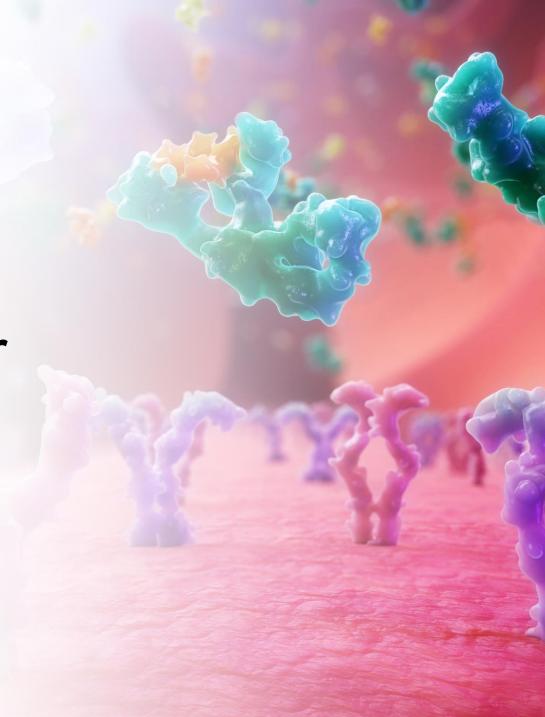


# Transforming Patient Outcomes with Superior Vision Gains

Corporate Presentation | August 2024 NASDAQ (OPT); ASX (OPT.AX)



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# Sozinibercept Has the Potential to Be the First Product in More Than 15 Years to Improve Visual Outcomes

#### Addressing High Unmet Need

Wet age-related macular degeneration (wet AMD) is the leading cause of vision loss in the elderly, impacting
 ~3.5 million patients in the US and Europe, despite wide use of anti-VEGF-A standard of care

# **Proprietary Technology**

- First-in-class VEGF-C/D Trap intended for combination with standard of care anti-VEGF-A therapies
- Composition of Matter and Methods of Use Patents through 2034; opportunities to extend beyond 2034\*

#### Superior Lead Asset

- Phase 2b demonstrated superiority in combination with SOC therapy, with well tolerated safety profile
- Sozinibercept has the potential to improve vision for millions of patients with wet AMD

### **Enrollment Complete** in Two Pivotal Trials

- COAST enrollment complete as of Feb 2024 (n=998); ShORe enrollment complete as of May 2024 (n=986)
- Topline data anticipated for COAST in early 2Q CY2025 and ShORe in mid-CY2025

## Substantial Market Opportunity

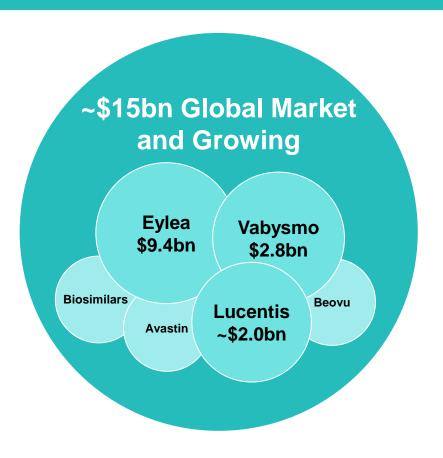
- · Multibillion dollar commercial opportunity in a growing market with an established clinical practice
- Sozinibercept developed for use in combination with any anti-VEGF-A

# Sozinibercept Designed to Improve Visual Outcomes in Combo with VEGF-A Inhibitors; Potential to Create New Multi-Billion Dollar Class

#### **Global Marketed VEGF-A Inhibitors**



Sozinibercept is a VEGF-C/D "Trap" Inhibitor



#### Potential value proposition:

#### **Targeting Improved Visual Function**

Critical for Patients, Physicians and Payors

Fits Seamlessly into Physician Practice

**Potential Use with Any VEGF-A Inhibitor** 

**Multi-Billion Dollar Commercial Opportunity** 

### **Experienced Leadership Team**

#### Expertise and Track Record to Make a Positive Impact on the Retinal Community

#### **Management Team**



Fred Guerard, PharmD, MS
Chief Executive Officer





**Peter Lang**Chief Financial Officer





Megan Baldwin, PhD, MAICD Founder, Chief Innovation Officer & Executive Director

Genentech



**Judith Robertson**Chief Commercial Officer



#### **Chief Medical Advisor**



Arshad M. Khanani, MD, MA, FASRS

Managing Partner, Director of Clinical Research
and Director of Fellowship at Sierra Eye

Associates, and Clinical Professor at the University
of Nevada, Reno School of Medicine

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Jason Slakter, MD
Clinical Profession at New York University School
of Medicine and partner at Vitreous Retina Macula
Consultants of New York

# Despite Treatment with Standard of Care Anti-VEGF-A Therapies, the Majority of Patients Achieve Suboptimal Vision Outcomes

#### **Despite treatment with anti-VEGF-A therapy\***

>45% do not achieve significant vision gains

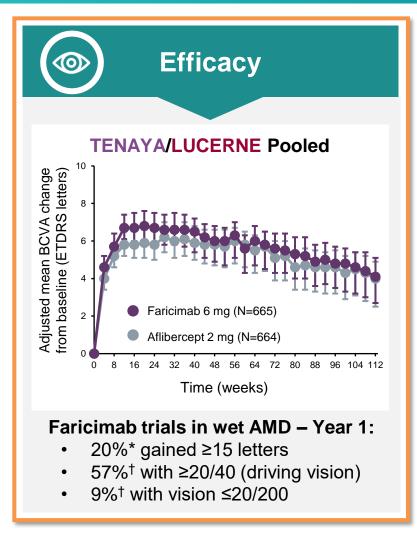
>60% will have persisting macular fluid

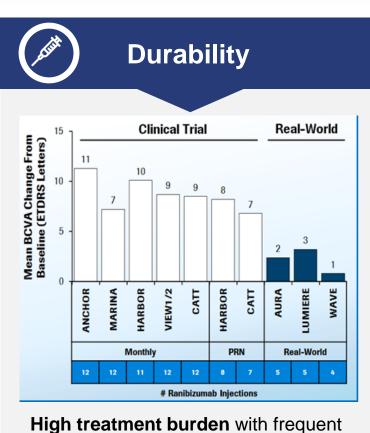
25% will have further vision loss at 12+ months

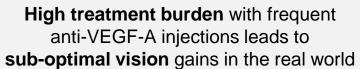




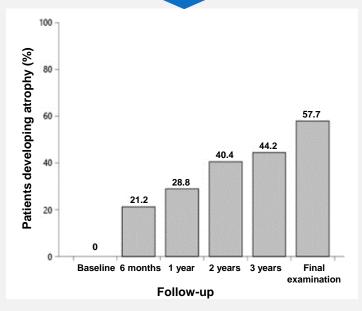
#### Unmet Needs in the Treatment of Wet AMD







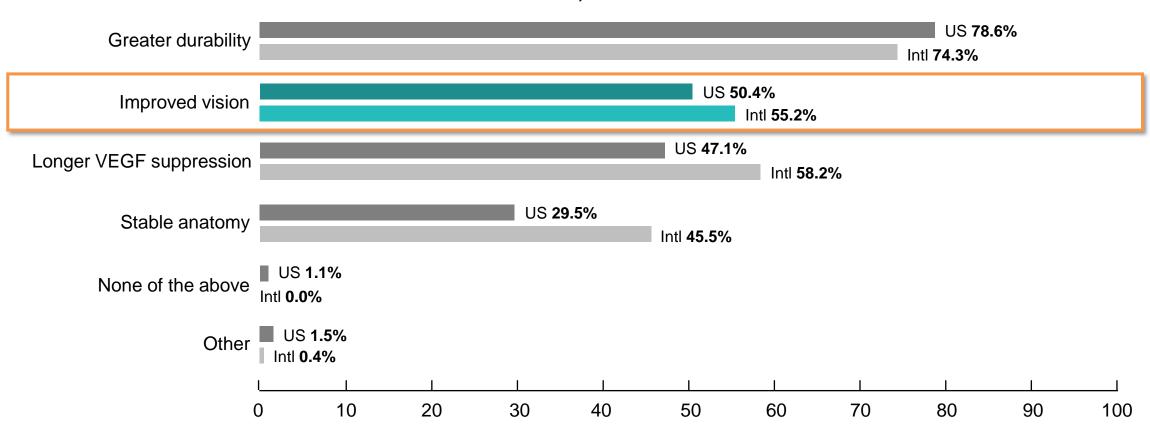




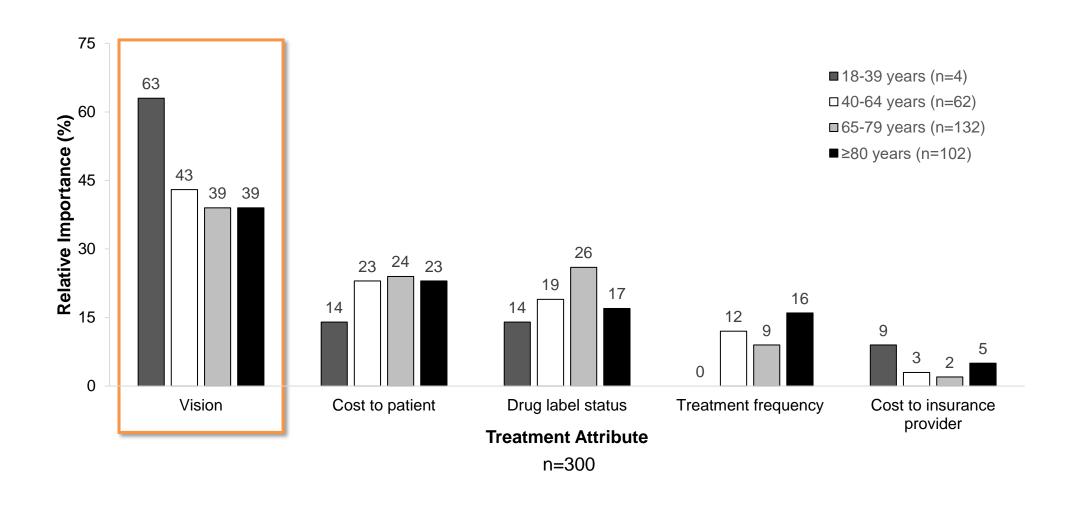
Patients still develop **inflammation**, **fibrosis**, **atrophy**, and **ischemia** despite anti-VEGF-A therapy

### Improved Vision Is One of the Greatest Unmet Needs

# What are the greatest unmet needs in treating wet AMD and DME? n=1,012

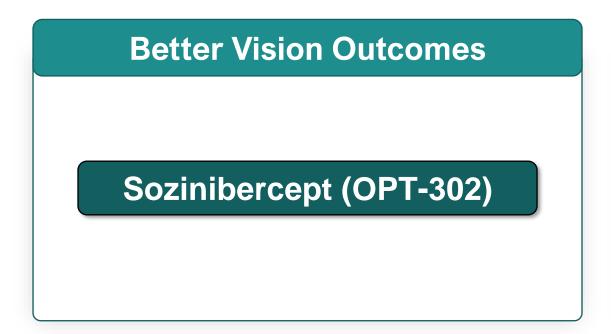


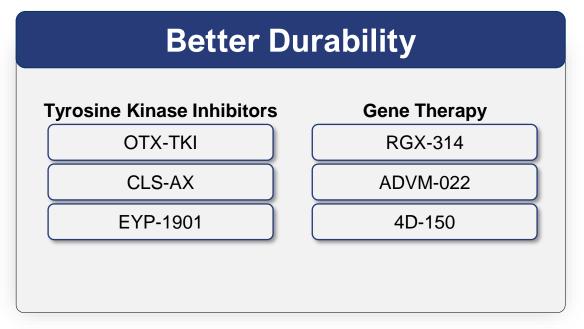
# Relative Importance of Treatment Attributes for Patients Receiving Anti-VEGF-A Monotherapy



### Emerging Treatments for Wet AMD: Better Vision Outcomes or Durability

Sozinibercept is the only late-stage drug in development targeting better vision outcomes



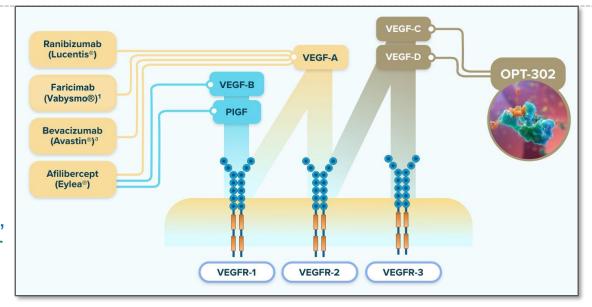


# Sozinibercept, a Proprietary VEGF-C/D "Trap" Inhibitor, Has the Potential to Address the Limitations of Anti-VEGF-A Therapies



#### **The Problem**

Wet AMD is a multi-factorial disease. Treatment with VEGF-A inhibitors upregulates VEGF-C/D, driving angiogenesis and vascular permeability.





#### **The Solution**

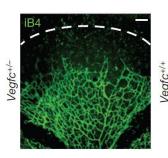
When used in combination with any VEGF-A inhibitor, OPT-302 completely blocks VEGFR-2 and VEGFR-3 signaling.

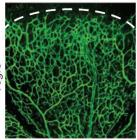
<sup>&</sup>lt;sup>1</sup> Faricimab also has inhibitory effect on Ang-2.

<sup>&</sup>lt;sup>a</sup> Bevacizumab is used 'off-label' for the treatment of neovascular (wet) AMD

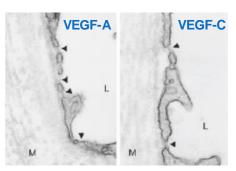
# Published Evidence Supports Broader VEGF Pathway Inhibition with Sozinibercept

#### **VEGF-C Stimulates Retinal Angiogenesis^**

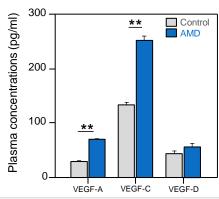




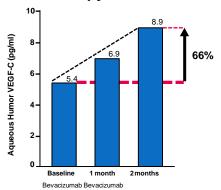
VEGF-A and VEGF-C Induce Vascular Leakage/permeability#



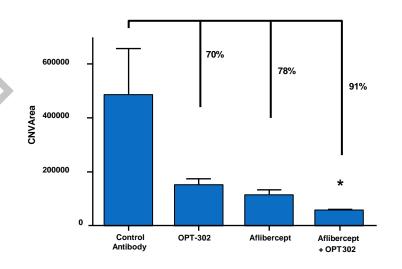
Circulating VEGF-C Levels Significantly Elevated in AMD Patients<sup>↑</sup>



Elevated VEGF-C in Aqueous Humor Following Anti-VEGF-Atherapy in Wet AMD Patients\*



# Additive Benefit of VEGF-A and VEGF-C/D Inhibition in Mouse Wet AMD Model



# Sozinibercept Has the Potential to Be the First Therapy in More Than 15 Years to Improve Visual Outcomes in Patients with Wet AMD

#### Sozinibercept has demonstrated strong clinical evidence of superior patient visual outcomes



# Sozinibercept Designed to Integrate into Current Anti-VEGF-A Clinical Practice



#### **Patients**

- Superior visual outcomes meaningfully improves patients' lives
- Intended to be administered at same anti-VEGF-A visit



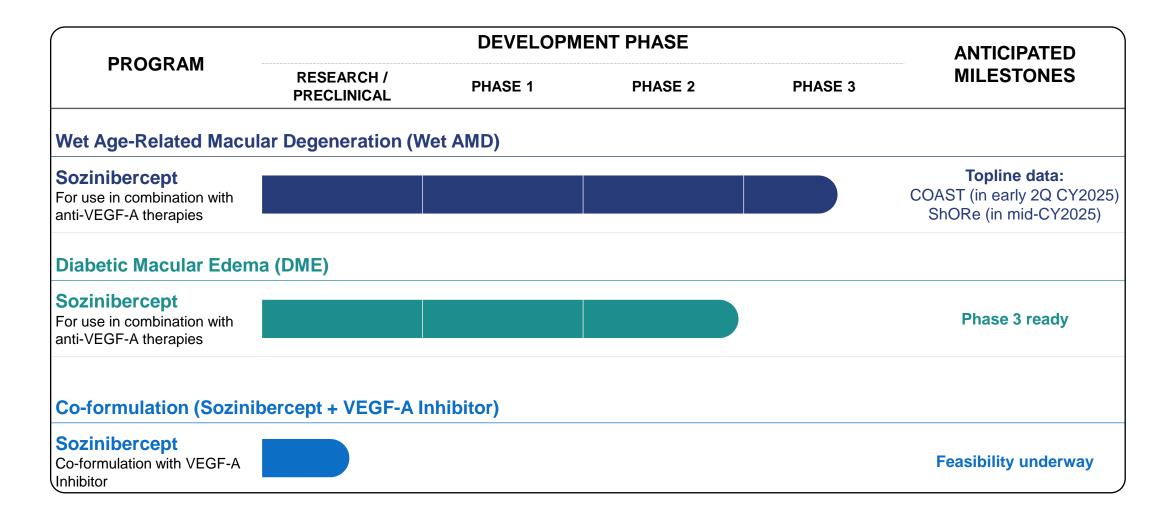
- Better vision outcomes is a high unmet medical need
- Designed to be agnostic to anti-VEGF-A treatment type, including biosimilars



- Better clinical outcomes represent better health economics
- Visual benefits a key driver in reimbursement

### Long-term Value Opportunities for Sozinibercept

Main Patent Family Extends through 2034, with Expansion Opportunities Beyond 2034\*



### Near-term Focus Is on Sozinibercept Phase 3 Execution

Pivotal Program Design Informed by Phase 2b and Optimized for Success

#### **Ongoing Phase 3 Trials**

Topline data from both trials anticipated for COAST (in early 2Q CY 2025) and ShORe (in mid-CY2025)

#### **Completed Phase 1-2 Trials**

Phase 2b (n=366) Treatment naïve wet AMD

**OPT-302:** 6 x monthly dosing **Comparator: Ranibizumab (monthly)** 

> Phase 1b/2a (n=153) Prior-treated DME

**OPT-302**: 3 x monthly dosing **Comparator: Aflibercept** (monthly)

Phase 1/2a: (n=51) Treatment Naïve/Prior-treated wet AMD

> OPT-302 + Ranibizumab: 3 x monthly dosing

#### **Enrollment Complete (May-24) Enrollment Complete (Feb-24)** COAST Phase 3 - wet AMD Phase 3 - wet AMD (treatment naïve) (treatment naïve) n=998 **Comparator: Comparator:** Aflibercept (Eylea®) once every two months after three monthly doses **Standard Dosing Standard Dosing Extended Dosing**

**OPT-302** 

once every two

months after three

monthly doses

OPT-302

once every month

Ranibizumab (Lucentis®) once every month **Extended Dosing** OPT-302 once every two months after three monthly doses

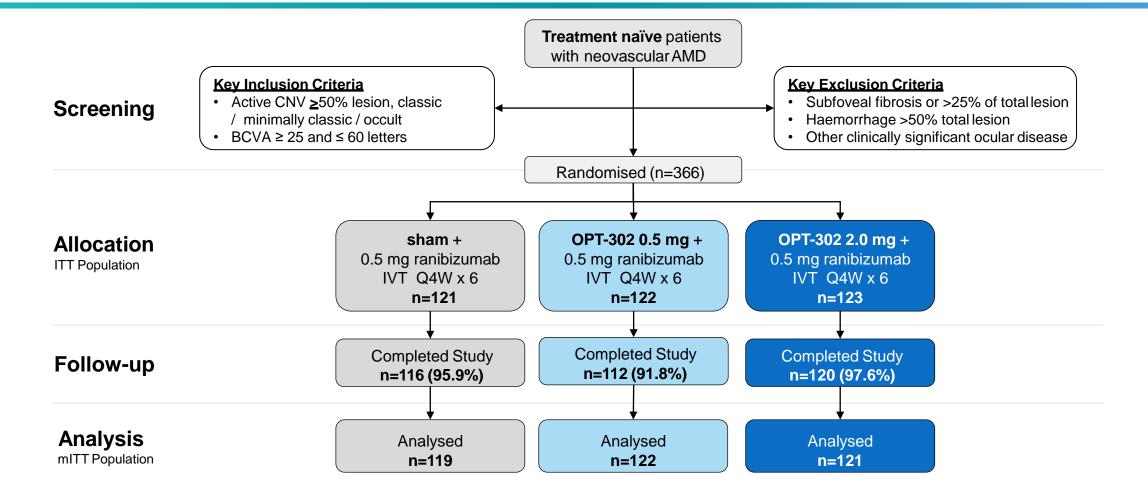
**ShORe** 

n=986

**OPT-302** 

once every month

#### Phase 2b Wet AMD Trial Overview



### Phase 2b Primary and Secondary Endpoints

#### **Primary Endpoint**

Mean change from baseline in BCVA at week 24

#### **Key Secondary Endpoints**

Proportion of patients gaining ≥15 letters from baseline at week 24

Change in central subfield thickness (CST) from baseline at week 24

Change in intra-retinal and sub-retinal fluid from baseline to week 24

Safety and tolerability

#### **Select Pre-specified Subgroups**

Predominantly classic, minimally classic, & occult lesions (Stratification Factor)

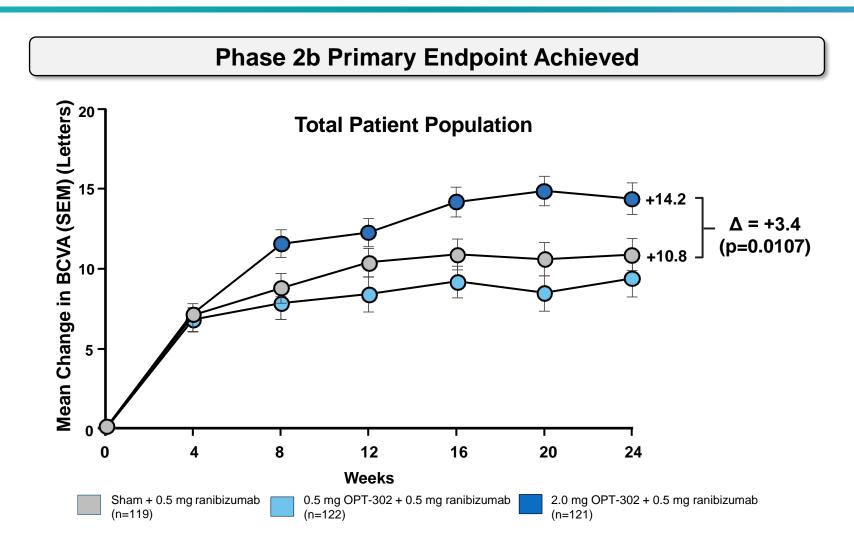
Retinal Angiomatous Proliferation (RAP)
detected/not detected at baseline

Polypoidal Choroidal Vasculopathy (PCV)
detected/not detected at baseline

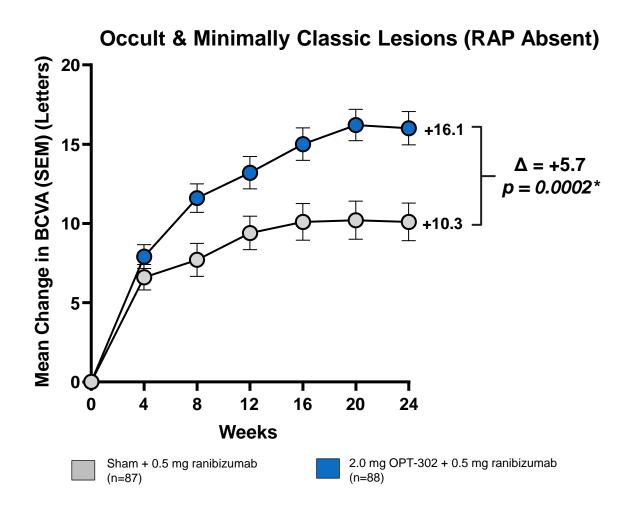
### Phase 2b Trial Demographics and Baseline Characteristics

Demographic/Bas	seline Disease Characteristic	Sham + ranibizumab n=121	0.5 mg OPT-302 + ranibizumab n=122	2.0 mg OPT-302 + ranibizumab n=123
Mean Age -years ± SD		76.1 ± 9.48	78.8 ± 8.16	77.8 ± 8.82
0	Male	48 (39.7%)	49 (40.2%)	45 (36.6%)
Sex - n (%)	Female	73 (60.3%)	73 (59.8%)	78 (63.4%)
Caucasian Race – n (%)		117 (99.2%)	119 (99.2%)	117 (97.5%)
Mean Visual Acuity (BCVA) – letters ± SD		50.7 ± 10.21	51.1 ± 8.96	49.5 ± 10.26
Mean Total Lesion Area - mm² ± SD		6.08 ± 3.21	6.48 ± 3.30	6.62 ± 3.39
Lesion Type	Predominantly classic -n (%)	15 (12.4%)	15 (12.3%)	16 (13.0%)
	Minimally classic -n (%)	53 (43.8%)	51 (41.8%)	53 (43.1%)
	Occult - n (%)	53 (43.8%)	56 (45.9%)	54 (43.9%)
	PCV detected <sup>1</sup> -n (%)	20 (16.5%)	24 (19.7%)	22 (17.9%)
	RAP detected <sup>2</sup> -n (%)	15 (12.7%)	22 (18.5%)	14 (11.8%)
Mean central subfield thickness (CST) - mm ±SD		412.10 ± 110.62	425.18 ± 120.45	414.12 ± 123.25
Sub-retinal fluid (SRF) present – % participants		89.3%	84.4%	87.8%
Intra-retinal cysts present –% participants		57.9%	63.9%	56.1%

# Sozinibercept 2.0 mg Combination Therapy Demonstrated Superiority in Visual Acuity over Ranibizumab Monotherapy



# Best Responding Phase 2b Patients Represents Primary Analysis Population in the Pivotal Phase 3 Trials to Maximize Probability of Success



Phase 2b demonstrated superior efficacy of +5.7 letter gain over standard of care, based on a pre-specified analysis

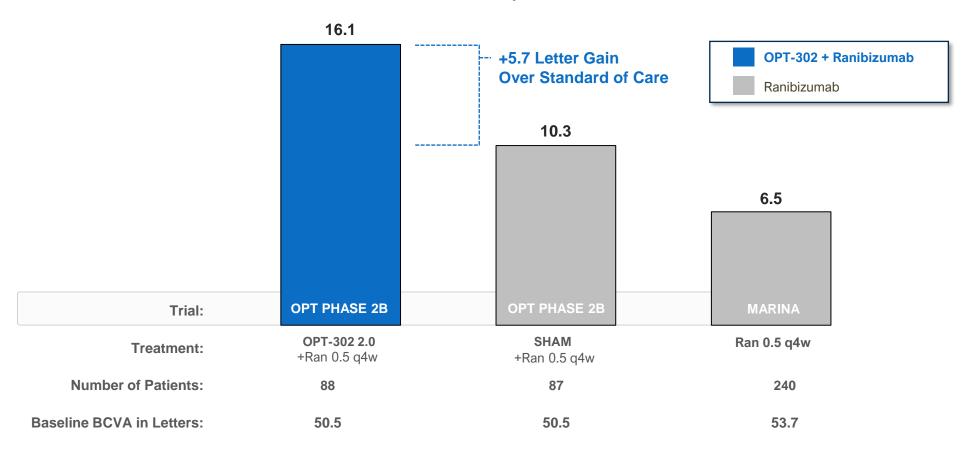
This patient population (minimally classic & occult) represents ~75% of wet AMD patients

21

\*Unadjusted p-value

# Control Arm in Phase 2b Overperformed MARINA Trial at Week 24 in in Similar Lesion Type Patient Population

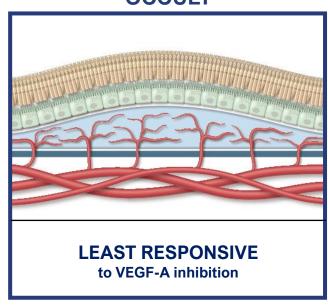
# Mean Change in BCVA from Baseline at Week 24 – OPT-302 Phase 2b vs. MARINA Trial Occult and Minimally Classic Lesions



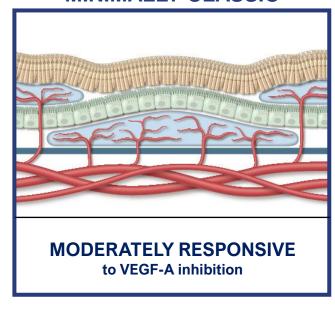
### Wet AMD Lesion Types

Differ in Vessel Location, Leakiness, and Responsiveness to VEGF-A Inhibitors

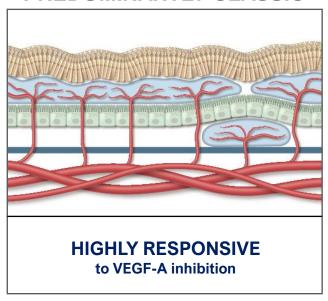
#### **OCCULT**



#### **MINIMALLY CLASSIC**



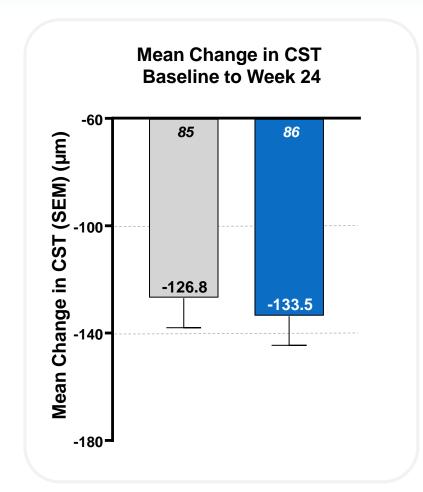
#### PREDOMINANTLY CLASSIC

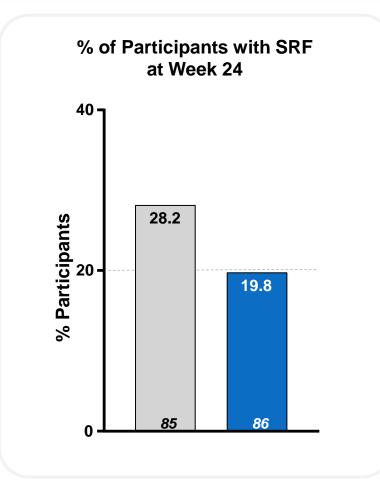


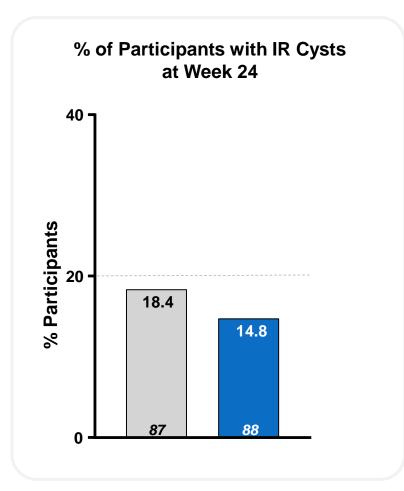
~75% of Wet AMD Patients Have Occult or Minimally Classic Lesions

### Reduced Retinal Thickness and Better Retinal Drying

With Combination Therapy in Occult & Minimally Classic (RAP Absent) Patients





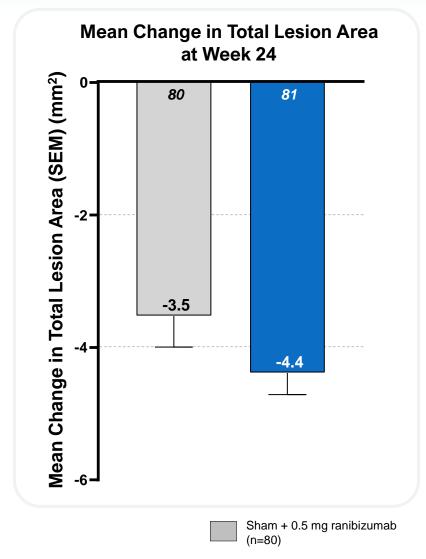


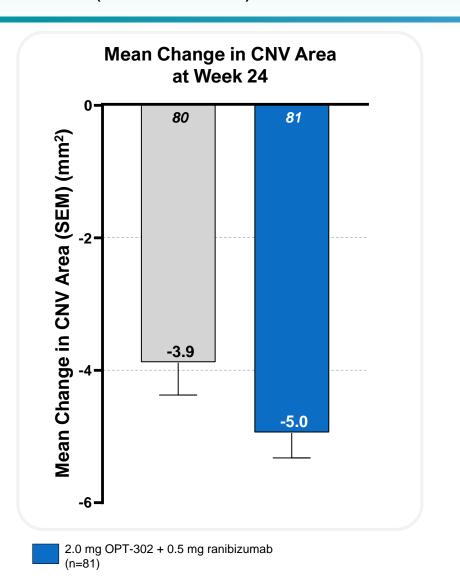
Sham + 0.5 mg ranibizumab

2.0 mg OPT-302 + 0.5 mg ranibizumab

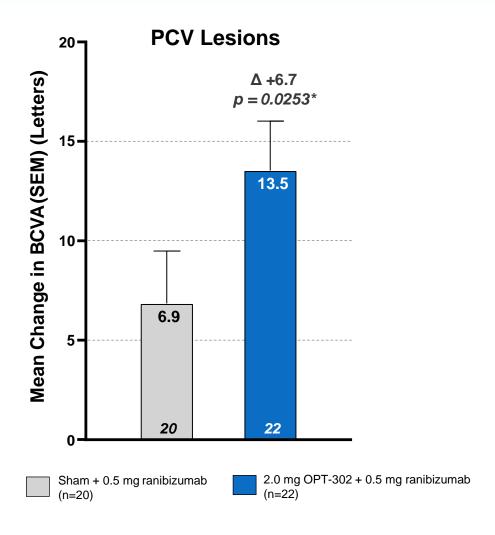
### Greater CNV and Lesion Regression

With Combination Therapy in Occult & Minimally Classic (RAP Absent) Patients





### Sozinibercept Further Demonstrated Superior Vision Gains in a Pre-Specified Subgroup of PCV Lesion Patients



Polypoidal Choroidal Vasculopathy (**PCV**) is a difficult-to-treat wet AMD subtype; it is often described as the **most prevalent form of** wet AMD worldwide

PCV is **highly prevalent in Asian populations** (up to ~60%), while ~8-13% prevalence in Caucasians

Phase 3 ShORe and COAST trials enrolled patients with PCV<sup>1</sup>

<sup>\*</sup>Unadjusted p-value

<sup>&</sup>lt;sup>1</sup> Evaluated by color fundus photography (FP), fluorescein angiography (FA), and spectral domain optical coherence tomography (SD-OCT)

### Pooled Safety for Completed OPT-302 Trials

Combination Therapy Well Tolerated and Comparable to Standard of Care Monotherapy

N Participants (%)	OPT-302 Any dose* N=399 (N=1,842 injections)	OPT-302 2.0 mg N=263 (N=1,121 injections)	Sham + anti-VEGF-A control N=170 (N=854 injections)
Ocular TEAEs - Study Eye – related to study product(s)	41 (10.2%)	22 (8.4%)	20 (11.8%)
Ocular TEAEs - Study Eye - Severe	4 (1.0%)	2 (0.8%)	2 (1.2%)
Intraocular inflammation – Study Eye	71,2,3 (1.8%)	31 (1.1%)	31 (1.8%)
Participants with AEs leading to treatment discontinuation	42,4-6 (1.0%)	14 (0.4%)	27,8 (1.2%)
Any APTC event	44,5,9,10 (1.0%)	35,9,10(1.1%)	211,12 (1.2%)
Deaths	210,13 (0.5%)	210,13 (0.8%)	214,15 (1.2%)

- Pooled safety analysis of 399 patients for completed OPT-302 trials
- Data Monitoring Committee ("DMC") regularly reviews data from ongoing Phase 3 COAST and ShORe studies
- Safety data from our completed OPT-302 trials show OPT-302 combination therapy has a safety and tolerability profile comparable to standard of care anti-VEGF-A monotherapy.
- Masked data from patients that have completed the week 52 visit in the ongoing Phase 3 clinical trials show greater mean BCVA increases from baseline than results with standard of care anti-VEGF-A monotherapy from Opthea's Phase 2b study\*\*

<sup>&</sup>lt;sup>1</sup>Transient anterior chamber cell (trace 1-4 cells); <sup>2</sup> SAE of endophthalmitis, with AE's of hypopyon and anterior chamber cell (n=1; 0.5 mg); <sup>3</sup> SAE of vitritis (n=1; 0.5 mg); <sup>4</sup>Non-fatal myocardial infarction; <sup>5</sup>Cerebrovascular accident; <sup>6</sup>Enteritis; <sup>7</sup>Abdominal pain; <sup>8</sup>Increased IOP; <sup>9</sup> Non-fatal angina pectoris; <sup>10</sup>Fatal congestive heart failure/myocardial infarction; <sup>11</sup>Non-fatal arterial embolism; <sup>12</sup>Embolic stroke; <sup>13</sup>Metatstaic ovarian cancer; <sup>14</sup> Pneumonia; <sup>15</sup> infective endocarditis. <sup>\*</sup>Any dose (OPT-302 0.3 mg, 0.5 mg, 1 mg or 2 mg)

<sup>\*\*</sup>Masked data represent pooled data from both OPT-302 combination and standard of care monotherapy treatment arms. The Phase 3 clinical trial masked data are incomplete and subject to additional analysis once unmasked. There is no assurance that standard of care monotherapy in our Phase 3 clinical trials will yield similar results to our prior clinical trials or previously published clinical trials with anti-VEGF-A monotherapies. As a result, there can be no assurance that topline results for OPT-302 from the Phase 3 clinical trial, if completed, will be consistent with results from masked data available to date.

# Very Low Intraocular Inflammation Observed in Combination Therapy Study Eye Across Completed OPT-302 Trials

N Participants (%)	OPT-302 Any dose* N=399 (N=1,842 injections)	OPT-302 2.0 mg N=263 (N=1,121 injections)	Sham + anti-VEGF-A control N=170 (N=854 injections)
Intraocular Inflammation <sup>1</sup>	7 (1.8%)	3 (1.1%)	3 (1.8%)
OPT-302-1001 (Phase 1/2a wet AMD)	2	0	0
Uveitis with anterior chamber cell 1+	1	0	0
Uveitis with anterior chamber cell 2+	1	0	0
OPT-302-1002 (Phase 2b wet AMD)	3	1	2ª
Endophthalmitis with anterior chamber 1+ and hypopyon	1	0	0
Vitritis	1	0	0
Anterior chamber cell, trace	1	1	2ª
OPT-302-1003 (Phase 1b/2a DME)	2 <sup>b</sup>	2 <sup>b</sup>	1
Iritis with keratic precipitates and anterior chamber cell 2+	1	1	0
Iritis with anterior chamber cell 2+	0	0	1
Anterior chamber cell 4+, associated with cataract extraction/ intraocular lens implant and hyphema	1 <sup>b</sup>	1 <sup>b</sup>	0

Safety population

<sup>&</sup>lt;sup>1</sup>AEs observations considered to be indicative of intraocular inflammation, defined prior to database lock

<sup>&</sup>lt;sup>a</sup>Observed during ophthalmic examination, but not reported as TEAEs

<sup>&</sup>lt;sup>b</sup>Considered associated with lens extraction and not reported as TEAEs

# Phase 3 Clinical Program Is Informed by Phase 2b Results and Optimized for Success



Hierarchical primary analysis first conducted in the high-responding occult and minimally classic population (RAP absent), followed by total patient population



Two robust pivotal trials studying sozinibercept in combination with Eylea® and Lucentis® in treatment naïve patients with wet AMD



Phase 3 designed to support broad label for use in combination with any VEGF-A inhibitor for all wet AMD patients (treatment naïve and prior treated)

#### Phase 3 Wet AMD Trials COAST and ShORe Are Well Advanced

1,984 Patients Enrolled in Phase 3 Program |

Topline Data for COAST (anticipated in early 2Q CY 2025) and for ShORe (anticipated in mid-CY2025)

**Design** 

- Multi-center, double-masked, randomized (1:1:1), sham control
- Treatment naïve wet AMD patients

**Sample Size** 

• COAST n=998; ShORe n=986

**Comparators** 

• 2 mg Eylea® q8w (COAST) & 0.5 mg Lucentis® q4w (ShORe)

Regulatory **Quality** 

~90% power, 5% type I error rate

### Phase 3 Primary and Secondary Endpoints

Primary Efficacy Endpoint at Week 52 to Support BLA Submission

#### **Primary Endpoint**

Mean change from baseline in BCVA at week 52

#### **Key Secondary Endpoints (Baseline to Week 52)**

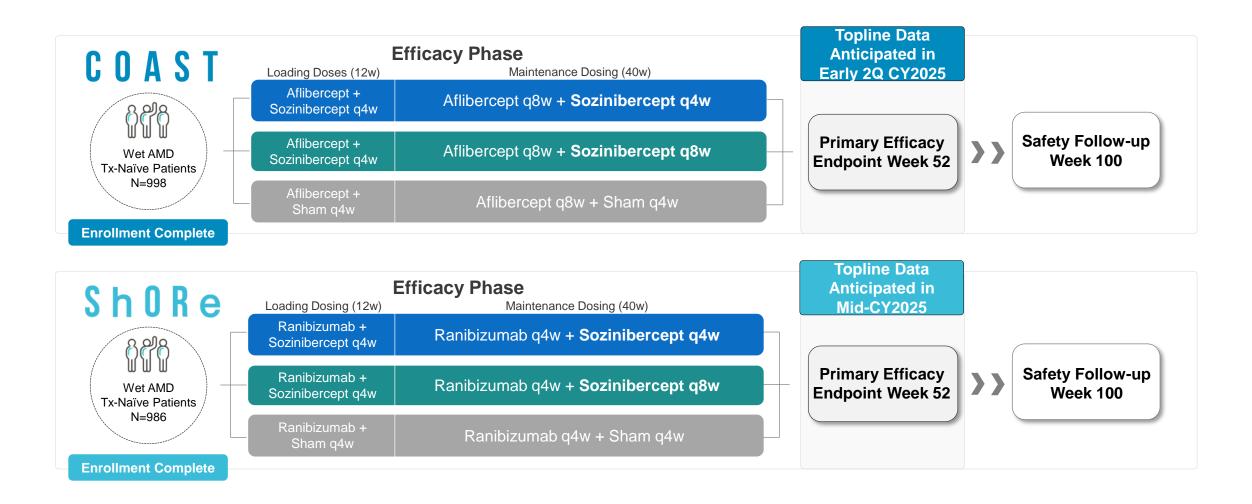
Proportion of participants gaining ≥15 letters

Proportion of participants gaining ≥10 letters

Change in choroidal neovascularization area

Proportion of participants with absence of both sub-retinal fluid and intra-retinal cysts

# Phase 3 Trial Design Supports Potential Broad Label for Use With Any Anti-VEGF-A Therapy



# Advancing Therapeutic Innovations to Transform Patient Outcomes with Superior Vision Gains

#### We are dedicated to advancing sozinibercept to improve patients' visual outcomes

 Phase 3 program enrolled 1,984 patients across COAST and ShORe **Clinical Milestones**  Topline data anticipated for COAST in early 2Q CY2025 and ShORe in mid-CY2025 Manufacturing Steps Production of validation batches supportive of BLA filing and launch Scale-up Next Regulatory FDA Fast Track designation allows rolling submission of completed BLA modules **Preparations**  Strengthen medical expert engagement and develop market access strategy **Commercial** Readiness Complete development of product launch plan

### Sozinibercept Will Not Compete Head-to-Head with Anti-VEGF-A

Differentiated Combination Approach Targeting Better Visual Outcomes Drives Commercial Value

- Addressing unmet medical need of improved efficacy in large wet AMD patient population in a potential ~\$15B market
- First and only therapy to have demonstrated superior visual outcomes over anti-VEGF-A therapy with a novel and highly differentiated MOA
- Only asset in near or long-term pipeline with potential to disrupt treatment paradigm on basis of efficacy in wet AMD
- Concentrated prescriptions in U.S. enables potential selfcommercialization opportunity with lean and targeted organization