Proceedings of the National Academy of Sciences, 99(17), 11393-11398.

# HSPG is present throughout the retinal layers[1]




HSPG has been shown to be highly concentrated near CNV lesions[2], **potentially prolonging ocular retention precisely at the site of disease activity**

**Green:** Heparan sulfate antibody

**Blue:** DAPI staining of cell nuclei

Sources: 1) Clark SJ, Keenan TD, Fielder HL, et al. 2011. 'Mapping the differential distribution of glycosaminoglycans in the adult human retina, choroid, and sclera', Invest Ophthalmol Vis Sci, 52: 6511-21; 2) Regatieri, C. V., Dreyfuss, J. L., Melo, G. B., Lavinsky, D., Hossaka, S. K., Rodrigues, E. B., & Nader, H. B. (2010). Quantitative evaluation of experimental choroidal neovascularization by confocal scanning laser ophthalmoscopy: fluorescein angiogram parallels heparan sulfate proteoglycan expression. Brazilian Journal of Medical and Biological Research, 43, 627-633.

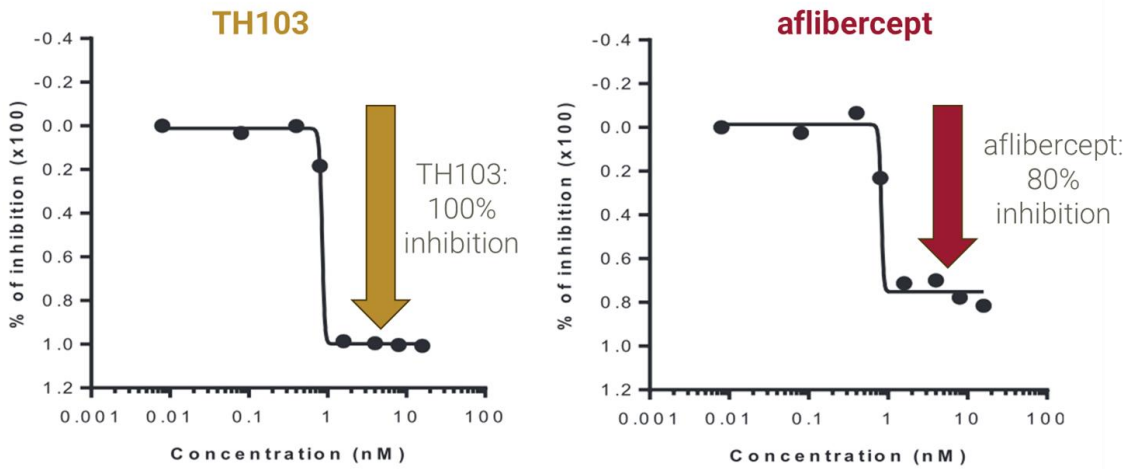
# Preclinical Data Review & Phase 1a Clinical Data

# TH103: Increased VEGF-inhibitory activity vs. aflibercept in preclinical studies

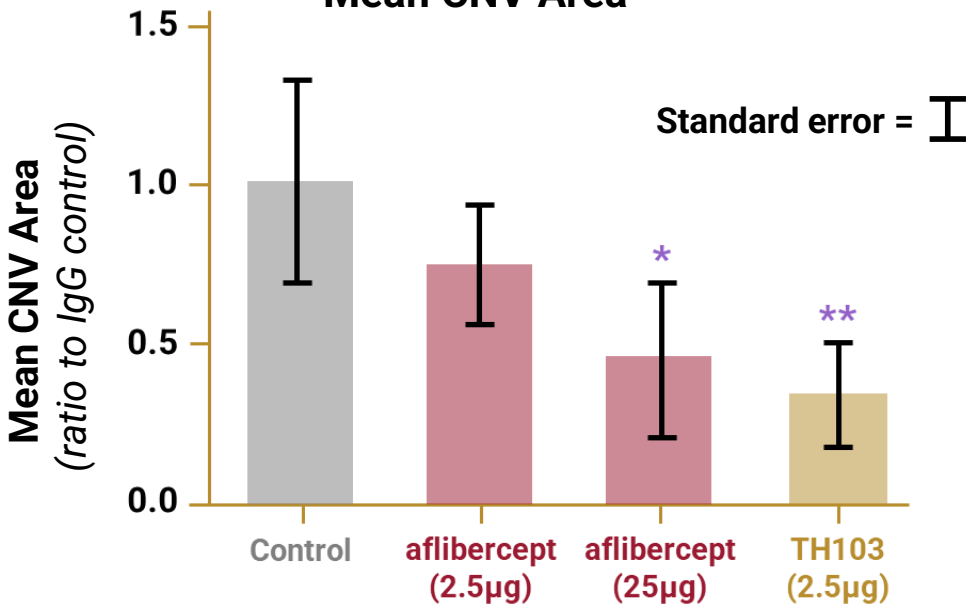
**TH103 achieved 100% inhibition vs. aflibercept 80% inhibition of VEGF-induced endothelial cell proliferation**
*(in vitro, bovine choroidal endothelial cell proliferation assay[1])*

**TH103 increased reduction in mean choroidal neovascularization (CNV) area after administration at Day -1[2]**
*(in vivo, murine model)*

## Concentration Dependent VEGF Inhibition




## Mean CNV Area



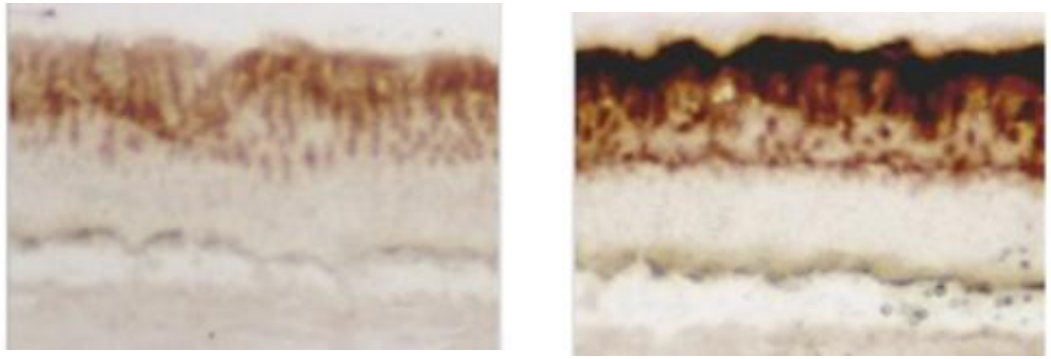

Notes: 1) human choroidal endothelial cells proliferate in nAMD pathologic angiogenesis; 2) The rodent laser-induced CNV model is the most widely used animal model to study the effects of anti-VEGFs in inhibiting CNV; Data are based on three independent experiments with at least five mice per group; Asterisks denote significant differences (Student's t test) compared to the appropriate IgG control groups (**P < 0.01, *P < 0.05); Source: Adapted from Xin H, Biswas N, Li P, et al. 2021. 'Heparin-binding VEGFR1 variants as long-acting VEGF inhibitors for treatment of intraocular neovascular disorders', Proc Natl Acad Sci U S A, 118.

# TH103: Demonstrated prolonged retinal retention vs. aflibercept in preclinical studies

**TH103 demonstrated increased retention in the retina as compared to aflibercept at two weeks post-injection**
*(in vivo, rabbit model)*

**TH103 demonstrated reduced systemic exposure after intravitreal administration[1]**
*(in vivo, murine model)*

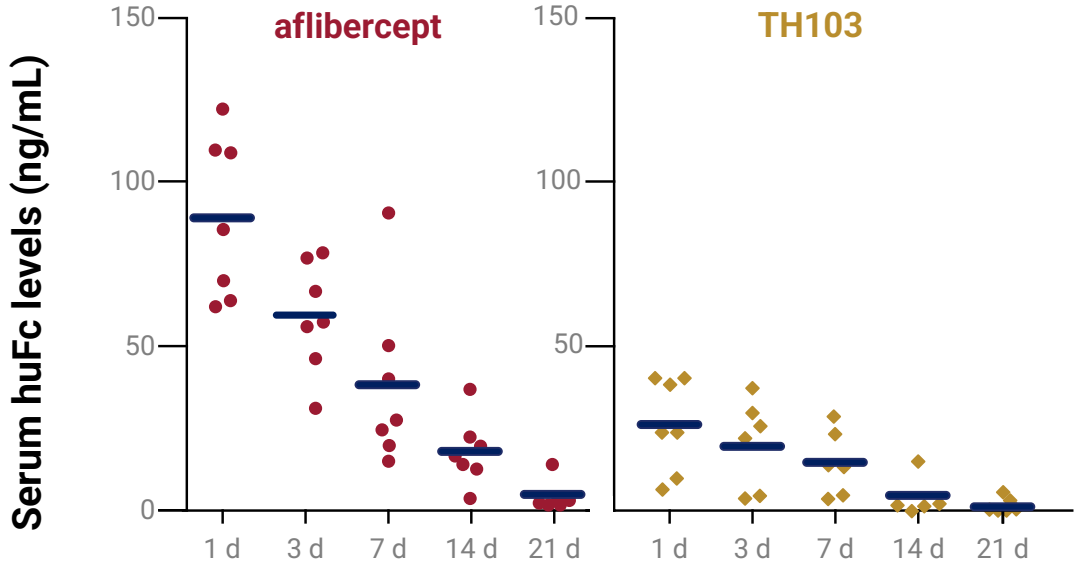
## Rabbit Retina Cross-Sections at Day 14



aflibercept TH103

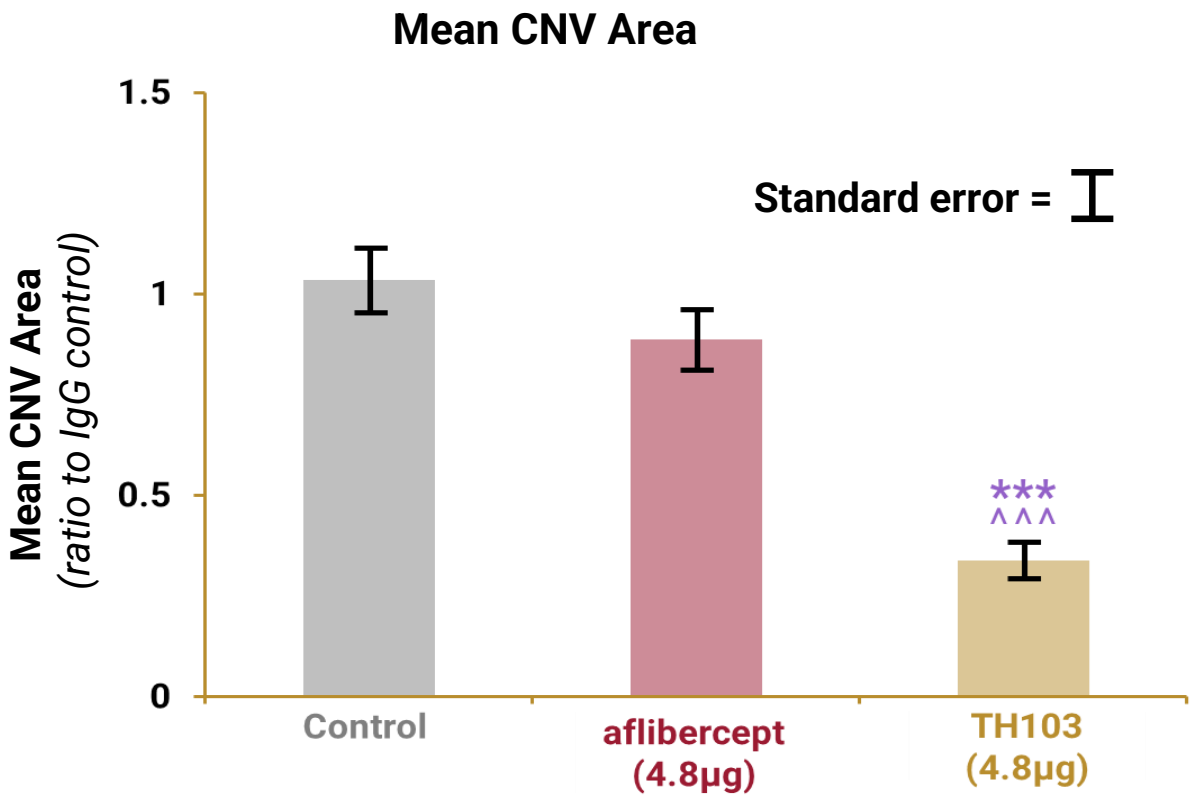
*Equimolar dose administrated; Darker immuno-histochemistry staining indicates higher drug levels present*

## Serum Levels of TH103 Compared to Aflibercept After Bilateral Intravitreal Injection




Note: 1) Serum levels of aflibercept and TH103 in mice at different time points after intravitreal injection. Each molecule was injected in both eyes in equimolar amounts (2.4 µg). After 1, 3, 7, 14, and 21 d, peripheral blood was collected from the tail vein. Human Fc levels were measured by ELISA. Values shown are means ± SEM. n = 8 per point;
Source: Adapted from Xin H, Biswas N, Li P, et al. 2021. 'Heparin-binding VEGFR1 variants as long-acting VEGF inhibitors for treatment of intraocular neovascular disorders', Proc Natl Acad Sci U S A, 118.

# TH103: Demonstrated prolonged bioactivity vs. aflibercept in an animal model




In a second murine experiment, rather than at Day -1, TH103 and aflibercept were administered at Day -14 prior to laser injury to assess durability of treatment effect. In this model, **TH103 showed smaller mean CNV area compared to equimolar aflibercept 21 days after injection.**

Note: TH103 and aflibercept administered 14 days prior to laser injury; CNV measurement at Day 7 post-laser; Symbols denote significant differences (Student's t test) between TH103 and control (***P < 0.001) and between TH103 and aflibercept (^^^P < 0.001). Source: Adapted from Xin H, Biswas N, Li P, et al. 2021. 'Heparin-binding VEGFR1 variants as long-acting VEGF inhibitors for treatment of intraocular neovascular disorders', Proc Natl Acad Sci U S A, 118.

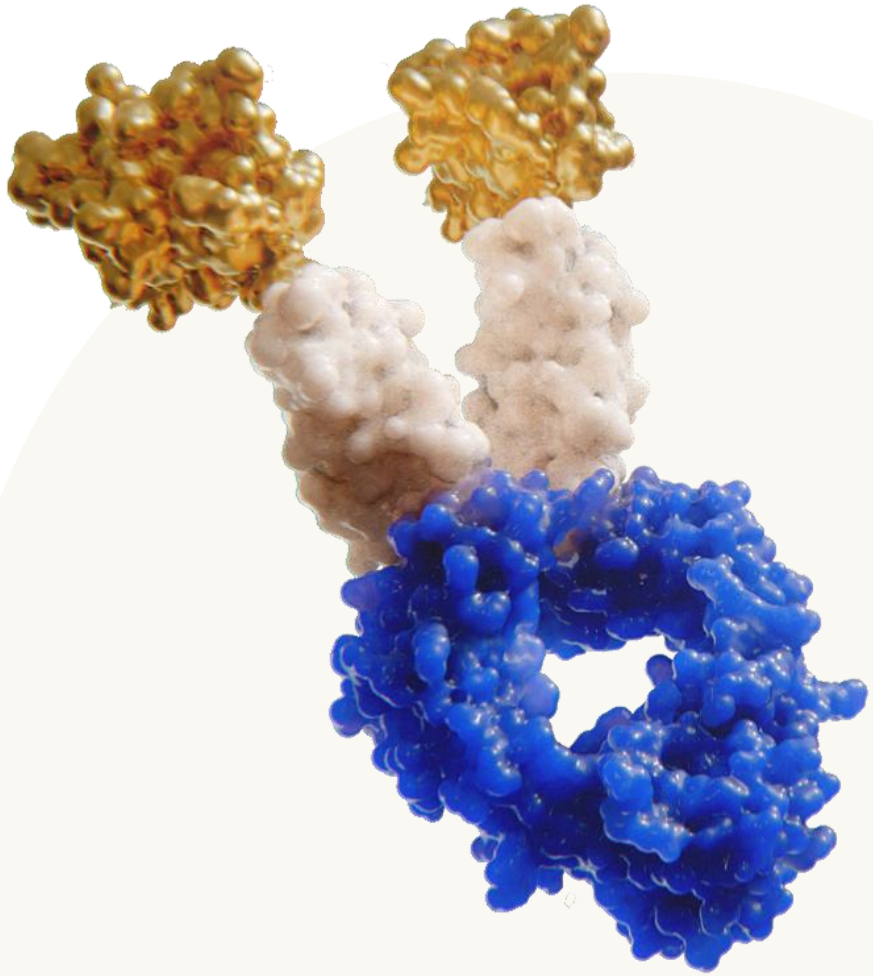
# Phase 1a SAD data summary

✓ **Efficacy:** rapid, robust response on BCVA and OCT parameters observed across dose levels at one month

✓ **Safety:** TH103 generally well tolerated, supporting exploration of multi-dose regimen

✓ **Durability:**

- PK analysis consistent with greater TH103 intraocular retention vs. other leading agents
- Single-dose durability signal suggests potential for stronger durability outcomes after standard four-dose loading regimen



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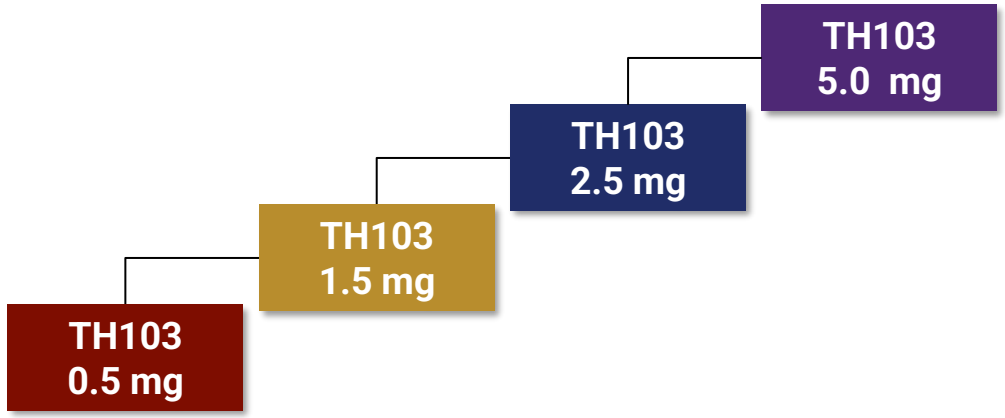
BCVA = Best Corrected Visual Acuity; CST = Central Subfield Thickness; PK = Pharmacokinetics

# Phase 1a Single Ascending Dose (SAD) Study in Treatment-Naïve nAMD

Multi-center U.S. study to evaluate safety, tolerability, pharmacokinetics, and anti-VEGF activity following a single injection of TH103




**Study Details**

- Primary timepoint for analysis at Month 1
- Frequent follow-up visits within the first month; patients then followed monthly out to Month 6

**Criteria for retreatment with aflibercept**

- Increase of > 50 µm thickness in CST on SD-OCT compared to the lowest previously measured CST
- New macular hemorrhage due to nAMD

CST = Central Subfield Thickness
SD-OCT = Spectral-Domain Optical Coherence Tomography

Note: Data safety monitoring oversight occurred before dose-escalations

# Key baseline characteristics of patients in Phase 1a SAD trial of TH103

| | | Tx.-Naïve (efficacy analysis population) | | | Including Tx-Experienced | |
|---|---|---|---|---|---|---|
| | | Dec. 2025 Data Release (n=13) | Additional Tx-Naïve Patients (n=4)[4] | All Tx.-Naïve Patients (n=17) | Tx.-Experienced[2] (n=3) | All Patients[2] (n=20) |
| **Age (mean)** | | **78** | **76** | **78** | **81** | **78** |
| **Sex (female \| male)** | | **9 \| 4** | **3 \| 1** | **12 \| 5** | **2 \| 1** | **14 \| 6** |
| **BCVA[1] (ETDRS letters, mean, range)** | | **58** (36-73) | **66** (57-71) | **60** (36-73) | **63** (53-69) | **60** (36-73) |
| **Lesion Type** | **Type 1** | **5** (38%) | **3 (75%)** | **8 (47%)** | **2** (67%) | **10** (50%) |
| | **Type 2** | **1** (8%) | - | **1 (6%)** | **1** (33%) | **2** (10%) |
| | **Type 3[3]** | **6** (46%) | **1 (25%)** | **7 (41%)** | - | **7** (35%) |
| | **Ungradable** | **1** (8%) | - | **1 (6%)** | - | **1** (5%) |
| **CST[1] (μm, mean, range)** | | **477** (310-657) | **478** (390-528) | **477** (310-657) | **472** (391-577) | **476** (310-657) |

**No study dropouts and 100% protocol adherence**

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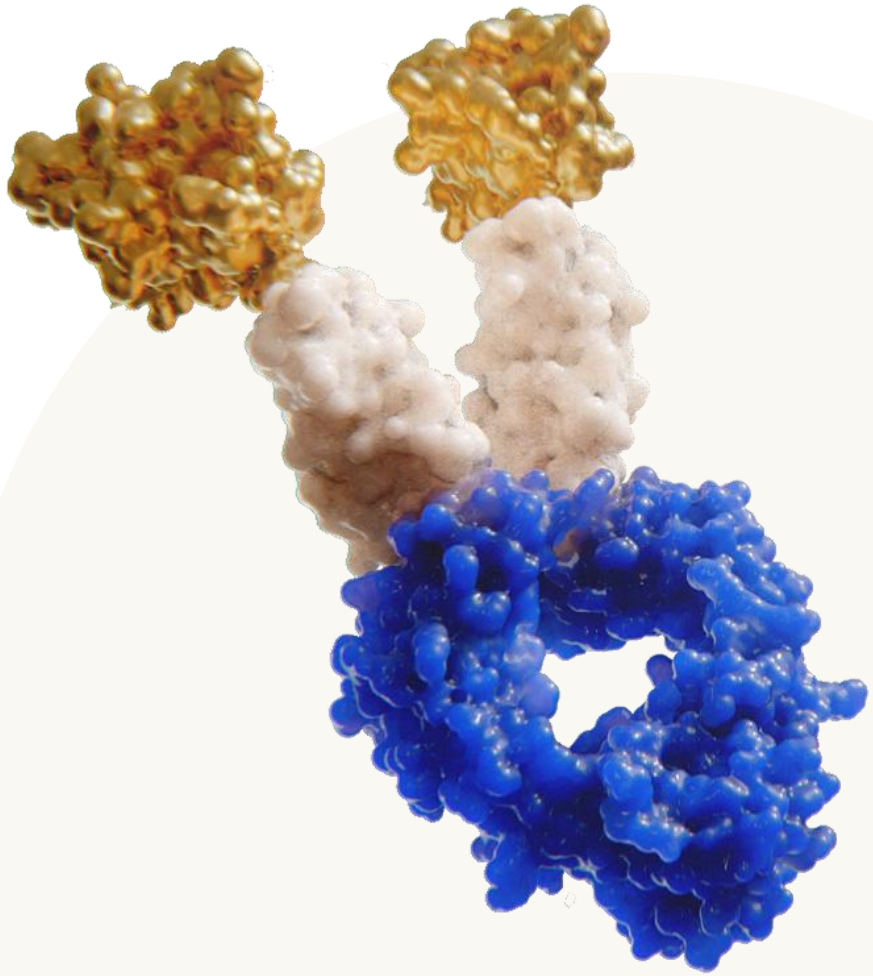
Notes: 1) BCVA and CST readings as of the day patients received their first dose of TH103; 2) Includes 3 treatment-experienced patients that are excluded from efficacy analyses that were administered either 2.5mg or 5mg of TH103; 3) Also called retinal angiomatous proliferation, or RAP; all but one of the Type 3 lesions were determined to be Stage 3; 4) Patients administered single 2.5mg dose of TH103

# Phase 1a SAD data summary

✓ **Efficacy:** rapid, robust response on BCVA and OCT parameters observed across dose levels at one month



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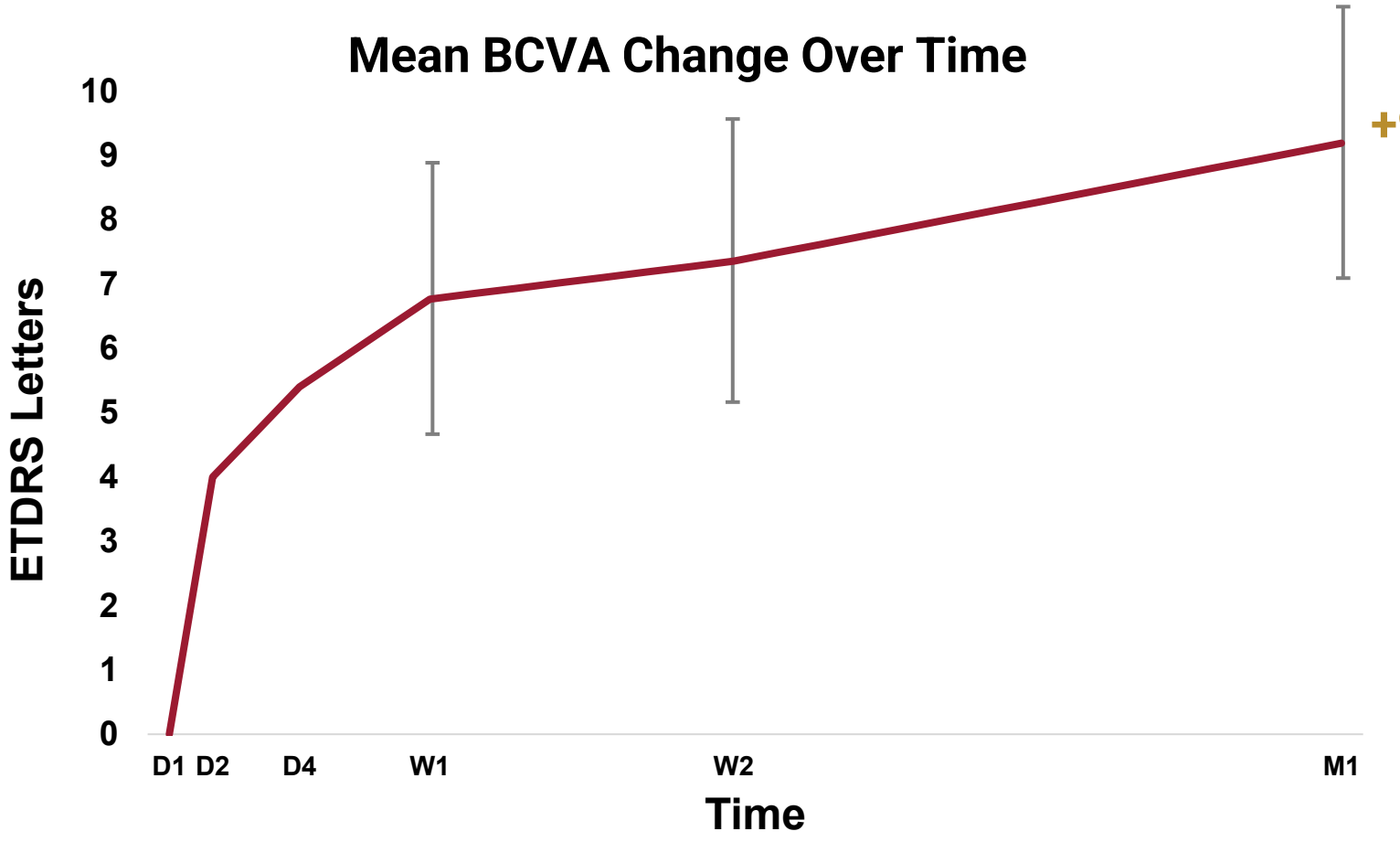
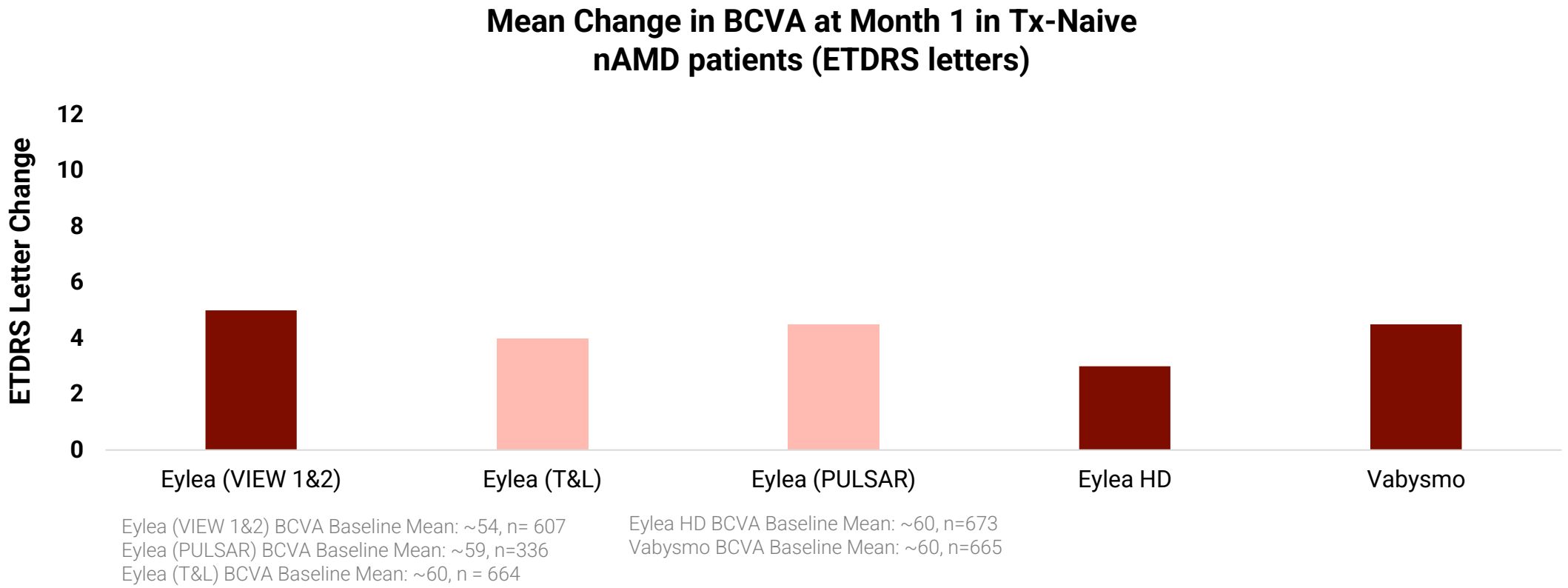
# Mean 9.2 letter gain in BCVA letter score after a single TH103 injection at Month 1




**53%** ↑ **≥10** letter gain

ETDRS = Early Treatment Diabetic Retinopathy Study
Note: n = 17 at all timepoints except Month 1, where n =16; one patient in the 0.5 mg cohort was treated with aflibercept at Week 2 and therefore the Month 1 data point is censored. Brackets indicate standard error

# Change in mean visual acuity in treatment-naïve nAMD patients for current market-leading agents at Month 1

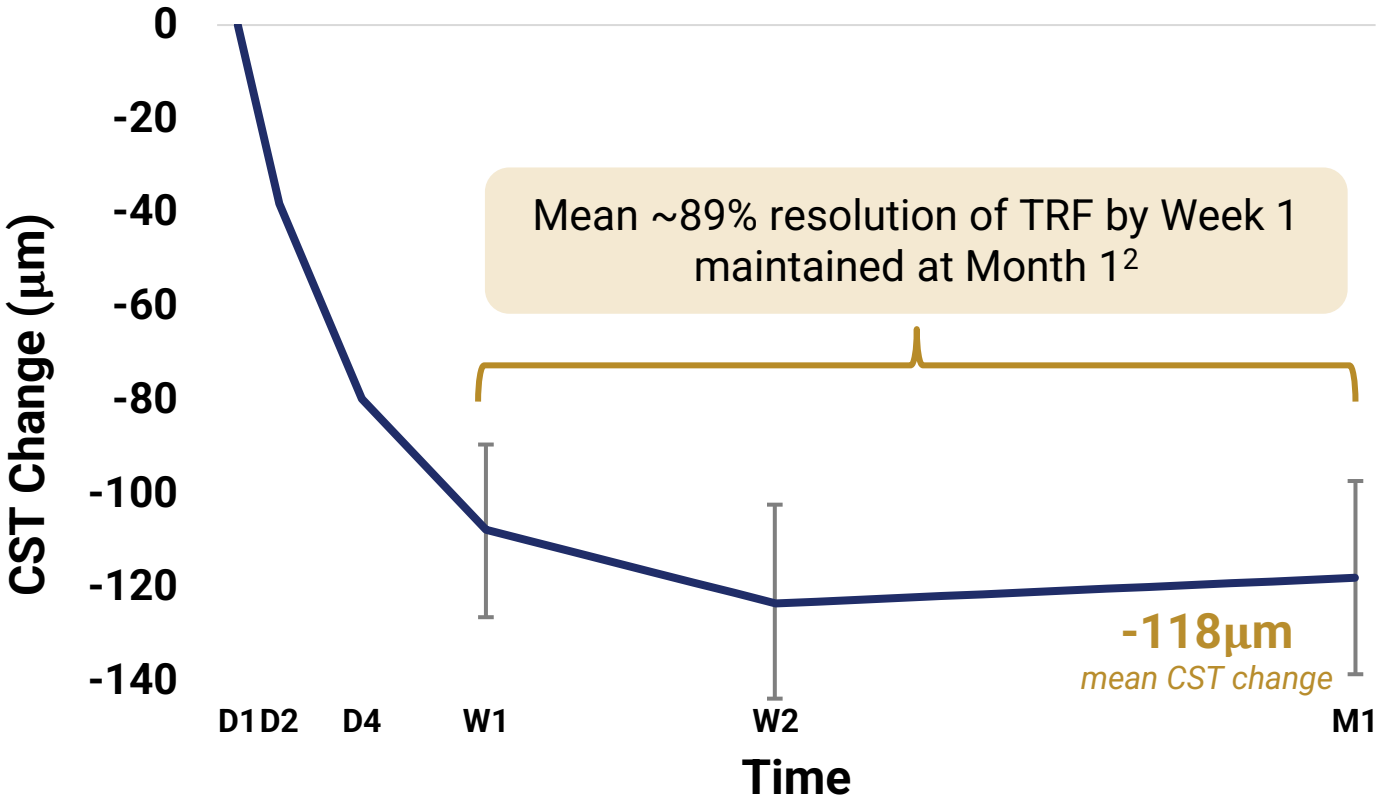



The above competitor data is approximate and reflects multiple Phase 3 studies. No head-to-head trials have been conducted comparing TH103 to any approved agents for nAMD. Such data may not be directly comparable due to differences in trial protocols, dosing regimens and patient populations. Accordingly, these cross-trial comparisons may not be reliable.

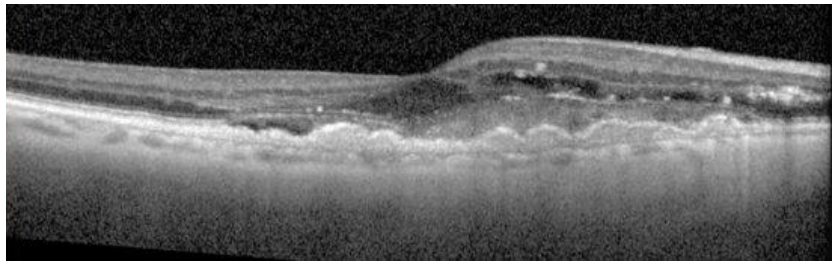
Sources: Khanani, Arshad M., et al. "TENAYA and LUCERNE: Two-Year Results from the Phase 3 Neovascular Age-Related Macular Degeneration Trials of Faricimab with Treat-and-Extend Dosing in Year 2." Ophthalmology, vol. 131, no. 8, 2024, pp. 914–926; Lanzetta, P., et al. "Intravitreal Aflibercept 8 mg in Neovascular Age-Related Macular Degeneration (PULSAR): 48-Week Results from a Randomised, Double-Masked, Non-Inferiority, Phase 3 Trial." The Lancet, vol. 403, no. 10344, 2024, pp. 1141-1152; Heier, J., et al. "Intravitreal Aflibercept (VEGF Trap-Eye) in Wet Age-Related Macular Degeneration." Ophthalmology, vol. 119, no. 12, 2012, pp. 2537-2548.

# Rapid, robust improvement in CST and total retinal fluid (TRF) volume at Week 1 and Month 1

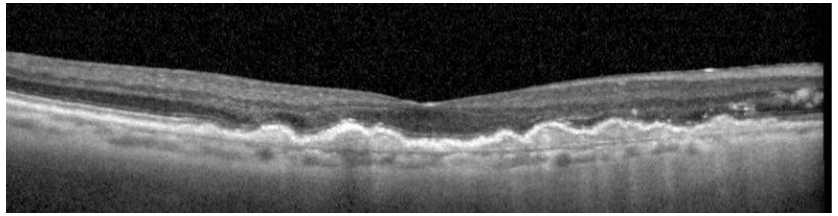
## Mean CST Change Over Time[1]




## Case Example (1.5 mg)



Single Dose TH103



Month 1

Note: n = 17 at all timepoints except Month 1, where n =16; one patient in the 0.5 mg cohort was treated with aflibercept at Week 2 and therefore the Month 1 data point is censored. Brackets indicate standard error.
Sources: 1) As measured by independent reading center; 2) Data from automated fluid measurement software, Notal Vision Inc.; percentage change in mean central subfield TRF volume (subretinal fluid + intraretinal fluid in the central subfield, measured in nanoliters) from Day 1 to Week 1 & Month 1

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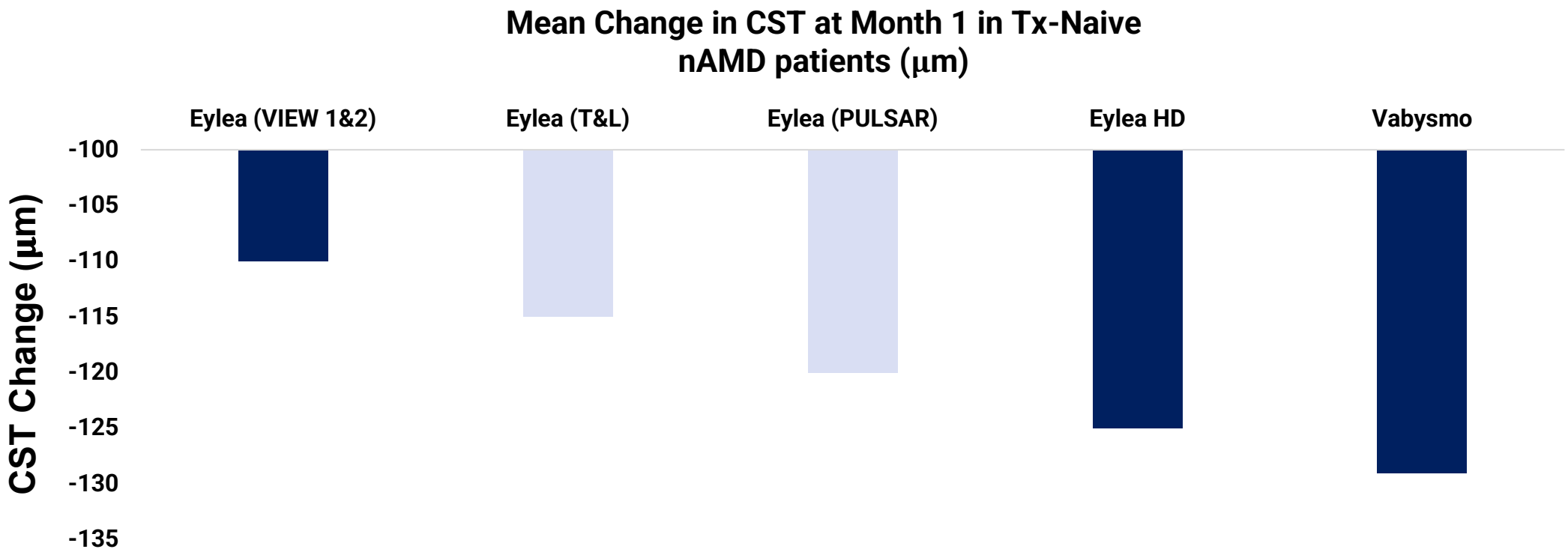
# Change in mean CST in treatment-naïve nAMD patients for current market-leading agents at Month 1



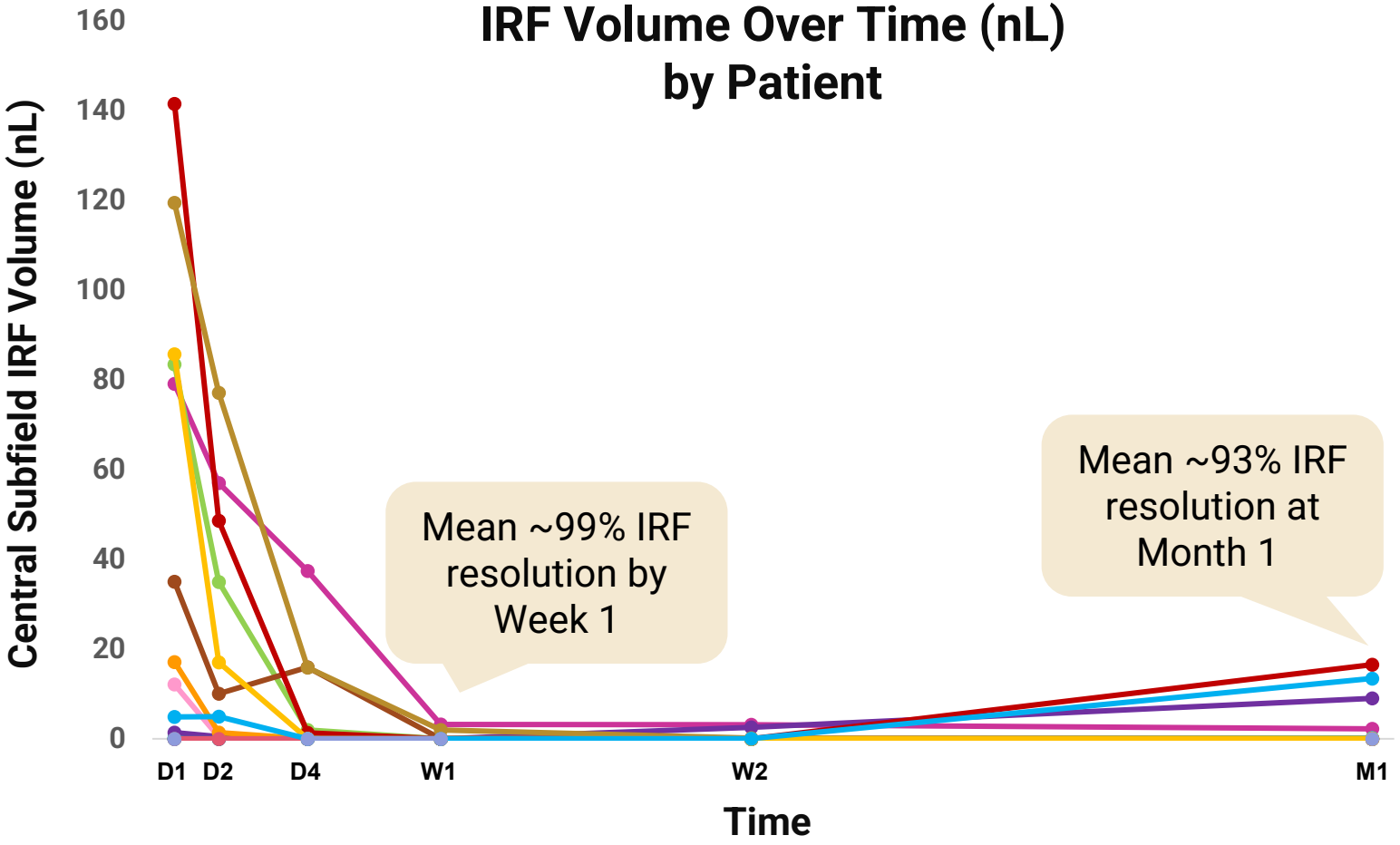

Eylea (VIEW 1&2) CST Baseline Mean: ~324, n=607
Eylea (PULSAR) CST Baseline Mean: ~367, n=336
Eylea (T&L) CST Baseline Mean: ~358, n = 664

Eylea HD CST Baseline Mean: ~370, n=673
Vabysmo CST Baseline Mean: ~357, n=665

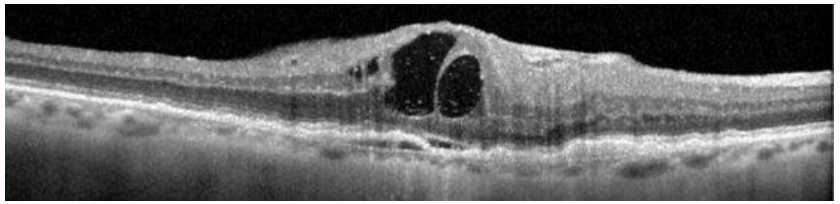
The above competitor data is approximate and reflects multiple Phase 3 studies. No head-to-head trials have been conducted comparing TH103 to any approved agents for nAMD. Such data may not be directly comparable due to differences in trial protocols, dosing regimens and patient populations. Accordingly, these cross-trial comparisons may not be reliable.

Sources: Khanani, Arshad M., et al. "TENAYA and LUCERNE: Two-Year Results from the Phase 3 Neovascular Age-Related Macular Degeneration Trials of Faricimab with Treat-and-Extend Dosing in Year 2." Ophthalmology, vol. 131, no. 8, 2024, pp. 914–926; Lanzetta, P., et al. "Intravitreal Aflibercept 8 mg in Neovascular Age-Related Macular Degeneration (PULSAR): 48-Week Results from a Randomised, Double-Masked, Non-Inferiority, Phase 3 Trial." The Lancet, vol. 403, no. 10344, 2024, pp. 1141-1152; Heier, J., et al. "Intravitreal Aflibercept (VEGF Trap-Eye) in Wet Age-Related Macular Degeneration." Ophthalmology, vol. 119, no. 12, 2012, pp. 2537-2548.

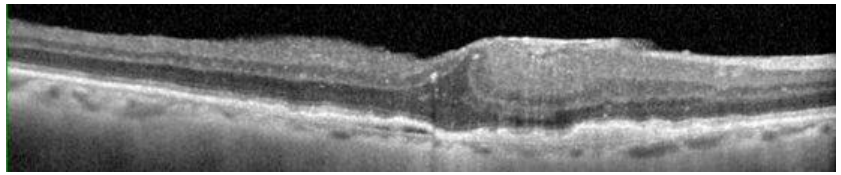
# Rapid and consistent resolution of intraretinal fluid (IRF) volume observed across doses



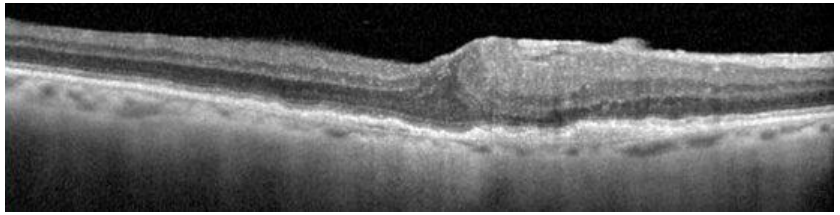

Case Example (2.5 mg)



Single Dose TH103



Week 1



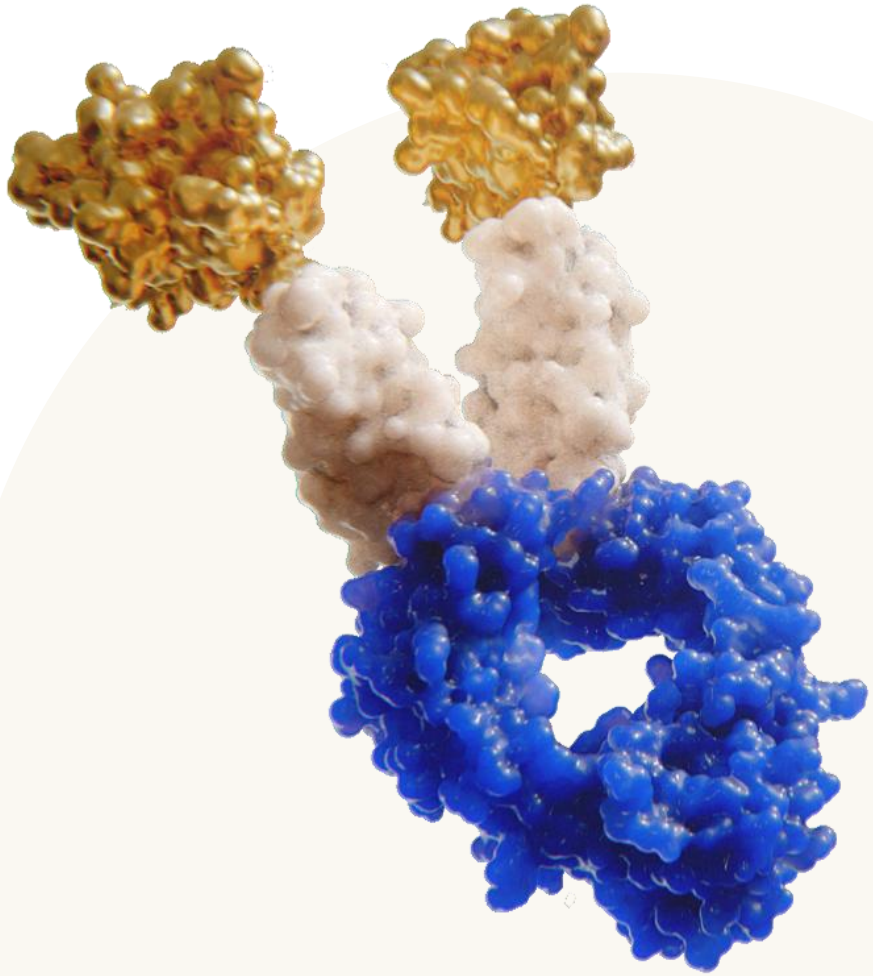
Month 1

Note: Measurement of intraretinal fluid volume (nL) in the central subfield, depicting individual patients (n = 16; one patient in the 0.5 mg cohort was treated with aflibercept 2mg at Week 2 and excluded from the analysis); patients with zero measured IRF throughout depicted timeframe appear as overlapping lines on the x-axis.
Source: Data from automated fluid measurement software, Notal Vision Inc.; percentage change in mean central subfield IRF volume (nL) from Day 1 to Week 1 / Month 1 (n = 16)

# Phase 1a SAD data summary

✓ **Efficacy:** rapid, robust response on BCVA and OCT parameters observed across dose levels at one month

✓ **Safety:** TH103 generally well tolerated, supporting exploration of multi-dose regimen



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# Safety Summary from Phase 1a SAD Trial[1]

- No dose limiting toxicity (DLT) or treatment-emergent serious adverse events (SAEs) observed
- Transient, mild-moderate intraocular inflammation (IOI) presented at Day 4 in 2 patients dosed at 2.5mg with TH103 manufacturing batch #1[2]
- No cases of IOI in 6 patients dosed at 2.5mg with TH103 manufacturing batch #2[3]
- One case of transient, moderate IOI that resolved without sequelae in a patient dosed at 5.0mg with TH103 manufacturing batch #2[3]

1) Additionally, in the Phase 1b/2 MAD trial there was a previously disclosed case that presented after the 3rd injection in the 1.5mg cohort of moderate IOI including mild arteriolar abnormalities without evidence of leak or occlusion; the patient was asymptomatic and the event resolved.
2) N = 13 patients treated with manufacturing batch #1
3) N = 7 patients treated with manufacturing batch #2, including 3 treatment-experienced patients that are excluded from the efficacy analyses. All patients completed trial including 6-month follow-up period. TH103 manufacturing batch #1 was additionally purified to generate batch #2 by reducing levels of host cell proteins in the drug product.

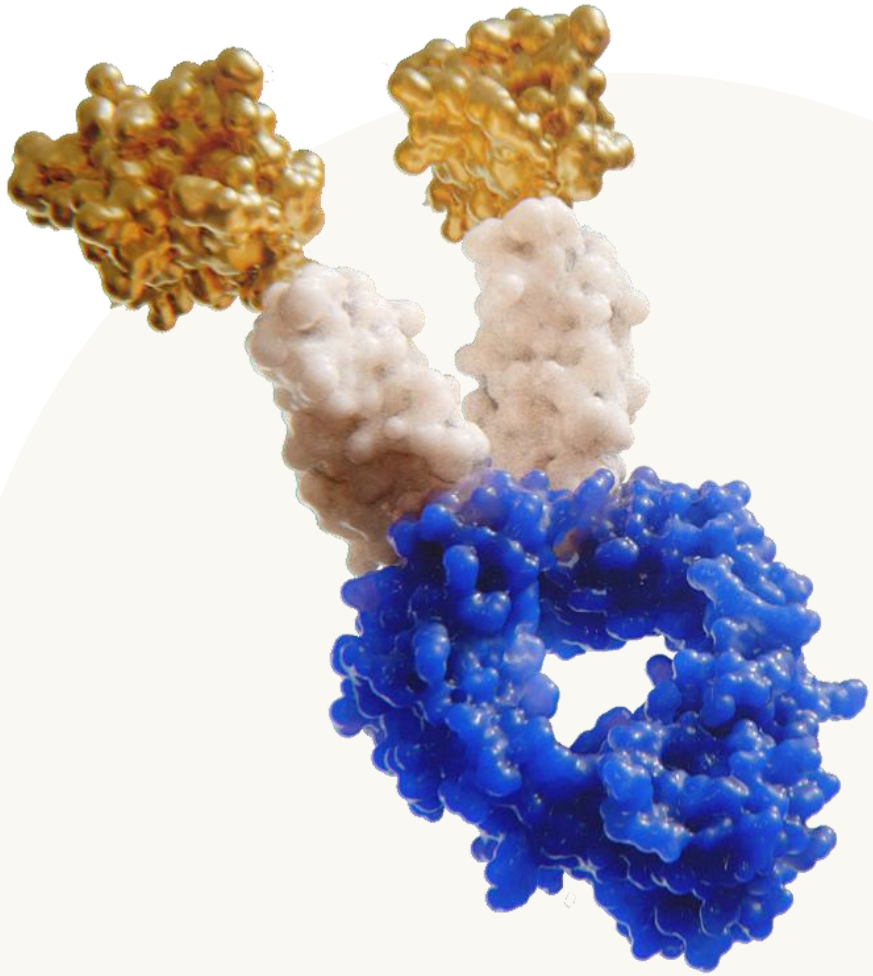
# Phase 1a SAD data summary

✓ **Efficacy:** rapid, robust response on BCVA and OCT parameters observed across dose levels at one month

✓ **Safety:** TH103 generally well tolerated, supporting exploration of multi-dose regimen

✓ **Durability:**

- PK analysis consistent with greater TH103 intraocular retention vs. other leading agents
- Single-dose durability signal suggests potential for stronger durability outcomes after standard four-dose loading regimen



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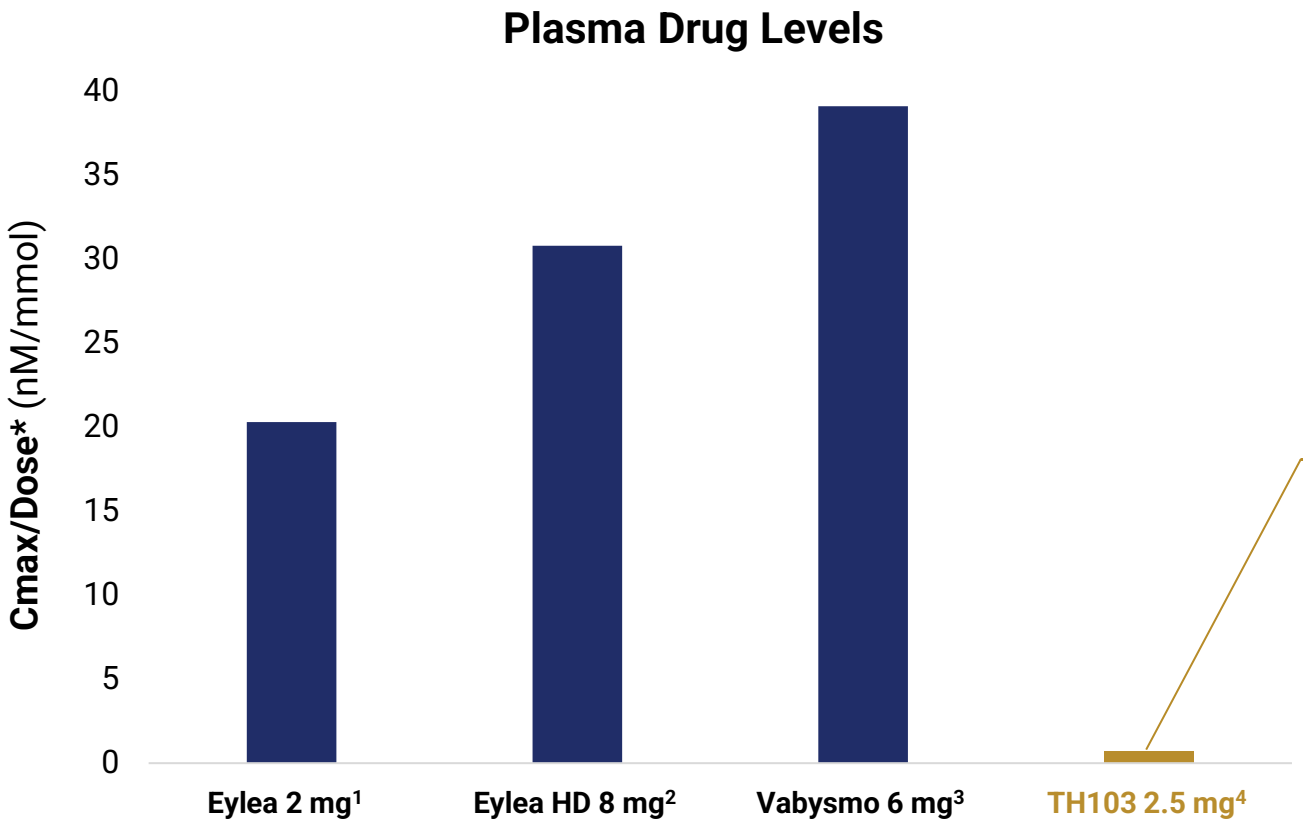
# PK data consistent with greater TH103 intraocular retention



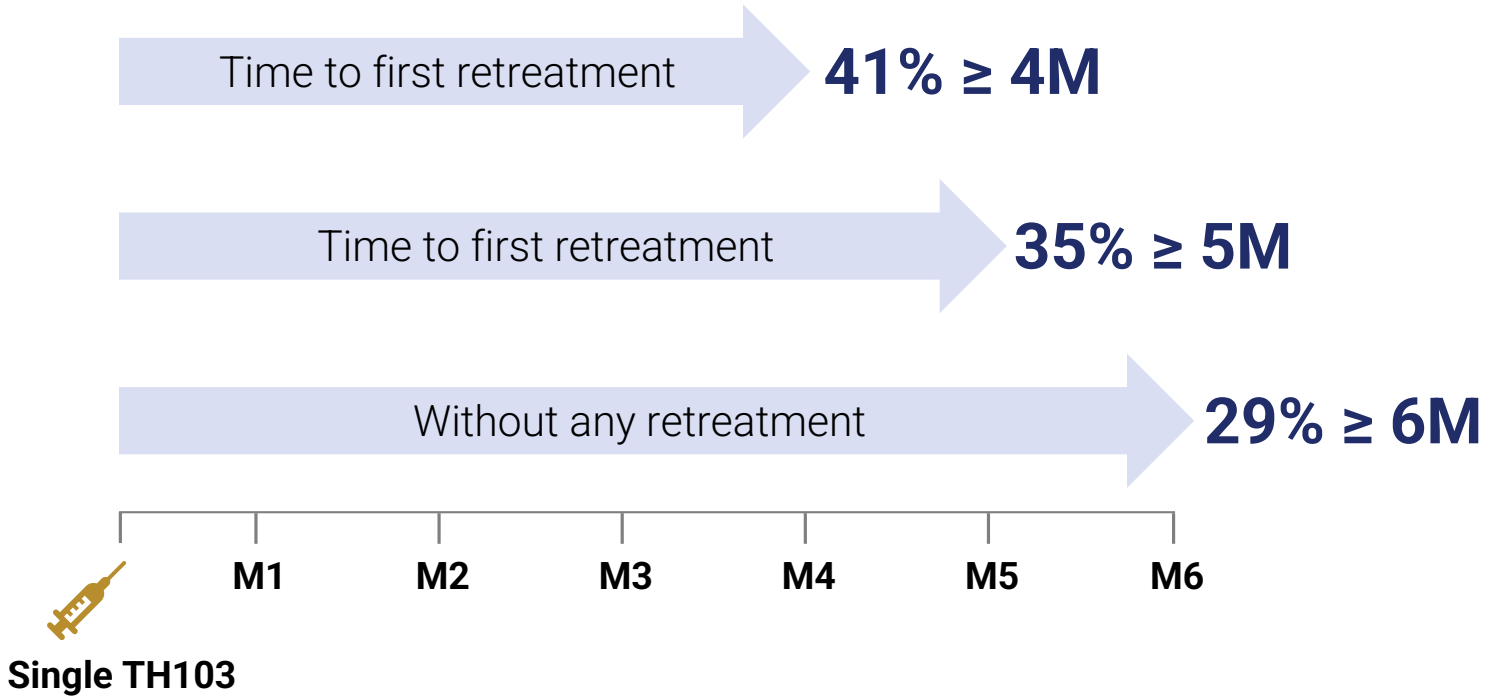

**TH103 2.5 mg Plasma Levels (Cmax/Dose):**

- **27x lower than Eylea 2mg**
- **42x lower than Eylea HD**
- **53x lower than Vabysmo**

*Mean, except for Vabysmo which is median
Sources: 1) Data from BLA761355 and published studies; 2) Data from BLA761355 ; 3) Data from BLA761235; 4) Data from KLRS-100 Clinical Trial
Notes: Dose normalization of a parameter involves converting the mg dose to its molar dose and dividing it by the molar concentration of the administered dose

**Single-dose durability signal suggests potential for stronger durability outcomes after standard four-dose loading regimen, currently being evaluated in ongoing Ph 1b/2 study**

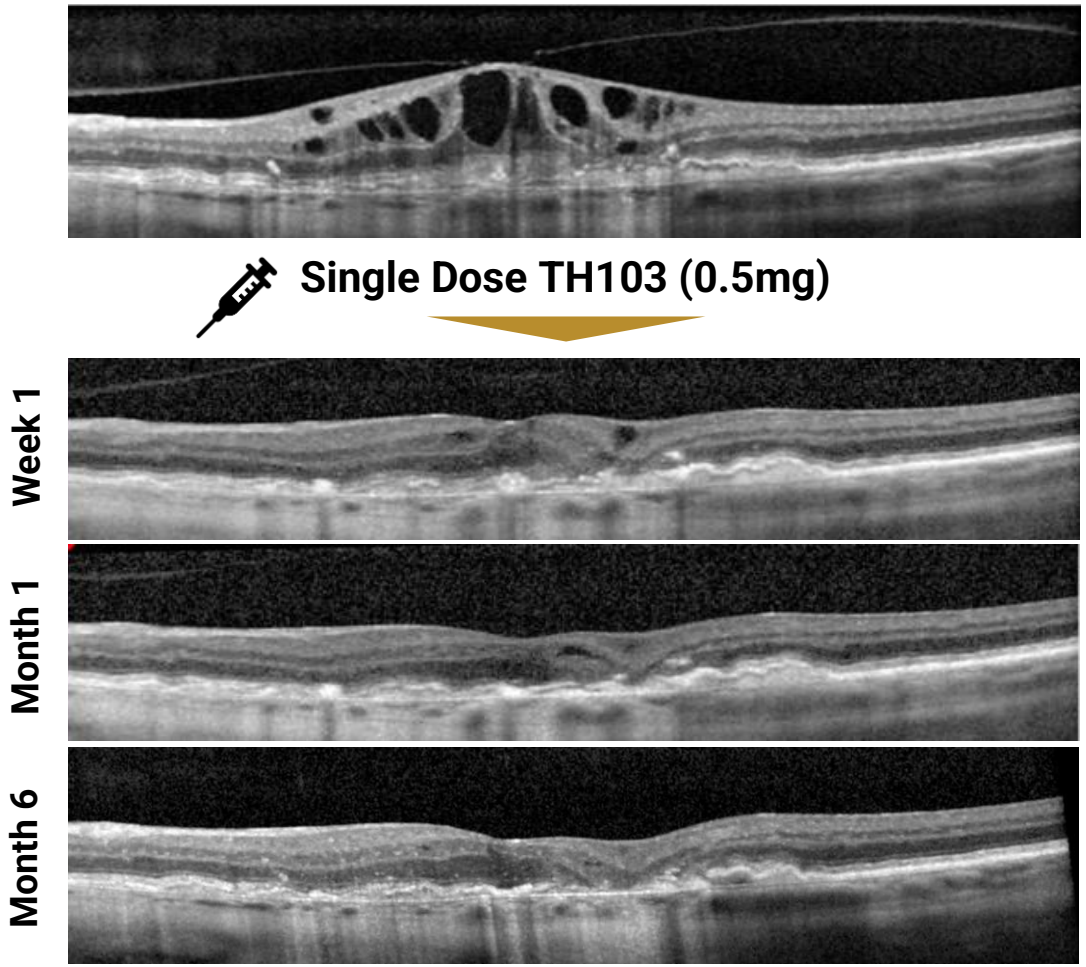
**Phase 1a Single-Dose Time to Retreatment (n = 17, Tx-naïve)**

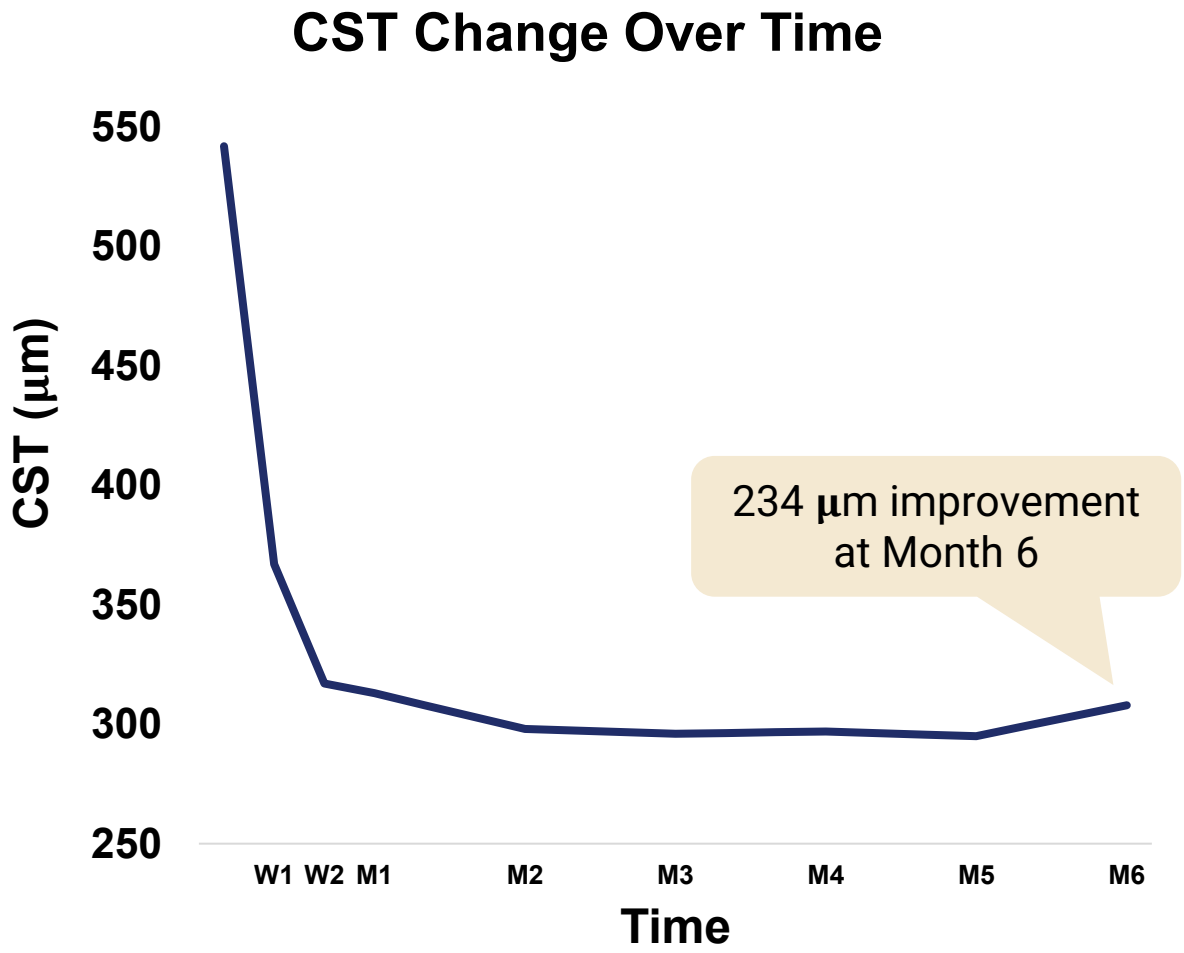



Separately, treatment-experienced patients
**extended their prior treatment interval by a mean of 2-months**[1]

1) N=3; Mean treatment interval pre-enrollment: 2.33 months; mean time to retreatment after a single TH103: 4.33 months

# Case Example:
# TH103 single-injection durable response past Month 6




Source: As measured by independent reading center

# Phase 1a SAD data continue to support TH103's potential as best-in-class, first-line treatment for retinal vascular diseases

✓ **Efficacy:** rapid, robust response on BCVA and OCT parameters observed across dose levels at one month

- Mean 9.2-letter BCVA improvement at Month 1 after one TH103 injection
- Mean 118µm improvement in mean CST and mean 93% resolution in CSF intraretinal fluid at Month 1

✓ **Safety:** TH103 generally well tolerated, supporting exploration of multi-dose regimen

- No dose-limiting toxicities or TH103-related SAEs observed
- 2 cases of mild/moderate IOI at 2.5mg dose level with TH103 manufacturing batch #1 material
- No cases of IOI at 2.5mg dose level (n=6) observed through ≥6 months with TH103 manufacturing batch #2
- Single case of transient, moderate IOI at 5.0mg dose level with TH103 manufacturing batch #2 material

✓ **Durability:**

- PK analysis consistent with greater TH103 intraocular retention vs. other leading agents
- Single-dose durability signal suggests potential for stronger durability outcomes after standard four-dose loading regimen

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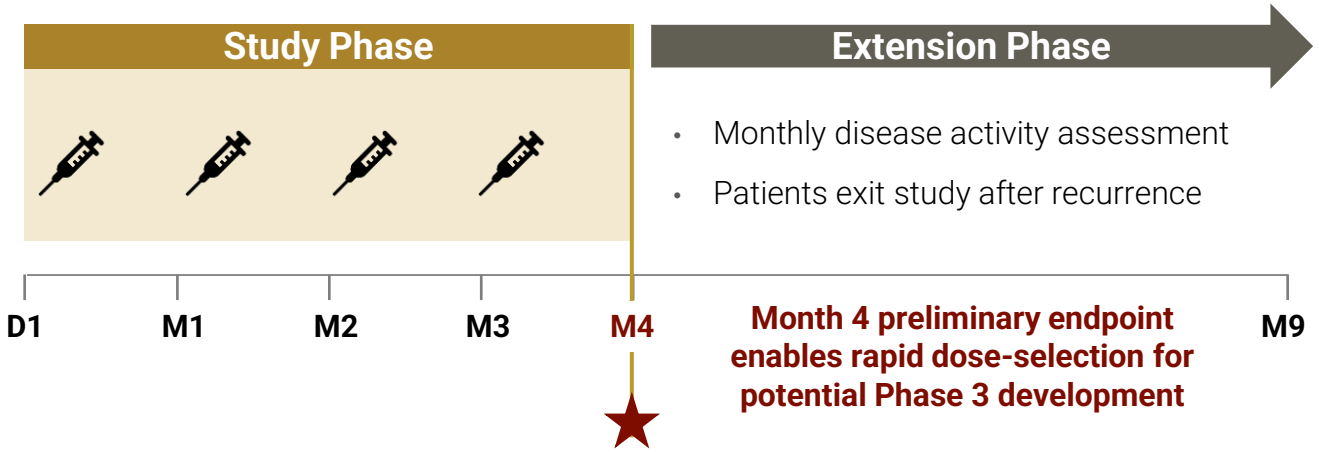
CSF = Central Subfield

# TH103 Ongoing Development Program

# TH103 Clinical Development Program

## Ongoing Phase 1b/2 Trial in nAMD

Open label, multiple ascending dose design followed by randomized, masked, multi-dose cohort-expansion phase; potential dosing up to 5.0mg




**Patient Population:**

| | | | |
|---|---|---|---|
| Age 50+ | Tx-naïve nAMD | > 325 microns CST* | BCVA: 20/32 to 20/200 |

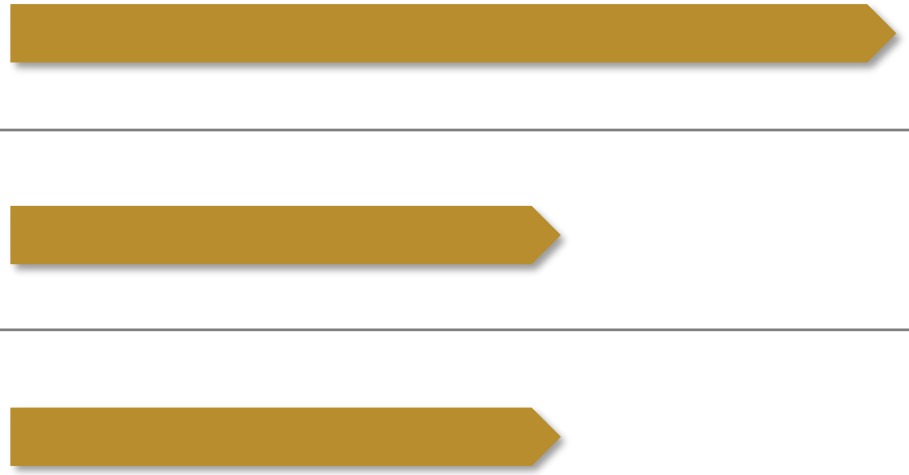
## Anticipated Milestones

- Enrollment continues in Phase 1b/2 MAD study – preliminary data expected in 1H 2027
- Pending the results from the Phase 1b/2 trial, potential Phase 3 trial initiation in nAMD planned by year-end 2027
- Cash runway expected to fund company into Q4 2027

*Confirmed by independent reading center

# Planned expansions beyond nAMD into other prevalent VEGF-mediated diseases such as DME, DR, and RVO

| Product Candidate | Indication | Discovery | IND Enabling | Phase 1 | Phase 2 | Phase 3 |
|---|---|---|---|---|---|---|
| TH103 | nAMD* | | | | | |
| TH103 | DME / DR** | | | | | |
| TH103 | RVO** | | | | | |



**DME =** Diabetic Macular Edema
**DR =** Diabetic Retinopathy
**RVO =** Retinal Vein Occlusion

*Two ongoing nAMD studies – Phase 1a and Phase 1b/2
**Subject to IND submission and clearance

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# Corporate

# Ongoing manufacturing process refinements continue to drive down levels of product host cell protein

| TH103 Manufacturing Batch #1 | TH103 Manufacturing Batch #2 | TH103 Manufacturing Batch #3 *(Current)* | Future TH103 Manufacturing Batches |
|---|---|---|---|
| • Fusion protein produced through CHO cell culture, with process impurities (HCP) removed through downstream steps to levels acceptable to FDA | • Added reagents to manufacturing process to dissociate and separate HCPs from TH103<br>• Overall HCP appreciably lower than TH103 manufacturing batch #1 | • Advanced analytical methods provided a granular identification of the specific remaining constituent HCP sub-types<br>• Additional manufacturing process adjustments to further purify | • Ongoing process refinements focused on eliminating all remaining sub-HCPs<br>• Process scale up also in progress to support Phase 3 & commercial supply |

**We continue to implement specific process modifications aimed at eliminating all remaining HCP subtypes to below levels of detection**

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CHO = Chinese Hamster Ovaries
HCP = Host Cell Protein

# Intellectual Property

1

**TH103 Compositions of Matter**

- Issued/allowed in United States, Japan, China, and at least 9 other jurisdictions
- Pending in Europe (examiner identified allowable compositions) and at least 3 other jurisdictions

2

**TH103 Methods of Use**

- Issued/allowed in United States, Japan, China, Europe*, and at least 8 other jurisdictions
- Pending in at least 2 other jurisdictions

3

**US Exclusivity through early 2040s**

- Later of US patent expiry (Q4 2040) or 12-year post-approval biologics exclusivity period
- Ex-US geographies vary, with coverage expected through 2039

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* Validated in Austria, Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Spain, Sweden, Switzerland and UK

# Experienced Board & Management Team

## Board of Directors

**David Hallal**
Board Chairman

**Anthony Adamis, MD**
Director

**Srinivas Akkaraju, MD, PhD**
Director & Co-founder

**Mike Dybbs, PhD**
Director & Co-founder

**Napoleone Ferrara, MD**
Director & Co-Founder

**Laurie Keating, JD**
Director

**Andrew Oxtoby**
CEO & Director

**Leone Patterson**
Director

## Management Team

**Andrew Oxtoby**
CEO

**Matthew Feinsod, MD**
CMO

**Liisa Bayko**
CFO

**Kristine Curtiss**
SVP Clinical

**Jill Porter, PhD**
SVP CMC

**Nancy Davis**
VP Clinical Ops

## Select Key Accomplishments

**Discoverer of VEGF**, VEGF receptors, VEGF isoforms

Leadership involved in developing **first two FDA approved anti-VEGF agents**

Extensive experience in **anti-VEGF therapeutic development**

Investment firm with track record in funding **successful retina therapeutic development** to FDA approval

**Extensive experience** in preclinical through commercial stage

# TH103 Advantage: Established yet Differentiated

## ESTABLISHED
*Part of a Proven Class*[1]

- ✓ Targets VEGF-A, primary mediator of disease activity in the retina
- ✓ Soluble decoy receptor MoA2
- ✓ Biologic (recombinant fusion protein); simple protein structure
- ✓ Drug class with well-established path to approval
- ✓ Drug administration would align with current clinical practice workflows

## DIFFERENTIATED
*TH103 Innovation*

- \+ Optimized dual target (VEGF + HSPG), with novel HSPG pathway disruption
- \+ Leverages native higher-affinity VEGFR1 for optimized VEGF binding
- \+ Designed for clinical differentiation and potentially improved:
  - \+ Disease control via optimized VEGF inhibition
  - \+ Durability via extended ocular retention

**TH103 builds on the proven success factors** of leading agents, with molecular innovation to address persistent unmet needs

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1) ranibizumab, aflibercept, faricimab
2) aflibercept

# Potential best in class, dual-action, anti-VEGF therapeutic

- **>$15 Billion[1] and growing** retinal neovascular / exudative disease global branded market, with significant remaining unmet need
- **Invented by VEGF pioneer and scientific co-founder Dr. Napoleone Ferrara**, TH103 is a dual-action biologic targeting **VEGF**, the primary mediator of disease activity in the retina, and **HSPG**, abundant in retinal layers
- Phase 1a clinical data support molecular hypothesis with **strong clinical activity and suggest potential for extended treatment durability**
- **Phase 1b/2 clinical trial currently enrolling nAMD patients** with data expected in 1H 2027; cash runway anticipated to fund company into Q4 2027
- **Leadership team experienced in developing and commercializing retina therapeutics** and successfully building biopharma companies

Sources: 1) Based on publicly available sales data 2024.

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# Glossary

# Glossary

**BCVA:** Best Corrected Visual Acuity

**Cmax:** Maximum Plasma Concentration

**CNV:** choroidal Neovascularization

**CST:** Central Subfield Thickness

**DLT:** Dose Limiting Toxicity

**DME:** Diabetic Macular Edema

**DR:** Diabetic Retinopathy

**ETDRS:** Early Treatment Diabetic Retinopathy Study

**HCP:** Host Cell Protein

**HSPG:** Heparan Sulfate Proteoglycans

**IOI:** Intraocular Inflammation

**IOP:** Intraocular Pressure

**IRF:** Intraretinal Fluid

**nAMD:** neovascular Age-related Macular Degeneration

**OCT:** Optical Coherence Tomography

**PK:** Pharmacokinetics

**RVO:** Retinal Vein Occlusion

**SAD:** Single Ascending Dose

**SAE:** Serious Adverse Events

**SD-OCT:** Spectral-Domain Optical Coherence Tomography

**TRF:** Total Retinal Fluid

# Anti-VEGF Therapeutics Background

# Lessons from over two decades of using Anti-VEGF to treat retinal disease

VEGF is the **primary mediator and the key target** for pathologic angiogenesis and exudation (permeability) in retinal disease[1]

Anti-VEGF therapy has **revolutionized treatment** for major retinal diseases[2]

VEGF has been the **primary target for neovascular / exudative retinal diseases** for over 20 years

Multiple anti-VEGF agents have become **blockbuster therapies,** treating millions of patients

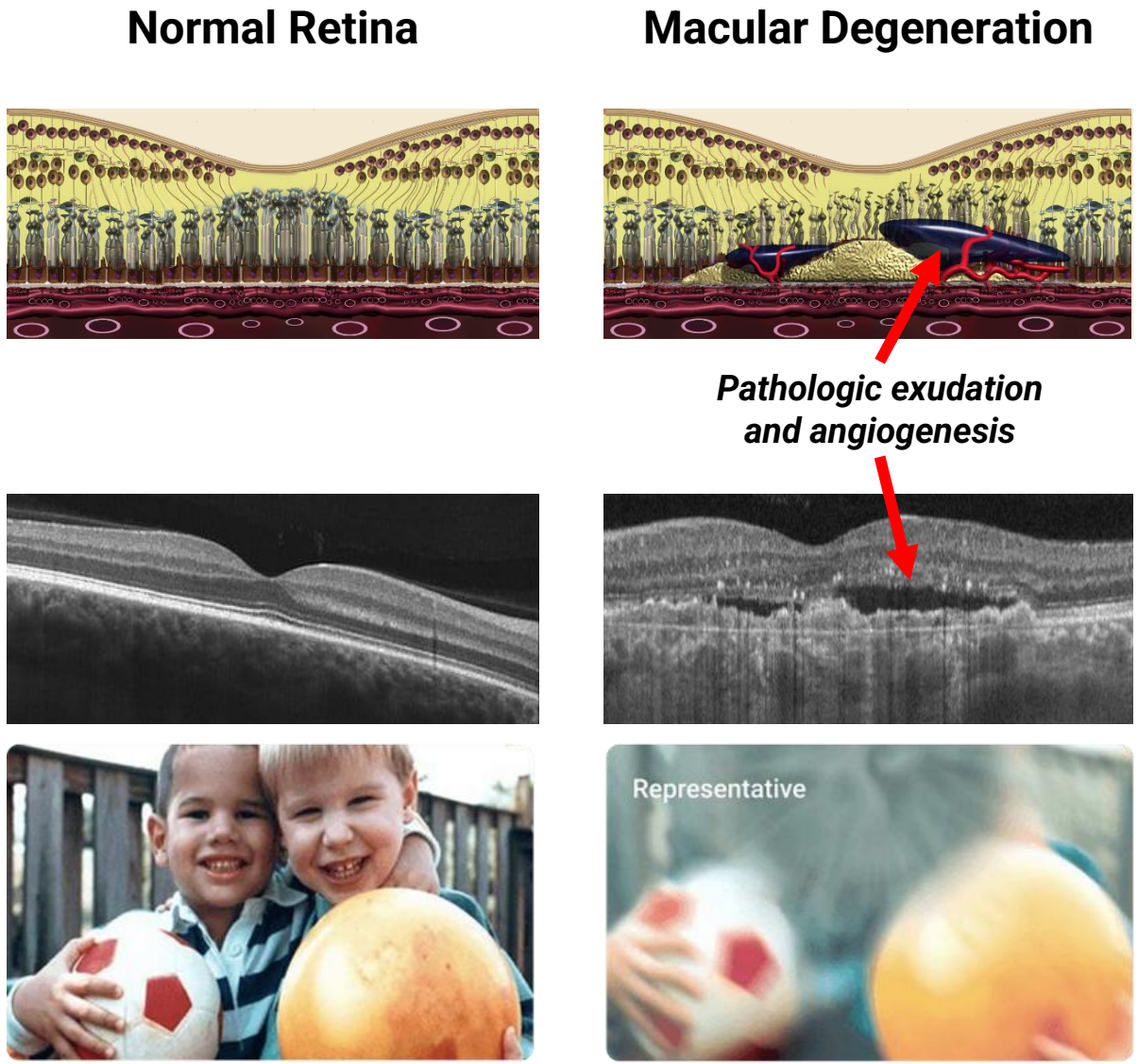
**~$15 Billion[3] global branded anti-VEGF market in 2025,** projected to grow to approx. $18B by 2029[4]

**Unmet need remains high,** with suboptimal real-world outcomes commonly explained by undertreatment due to onerous visit regimen[5,6,7,8,9]

Sources: 1) Witmer, A. N., Vrensen, G. F. J. M., Van Noorden, C. J. F., & Schlingemann, R. O. (2003). Vascular endothelial growth factors and angiogenesis in eye disease. Progress in retinal and eye research, 22(1), 1-29.2) Solomon, Sharon D., Kristina Lindsley, Satyanarayana S. Vedula, Magdalena G. Krzystolik, and Barbara S. Hawkins. "Anti-vascular endothelial growth factor for neovascular age-related macular degeneration." Cochrane Database of Systematic Reviews 8 (2014); 3) Based on publicly available sales data 2024; 4) 2024 Retinal Pharmaceuticals Market Report, Market Scope September 2024; 5) Prenner, J.L. · Halperin, L.S. · Rycroft, C., Am J Ophthalmol. 2015; 160:725-731.e1; 6) Varano, M. · Eter, N. · Winyard, S., Clin Ophthalmol. 2015; 9:2243-2250; 7) Monés, J. · Singh, R.P. · Bandello, F., Ophthalmologica. 2020; 243:1-8; 8) Gohil, R. · Crosby-Nwaobi, R. · Forbes, A., PLOS ONE. 2015; 10, e0129361; 9) MacCumber, M.W. · Yu, J.S. · Sagkriotis, A., Can J Ophthalmol. 2023; 58:252-261

# VEGF is the primary mediator and the key target for pathologic angiogenesis and exudation (permeability) in retinal disease

Growth and leakage from abnormal vessels leads to visual impairment in diseases such as nAMD, DME, and RVO. VEGF is a primary mediator of this pathology.




Source: Apte, R. S., Chen, D. S., & Ferrara, N. (2019). VEGF in signaling and disease: beyond discovery and development. Cell, 176(6), 1248-1264.

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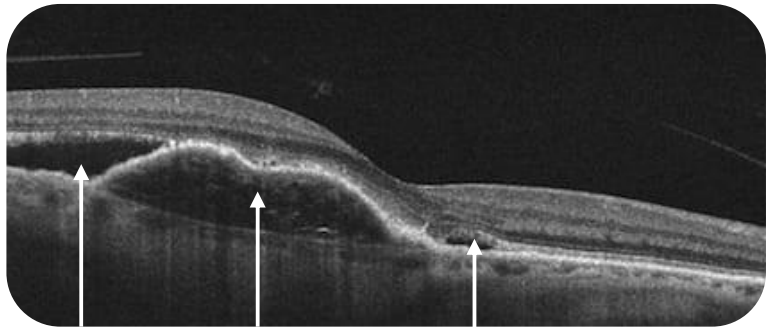
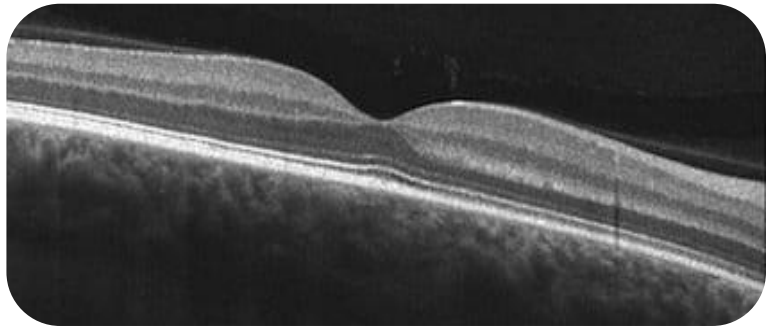
# Anti-VEGF therapy has revolutionized treatment for major retinal diseases

**Pre-Anti-VEGF Treatment**



*Pathological exudation*

**Post-Anti-VEGF Treatment**



- Anti-VEGFs have a potent anti-permeability effect, causing reduction or resolution of pathological fluid, often leading to visual acuity improvements
- Retinal neovascular diseases treated with anti-VEGF as standard of care include:
  - **nAMD**: neovascular age-related macular degeneration
  - **DME**: diabetic macular edema
  - **DR**: diabetic retinopathy
  - **RVO**: retinal vein occlusion
- Optical coherence tomography (OCT) is the current standard for quantitatively detecting fluid presence across various retinal layers, along with other pathological features

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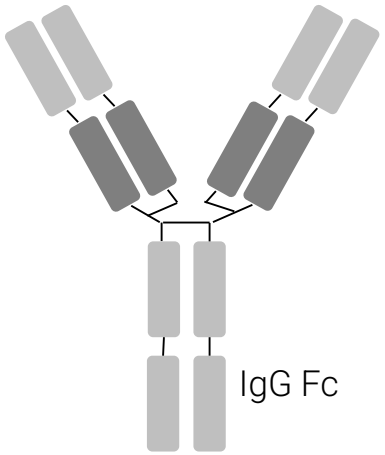
Source: Solomon, S. D., Lindsley, K., Vedula, S. S., Krzystolik, M. G., & Hawkins, B. S. (2014). Anti-vascular endothelial growth factor for neovascular age-related macular degeneration. Cochrane Database of Systematic Reviews, (8).

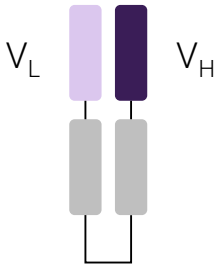
# VEGF has been the primary target for neovascular / exudative retinal diseases for over 20 years

## Bevacizumab



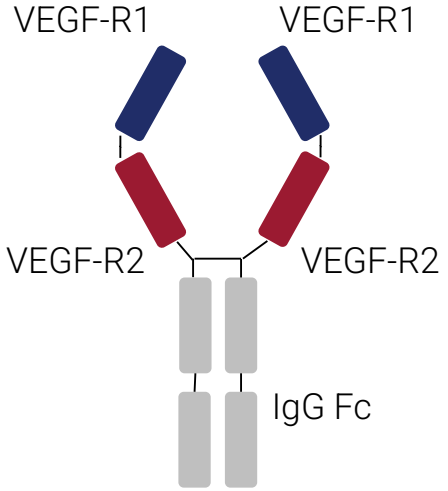

Type: **mAb targeting VEGF**
Licensed use: **Oncology**
Launch: **2005**

## Ranibizumab



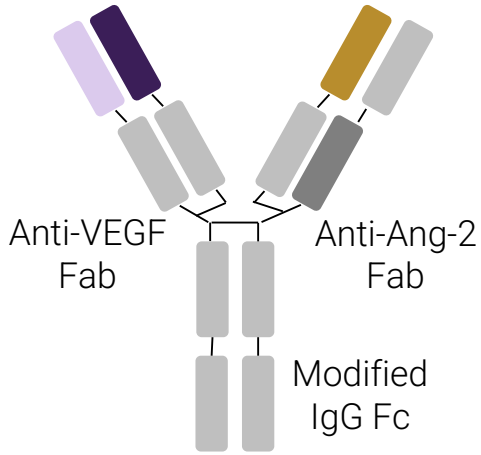

Type: **Fab fragment targeting VEGF**
Original use: **Ophthalmology**
Launch: **2006**

## Aflibercept




Type: **Decoy Receptor binding to VEGF**
Original use: **Oncology**
Launch: **2011**

## Faricimab

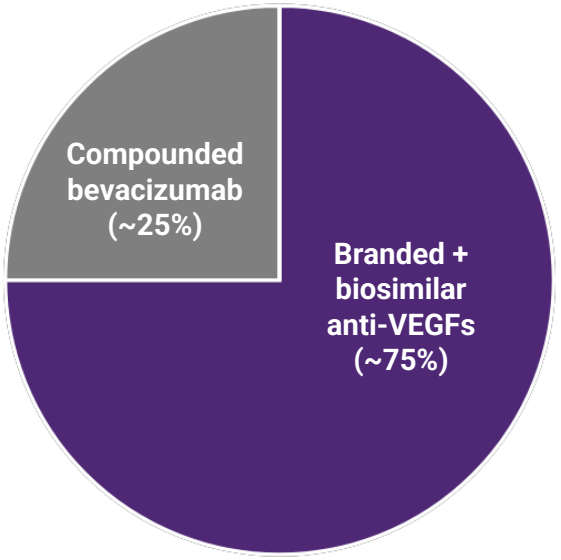



Type: **Bi-specific mAb VEGF & Ang-2***
Original use: **Ophthalmology**
Launch: **2022**

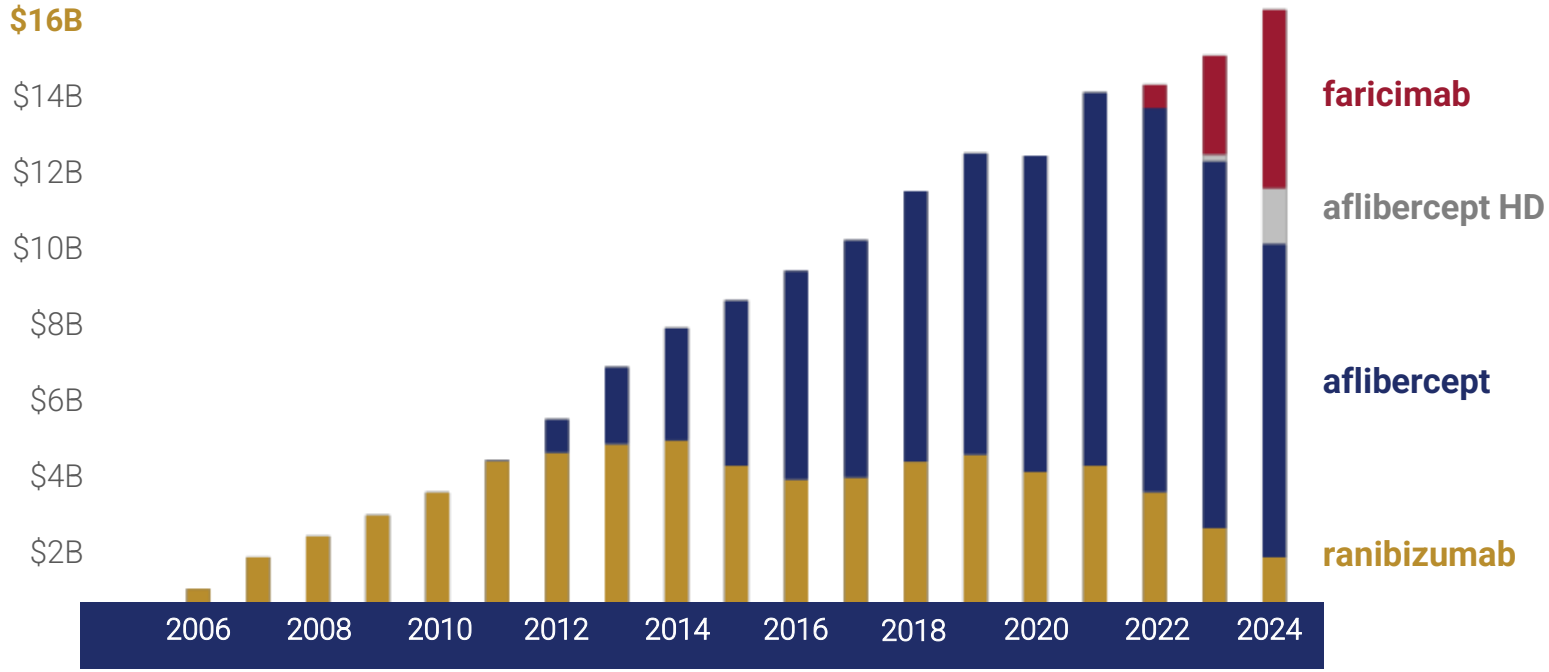
*According to the VABYSMO Prescribing Information, "The contribution of Ang-2 inhibition to the treatment effect and clinical response for nAMD, DME, and RVO has yet to be established."[1]
Source: 1) VABYSMO Prescribing Information accessed via AccessData.FDA.gov July 8, 2025
Additional Sources: Tatsumi, Tomoaki. (2023). Current Treatments for Diabetic Macular Edema. International Journal of Molecular Sciences. 24. 9591. 10.3390/ijms24119591; FDA Approval.

# >$15B global branded anti-VEGF market in 2024, projected to grow to approximately $18B by 2029[1,2]

**Global Anti-VEGF Units in Retinal Disease (2024)[1]**



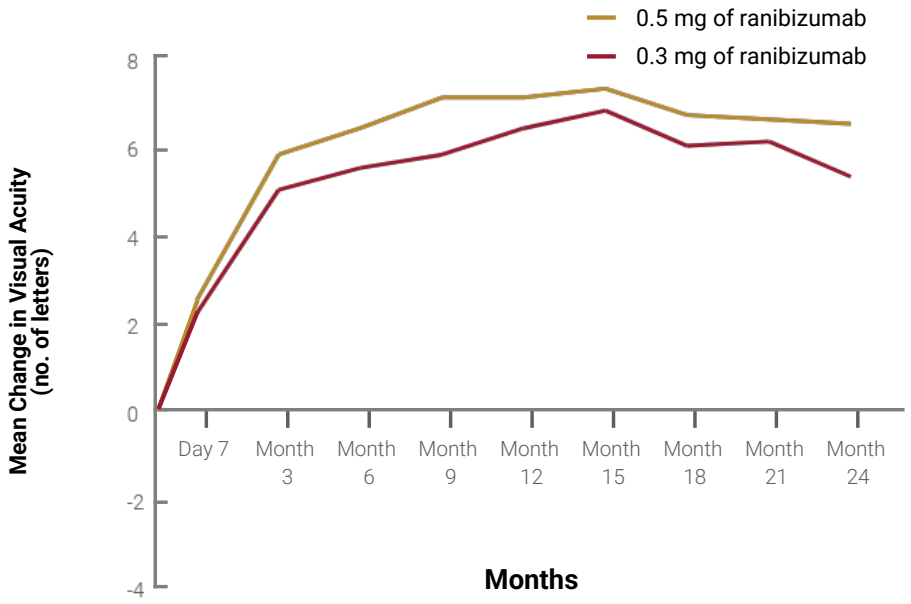

**Branded Anti-VEGF Therapies 2024 Global Sales[2]**



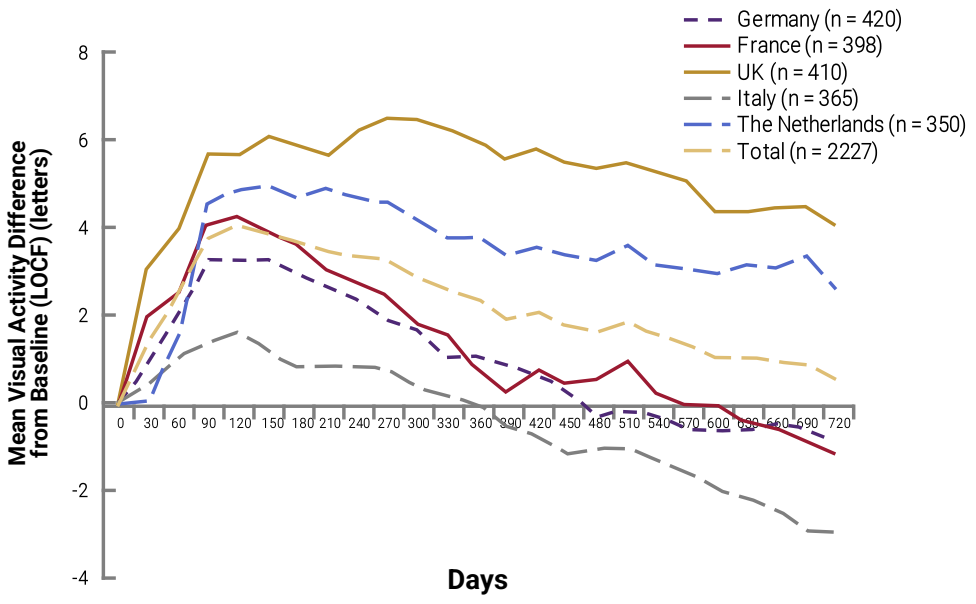

Sources: 1) 2025 Retinal Pharmaceuticals Market Report, Market Scope October 2025; 2) Based on publicly available sales data 2024

# Suboptimal Real-World outcomes as compared to clinical trial results[1,2,3,4,5]

## Registrational Clinical Trial[6]




## Real World Study[7]




**A major unmet need remains for a long-acting agent** that preserves patient vision and reduces patient visit burden


Sources: 1) Prenner, J.L. · Halperin, L.S. · Rycroft, C., Am J Ophthalmol. 2015; 160:725-731.e1; 2) Varano, M. · Eter, N. · Winyard, S., Clin Ophthalmol. 2015; 9:2243-2250; 3) Monés, J. · Singh, R.P. · Bandello, F., Ophthalmologica. 2020; 243:1-8; 4) Gohil, R. · Crosby-Nwaobi, R. · Forbes, A., PLOS ONE. 2015; 10, e0129361; 5) MacCumber, M.W. · Yu, J.S. · Sagkriotis, A., Can J Ophthalmol. 2023; 58:252-261; 6) Rosenfeld PJ, Brown DM, Heier JS, Boyer DS, Kaiser PK, Chung CY, Kim RY; MARINA Study Group. Ranibizumab for neovascular age-related macular degeneration. N Engl J Med. 2006; 7) Holz FG, et al. Br J Ophthalmol 2015;99:220-226