2017
Annual General Meeting

Corporate Presentation, November 23, 2017
Megan Baldwin PhD, CEO & Managing Director

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Corporate & Operational Achievements

- ✓ Met primary safety objective in Phase 1/2A wAMD trial (n = 51 patients)
  - ✓ Demonstrated safety and tolerability of OPT-302 as monotherapy and in combination with Lucentis®
- ✓ Demonstrated clinical activity of OPT-302 as a monotherapy and in combination with Lucentis® in both treatment naïve patients and prior treated patients
- ✓ Raised A$45m in over-subscribed capital raising (April ‘17)
  - $42m in placement to Australian, US and EU based institutional investors
  - $3m in Aust/NZ rights issue
- ✓ Strengthened financial position, fully-funded through 2020 and completion of Phase 2b wet AMD trial and two Phase 2a trials
- ✓ Expanded clinical management team
- ✓ Granted key US patent covering OPT-302 and its use (exp. 2034)
- ✓ R&D Tax Incentive anticipated ~$2.7m (Australian & international expenditure)

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Corporate & Operational Achievements

- ✓ Engaged global CRO (contract research organisation) for wAMD & DME
- ✓ Progressed activities for Phase 2b wAMD study
  - ✓ Type C Meeting US FDA
  - ✓ Scientific Advice meetings MHRA (UK), MPA (Sweden)
  - ✓ Protocol finalised & submitted to IND (US FDA)
  - ✓ ClinTrials.gov ID#NCT03345082
- ✓ Progressed activities for Phase 2a DME study
  - ✓ Protocol submitted to IND (US FDA)
- ✓ wAMD and DME trials progressing to schedule
- ✓ Expect to initiate enrolment by end 2017
- ✓ Planning underway for Phase 2A wAMD trial (eg. Prior-Tx patients)
- ✓ Continued to raise company profile in local and international investment and clinical ophthalmology communities
- ✓ Data presented at international conferences and Innovation Summit (OIS/ASRS, EURetina) by mgmt, clinical advisory board & investigators

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Financial Position (Unaudited)

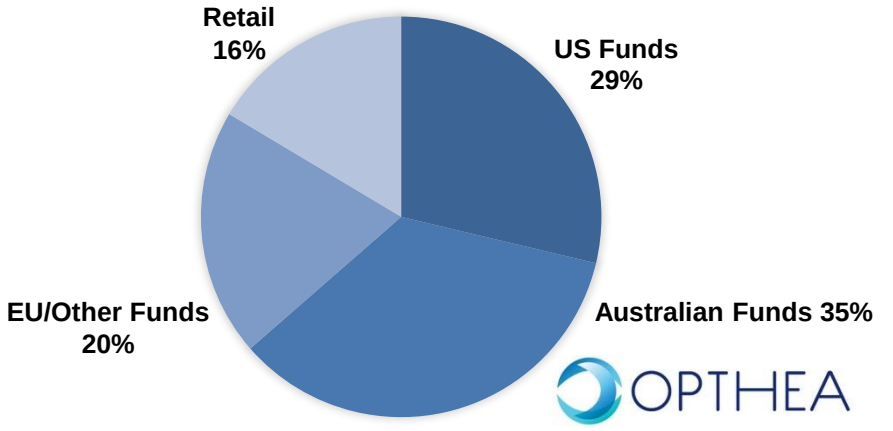
Key Financial Details	ASX: OPT
Ticker Symbol	ASX:OPT
Share Price (Nov 22 2017)	~A$0.69
Total Ordinary Shares on Issue	200,624,570
Options on Issue	48,086,642
Market Capitalisation (Oct 20 2017)	~A$140m (~USD106m)
Trading Range (last 12 months)	A$0.67– 1.20
Cash Balance (Oct 31 2017)	~A$48.5m
Forecast Net Operating Cash Burn (CY 2017)	~$18m
Top 20 Shareholders Own	69%
Institutional Holders	84%

Details

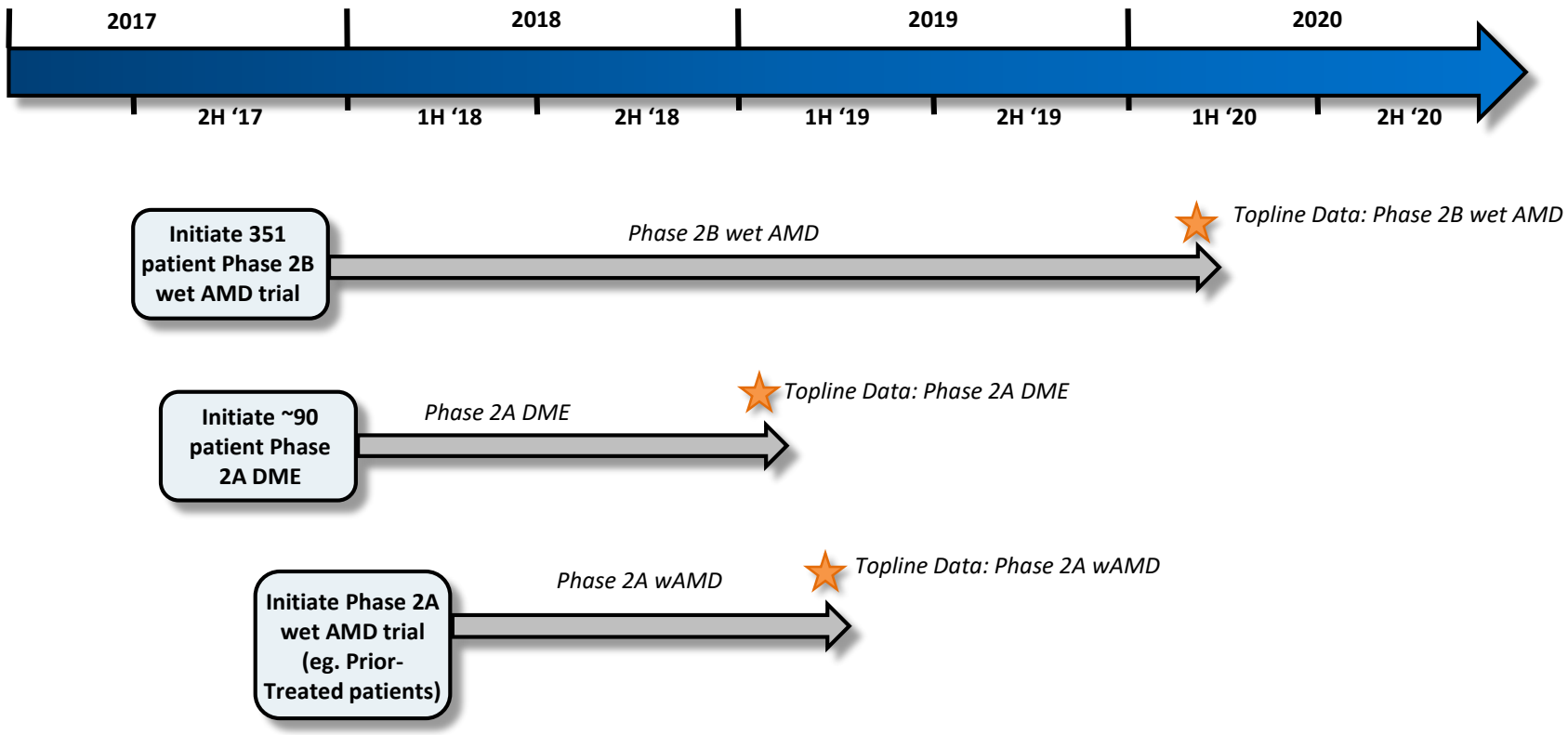
- Cash positive until end ’20
- Fully-funded through
  - ~350 pt Ph2B wAMD trial (randomised, statistically powered)
  - ~90 pt Ph2A DME trial (randomised, statistically powered)
  - Ph 2A trial (eg. Prior-Tx Patients)
- Accumm. tax and capital losses ~A$15m

Share Price Performance (Nov 2015 - Nov 2017)

Shareholders by Region

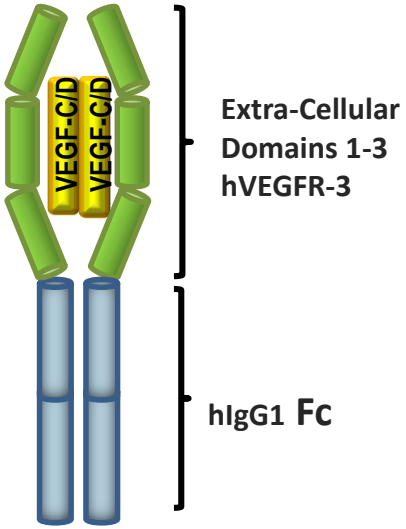


OPT-302: fully funded through an expanded clinical development program



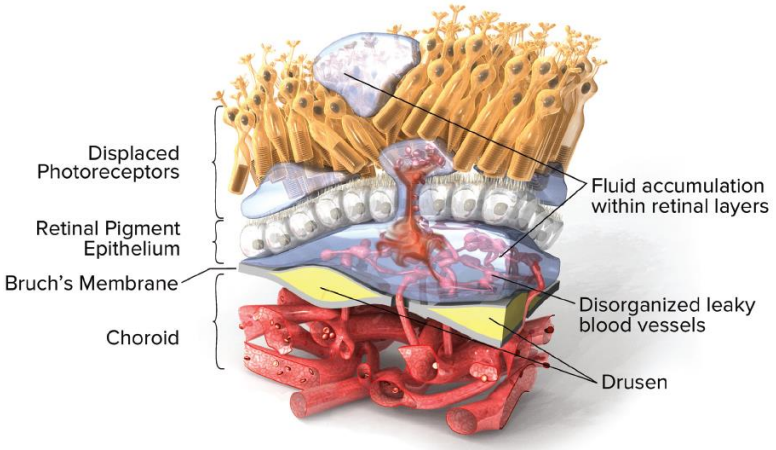
Note: Dates provided in timelines are estimates, and indicative only, and subject to change as a result of a number of factors outside of Opthea's control.

OPT-302 for Wet AMD

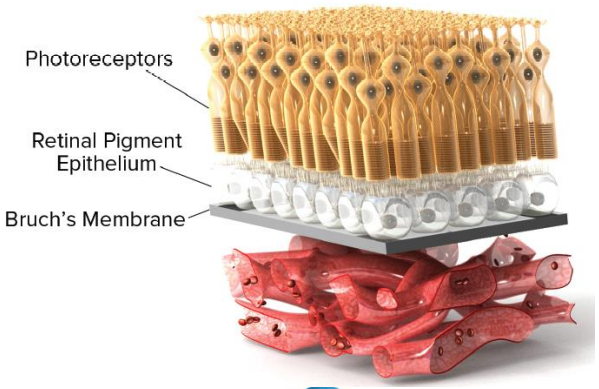


- OPT-302 blocks VEGF-C and VEGF-D
- The VEGF family is recognised as the most important family of growth factors controlling vessel growth and leakage
- Blocks vessel growth and leakage, two of the key hallmarks of wet AMD
- Leading cause of blindness in over 55's, increasing prevalence

Wet AMD



Normal Retina



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Our Goal: To Improve Vision

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An Unmet Medical Need for Wet AMD

Despite receiving a VEGF-A inhibitor (Lucentis, Eylea or Avastin):

>50%	Do not achieve significant vision gains
2/3	Will continue to have fluid at the back of the eye
25%	Will have further vision loss at 12 months

Opportunity: New Products that Improve Efficacy and Durability

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Very few novel combination therapies in development

DURABILITY (fewer injections) & **BIOSIMILARS**

Anti-VEGF-A

Phase III

- **Abicipar pegol** Anti-VEGF-A *Molecular Partners Allergan*
- **Brolucizumab (RTH-258)** Anti-VEGF-A *Novartis*
- **Ranibizumab biosimilar*** Anti-VEGF-A *Formycon*
- **Squalamine** Anti-VEGF *Ohr Pharmaceutical*

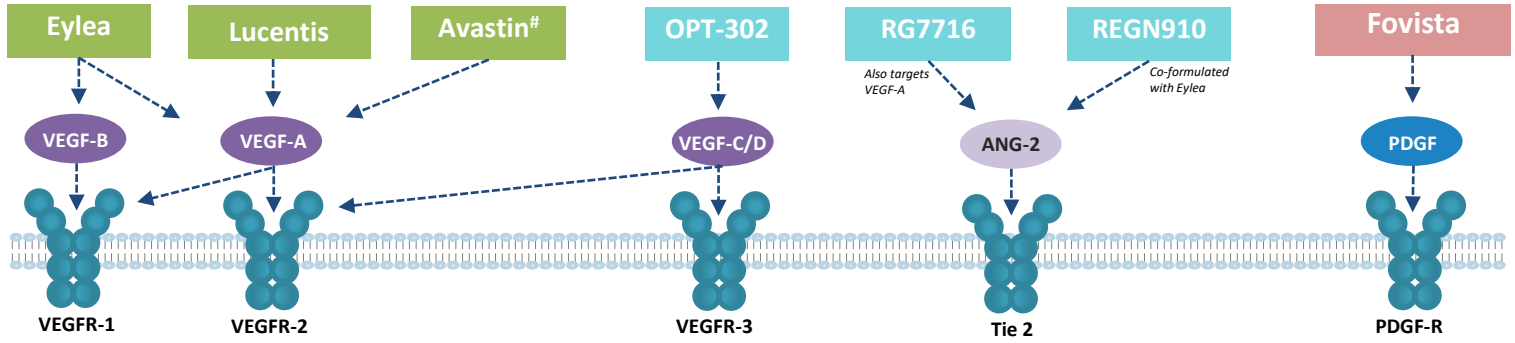
Phase II

- **PAN-90806** Anti-VEGF-A *PanOptica*
- **Ranibizumab biosimilar** Anti-VEGF-A *Pfenex*
- **SB11 (Lucentis biosimilar)** Anti-VEGF-A *Samsung Bioepis*
- **X-82** Anti-VEGF/PDGF *Tyrogenex*

Phase I

- **Sevacizumab** Anti-VEGF-A *Apexigen*
- **RGX-314** Gene therapy *Regenxbio*
- **Ranibizumab biosimilar*** Anti-VEGF-A *Lupin Ltd.*

Mechanism Comparison Of IVT Administered Wet AMD Agents



= In Clinical Development
= Failed to meet primary endpoint
= Approved therapies

Opthea is the Only Company Working on VEGF-C/D

** Small molecule TKIs such as X-82 (Tyrogenix) and Squalamine (Ohr Pharmaceuticals) are not represented here. Other biologics in development that selectively target VEGF-A include Abicipar Pegol (DARPin, Allergan), RTH258 (Novartis), and a-VEGF-A biosimilars*

 # Avastin is used off-label for the treatment of wet AMD

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OPT-302:
Phase 1/2A Clinical Trial Results (wet AMD)

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OPT-302 Phase 1/2A

Opthea's Phase 1/2A clinical trial in wet AMD enrolled 51 patients:

OPT-302 Monotherapy	n=13 patients Administered OPT-302 alone
OPT-302 + Lucentis® Naïve Patients	n=18 patients Administered combination therapy to patients who had not previously received wAMD therapy
OPT-302 + Lucentis® Prior-Treated Patients	n=20 patients Administered combination therapy to patients who had previously received wAMD therapy and shown a sub-response

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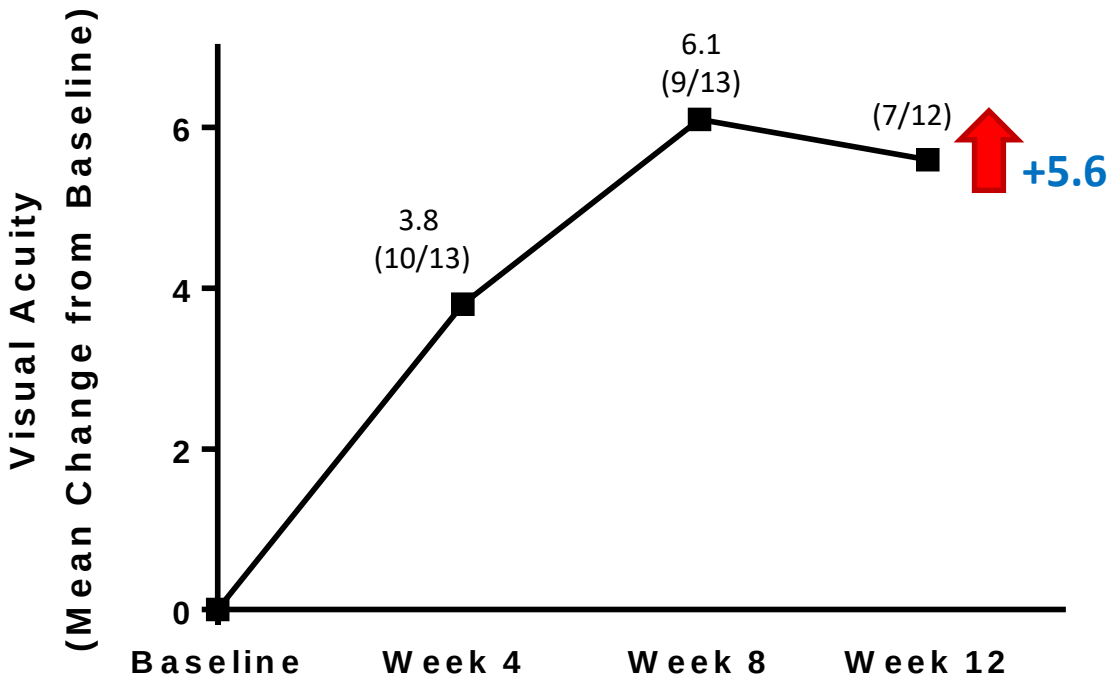
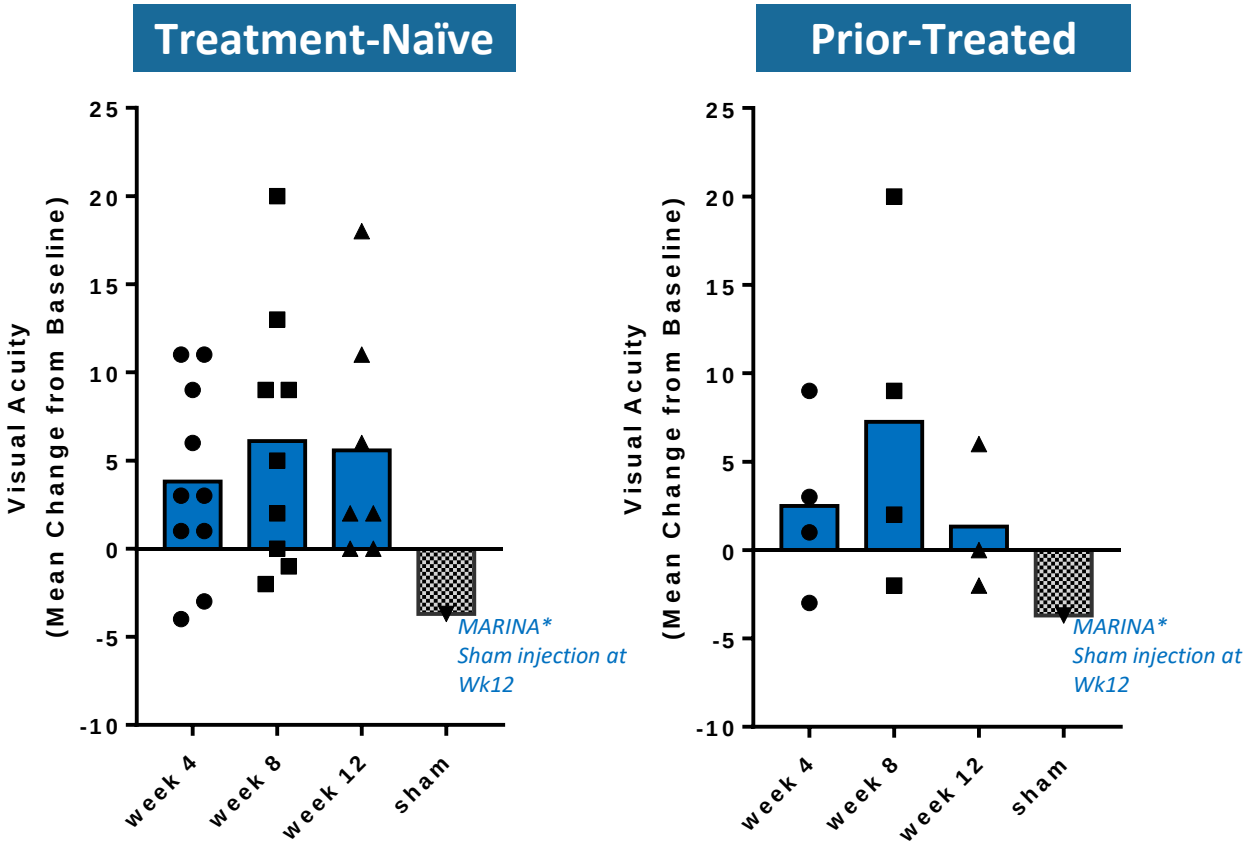
Phase 1/2A Monotherapy Patients

Mean Change in Visual Acuity in Non-Rescue Patients



One treatment-naïve patient in the monotherapy cohort with myocardial infarction died (on day 77) prior to the week 12 visit (unrelated to study drugs)

Phase 1/2A Monotherapy Patients



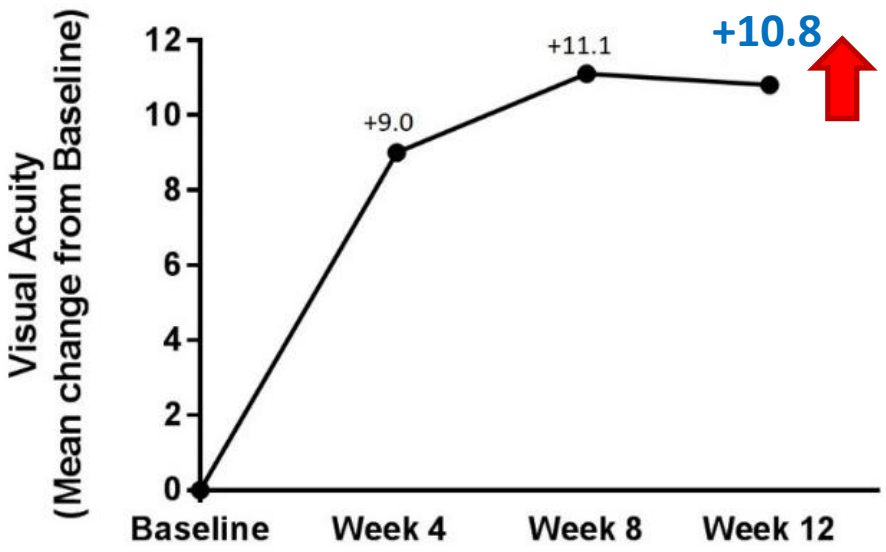
Gains in Visual Acuity in Patients Treated with OPT-302 Monotherapy

** Rosenfeld et al., NEJM, 355;14, pp 1419-1431, 2006*

Gains in Visual Acuity in Patients Treated with OPT-302 Combination Therapy

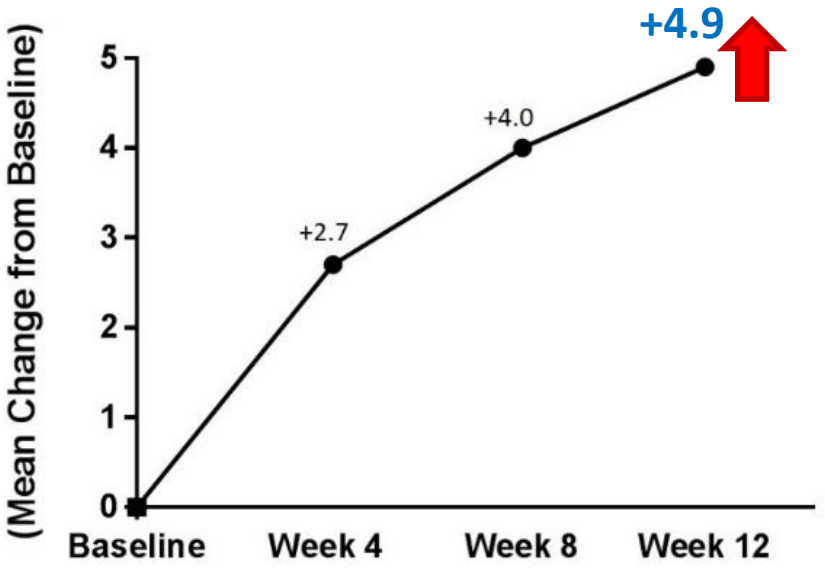
Treatment Naïve Patients

Mean Change in Visual Acuity from Baseline (letters)



Prior-Treated Patients

Mean Change in Visual Acuity from Baseline (letters)



Improved Visual Acuity in both Treatment-Naïve and Prior-Treated Patients Treated with OPT-302 + Lucentis Combination Therapy

Number of Patients: 18; Mean Baseline VA = 56.5 Letters
(MARINA: Mean Baseline VA = 53.7 letters)
** Rosenfeld et al., NEJM, 355;14, pp 1419-1431, 2006*

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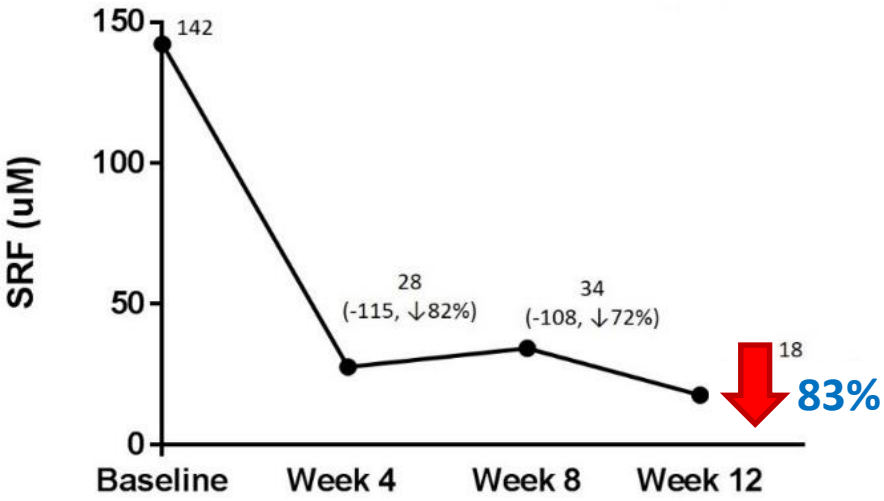
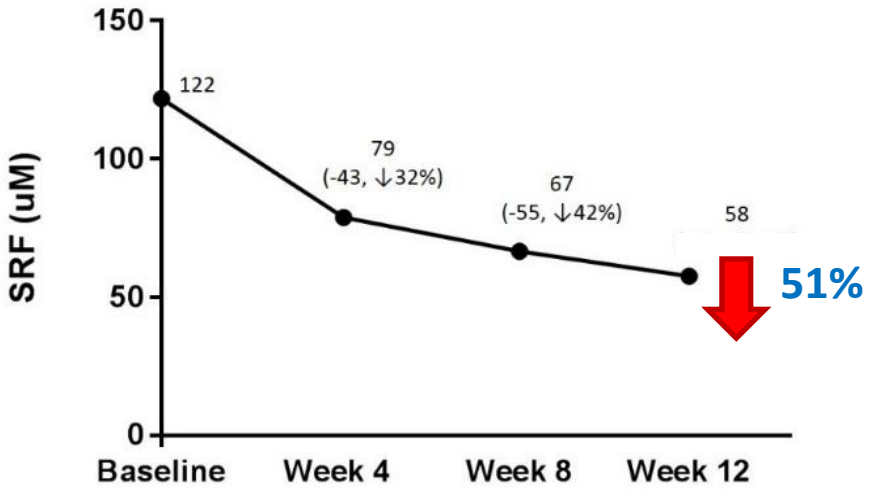
Reductions in Retinal Fluid in Patients Treated with OPT-302 Combination Therapy

Treatment Naïve Patients
Mean Sub-Retinal Fluid



- *SRF reduced by 83% by Week 12*
- *72% patients had 100% resolution of SRF by Week 12*

Prior-Treated Patients
Mean Sub-Retinal Fluid



- *16% patients had 100% resolution of SRF*
- *47% had >50% resolution of SRF by Week 12*

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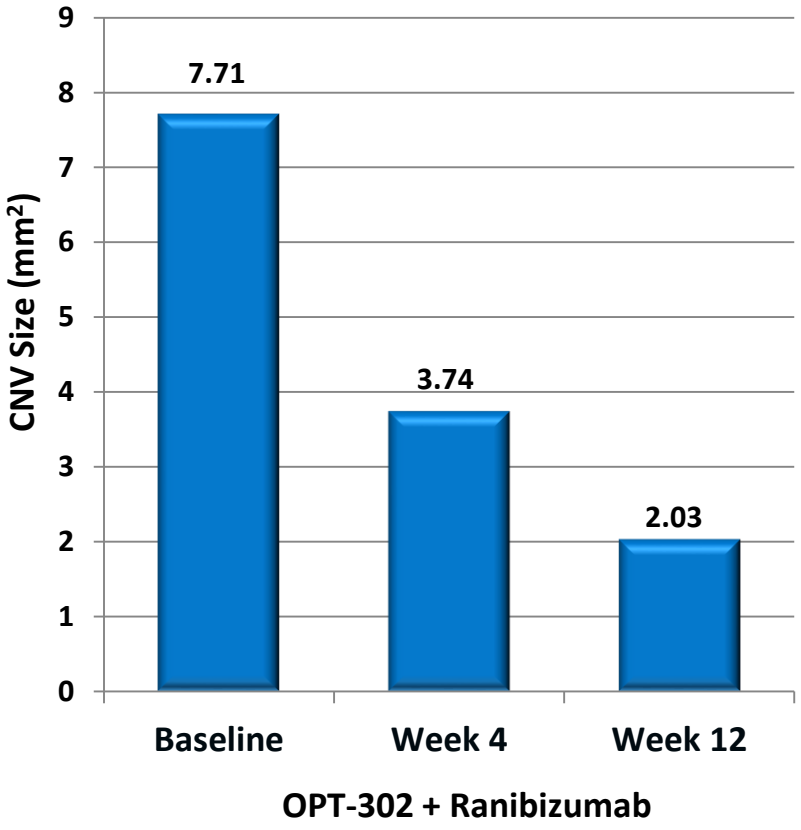
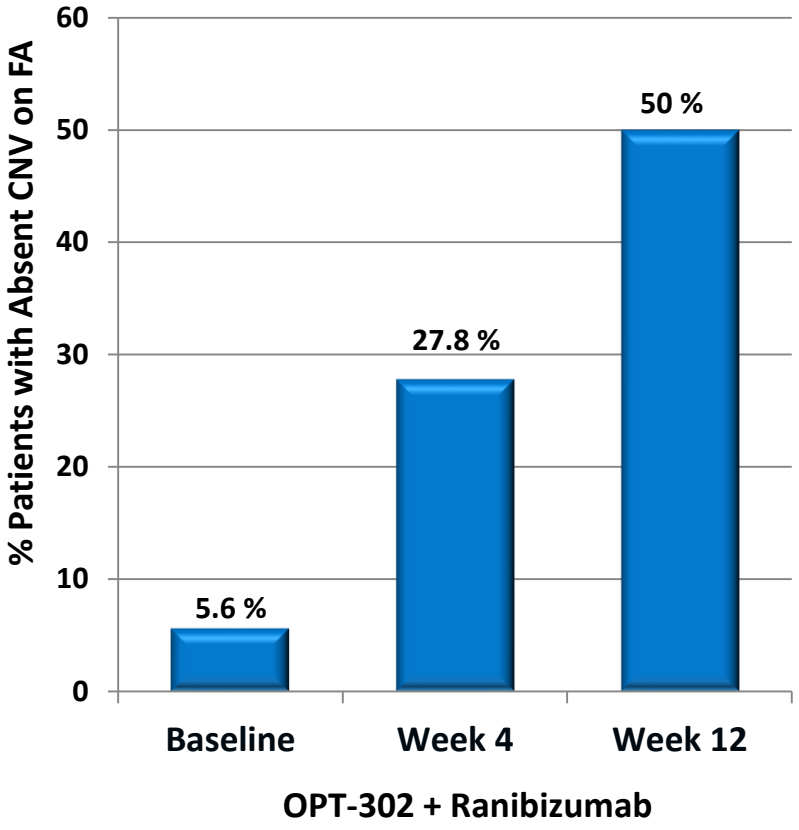
Treatment-Naïve Patients: Reductions in CNV

Reduction in CNV Size on FA



% Patients with Absent CNV on FA



50% of Treatment-Naïve Patients had no detectable CNV after 12 weeks

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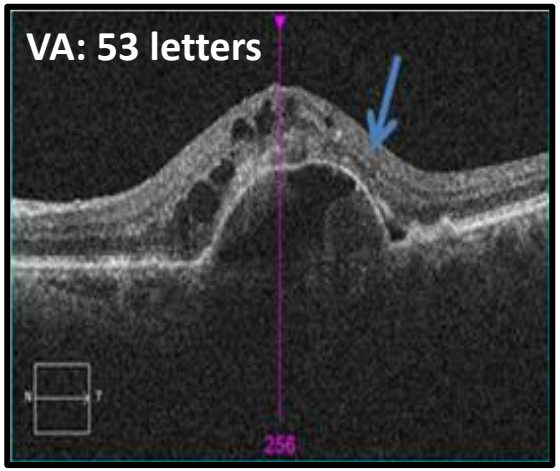
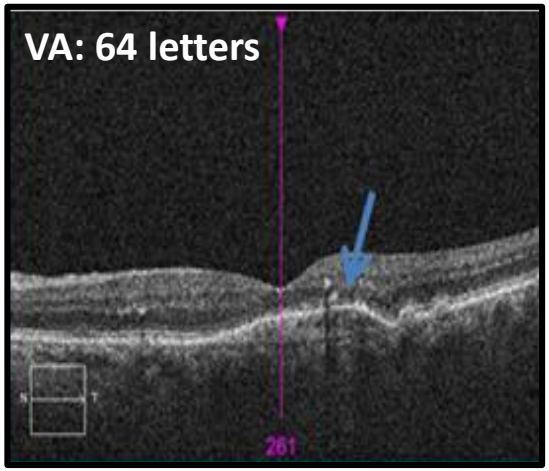
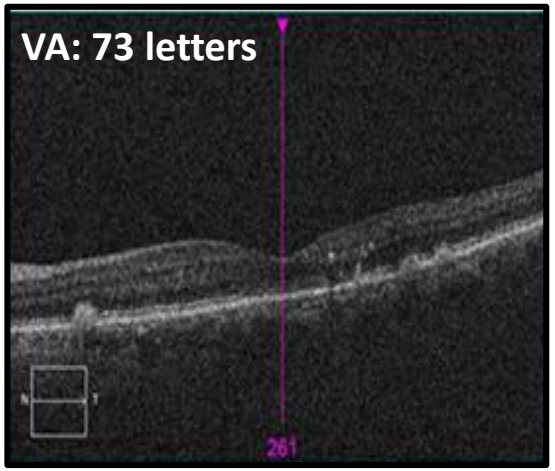
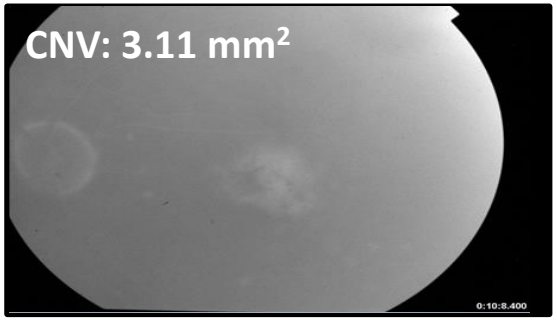
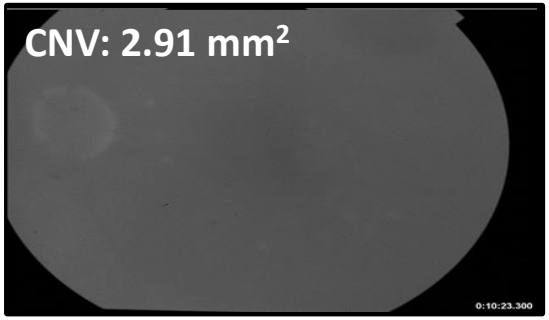
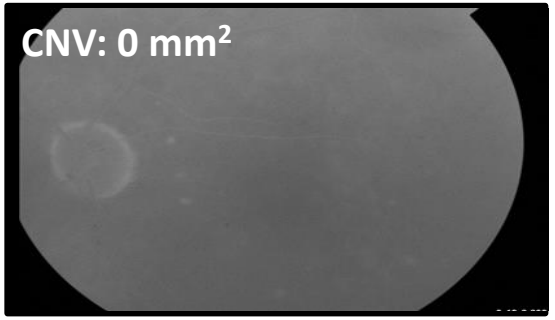
CNV: Choroidal Neovascularisation; Treatment Naïve Patients: n = 18; OPT-302 (0.3, 2.0 mg) + ranibizumab (0.5 mg)

Case-Study: Treatment-Naïve Patient (Occult)

OPT-302 (2 mg) + Ranibizumab (0.5 mg)

Baseline	Week 4	Week 12
		
		
CST: **279 µM** SRF: **192 µM** SHRMw: **1053 µM** SHRMh: **194 µM**	CST: **217 µM** SRF: **0 µM** SHRMw: **0 µM** SHRMh: **0 µM**	CST: **233 µM** SRF: **0 µM** SHRMw: **0 µM** SHRMh: **0 µM**

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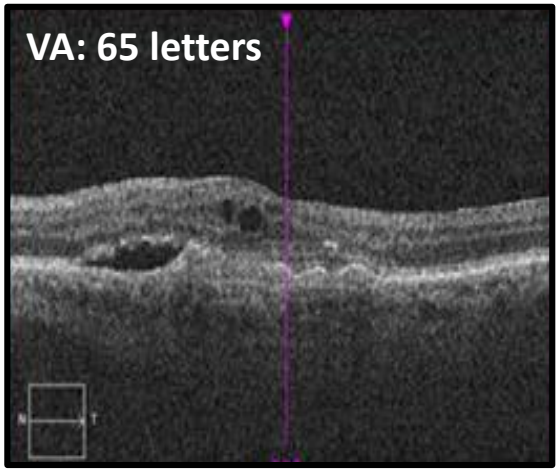
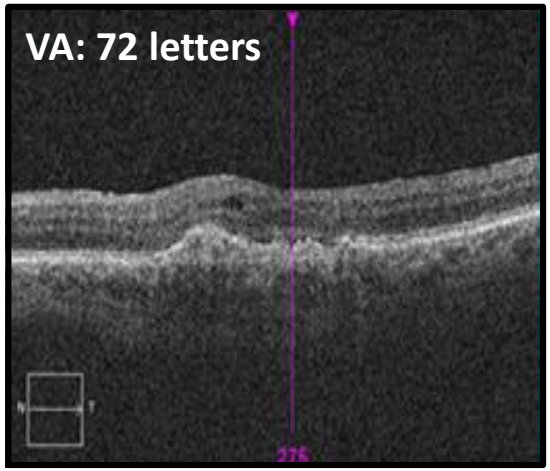
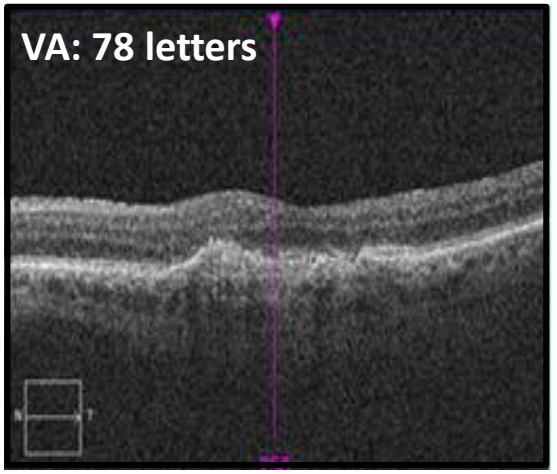
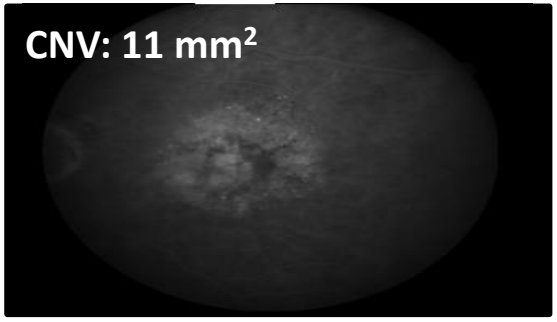
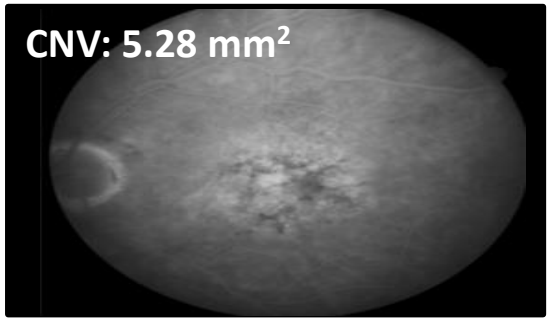
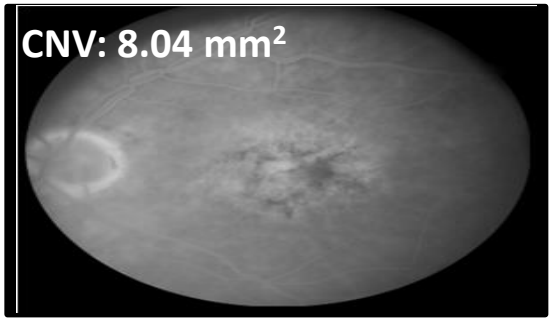
Case-Study: Prior-Treated Patient (Occult)

OPT-302 (2 mg) + Ranibizumab (0.5 mg) **Prior-treatment: Ranibizumab (0.5 mg) x28**

Baseline	Week 4	Week 12
		
		
CST: **303 µM** SRF: **140 µM** SHRMw: **1042 µM** SHRMh: **133 µM**	CST: **249 µM** SRF: **41 µM** SHRMw: **0 µM** SHRMh: **0 µM**	CST: **248 µM** SRF: **0 µM** SHRMw: **0 µM** SHRMh: **0 µM**

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OPT-302
Phase 2b study in Wet AMD

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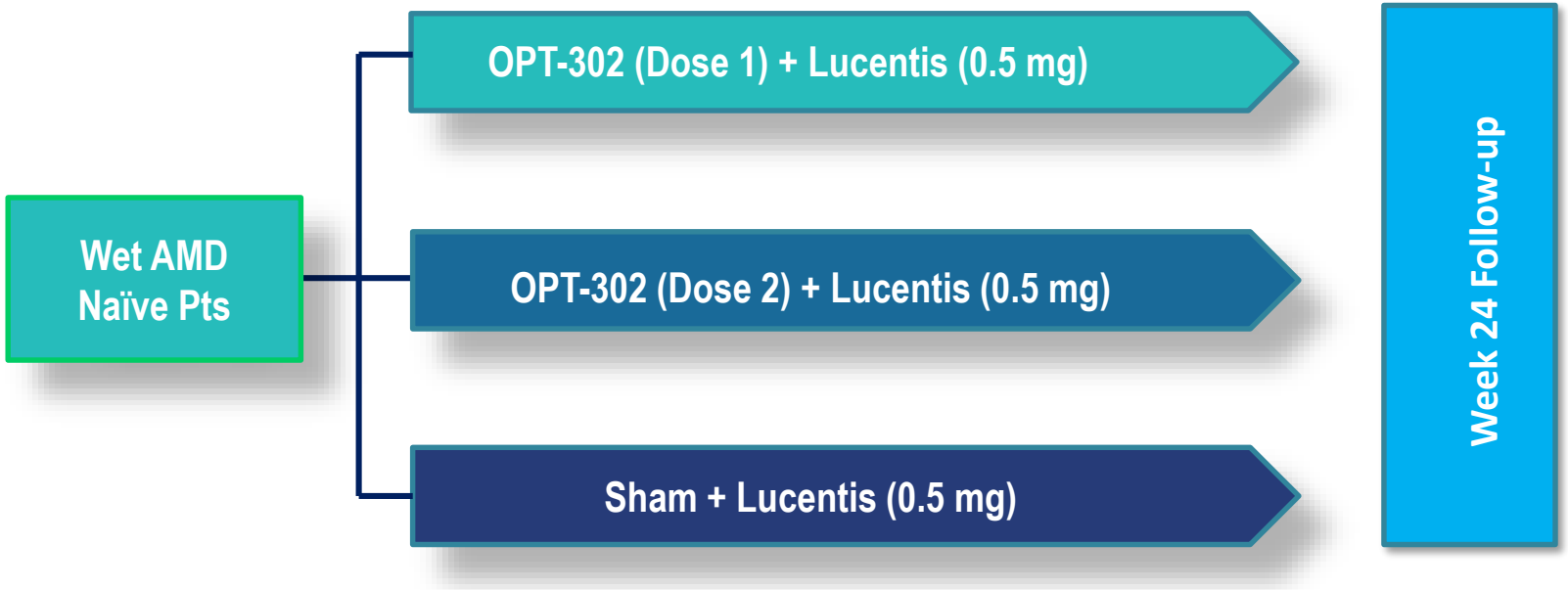
OPT-302 Phase 2B Trial in wet AMD (n=351)

Combination OPT-302 + Lucentis vs Sham + Lucentis



Randomized 1:1:1 to treatment arms : IVT dosing at every 4 weeks (x 6)

- **Primary Objective:**
  - Mean change from baseline in BCVA (visual acuity) (ETDRS) at week 24
- **Secondary Objectives:**
  - The proportion of patients gaining ≥15 or more ETDRS letters from baseline at week 24
  - Area under the BCVA over time curve
  - The proportion of patients losing ≥15 or more ETDRS letters from baseline at week 24
  - Change in central subfield thickness (CST) from baseline at week 24 (SD-OCT)
  - Change in intra-retinal fluid and sub-retinal fluid from baseline to week 24 (SD-OCT)
  - Safety and tolerability

Primary data analysis: est. early 2020

OPT-302
Phase 2a study in Diabetic Macular Edema

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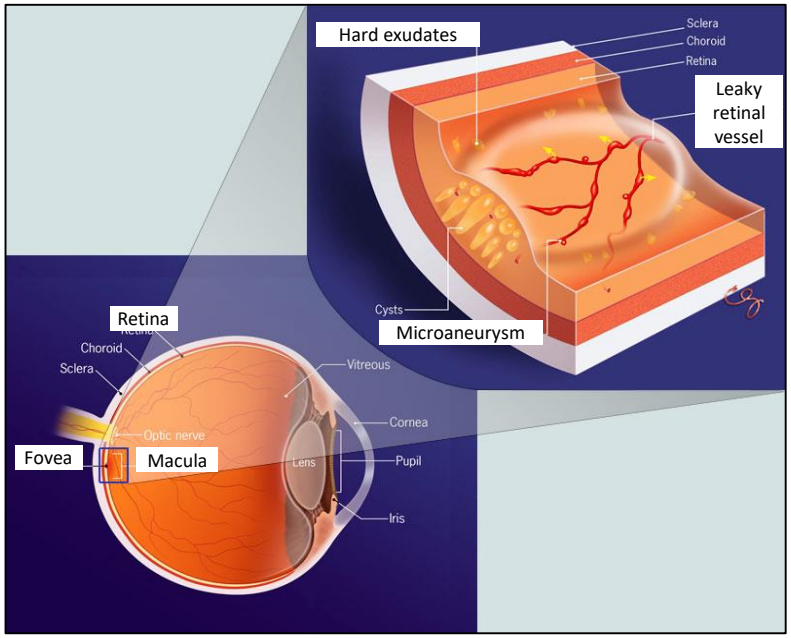
Diabetic Macular Edema

Diabetic macular edema (DME) is an ophthalmic complication of diabetes and is the leading cause of blindness in diabetics



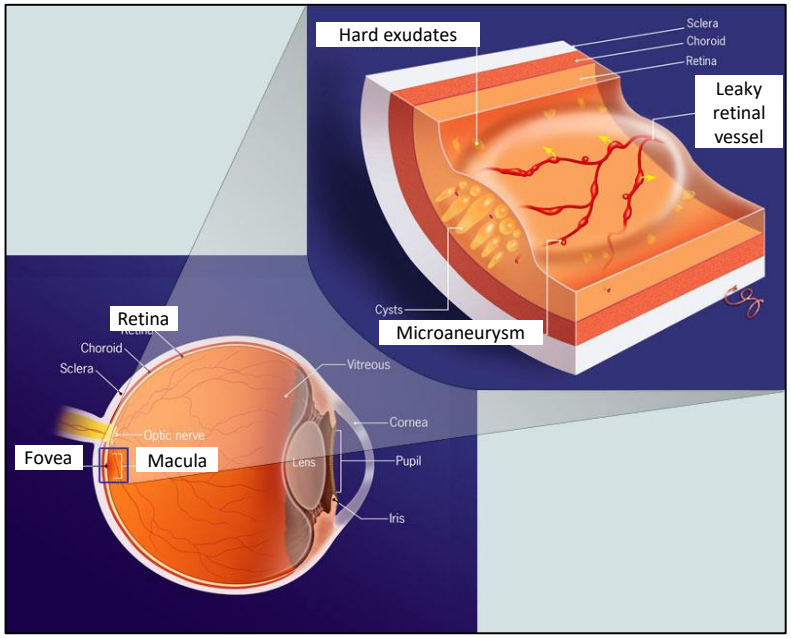
- DME is the build-up of fluid (edema) and hard exudates in the macula
- Diabetes can trigger inflammatory responses & lead to microvascular damage in the retina (diabetic retinopathy) which can develop into DME
- Edema leads to blurred vision, darkened & distorted vision
- Increasing prevalence of diabetes in working age adults, growing mkt
- Anti-VEGF-A therapies (Lucentis, Eylea) are the preferred treatment, poor or non-responders often switched to steroids or laser
- ~Half of patients exhibit no response or suboptimal response to anti-VEGF-A therapy

~1.3M have DME in US and EU

Note: Dates provided in timelines are estimates, and indicative only, and subject to change as a result of a number of factors outside of Opthea's control.

OPT-302 MOA supports investigation in DME

Published data indicates that VEGF-C and its interaction with VEGFR-2 and VEGFR-3 plays a functional role in pathogenesis of DME



VEGF-C/D signaling pathway is implicated in diabetes

- OPT-302 has shown evidence of activity to resolve retinal fluid
- VEGFR-2 expression is greater in diabetic retina than non-diabetics
- VEGF-C is elevated in diabetic retinopathy
- Vitreous levels of VEGF-D are elevated in diabetes
- VEGF-C expression is elevated by glucose & pro-inflammatory cytokines
- Inhibition of VEGF-C and VEGF-D in adipose tissue of mice improves metabolic parameters and insulin sensitivity
- Advanced glycation end products accumulate faster in diabetics and stimulate VEGF-C expression and secretion from the RPE

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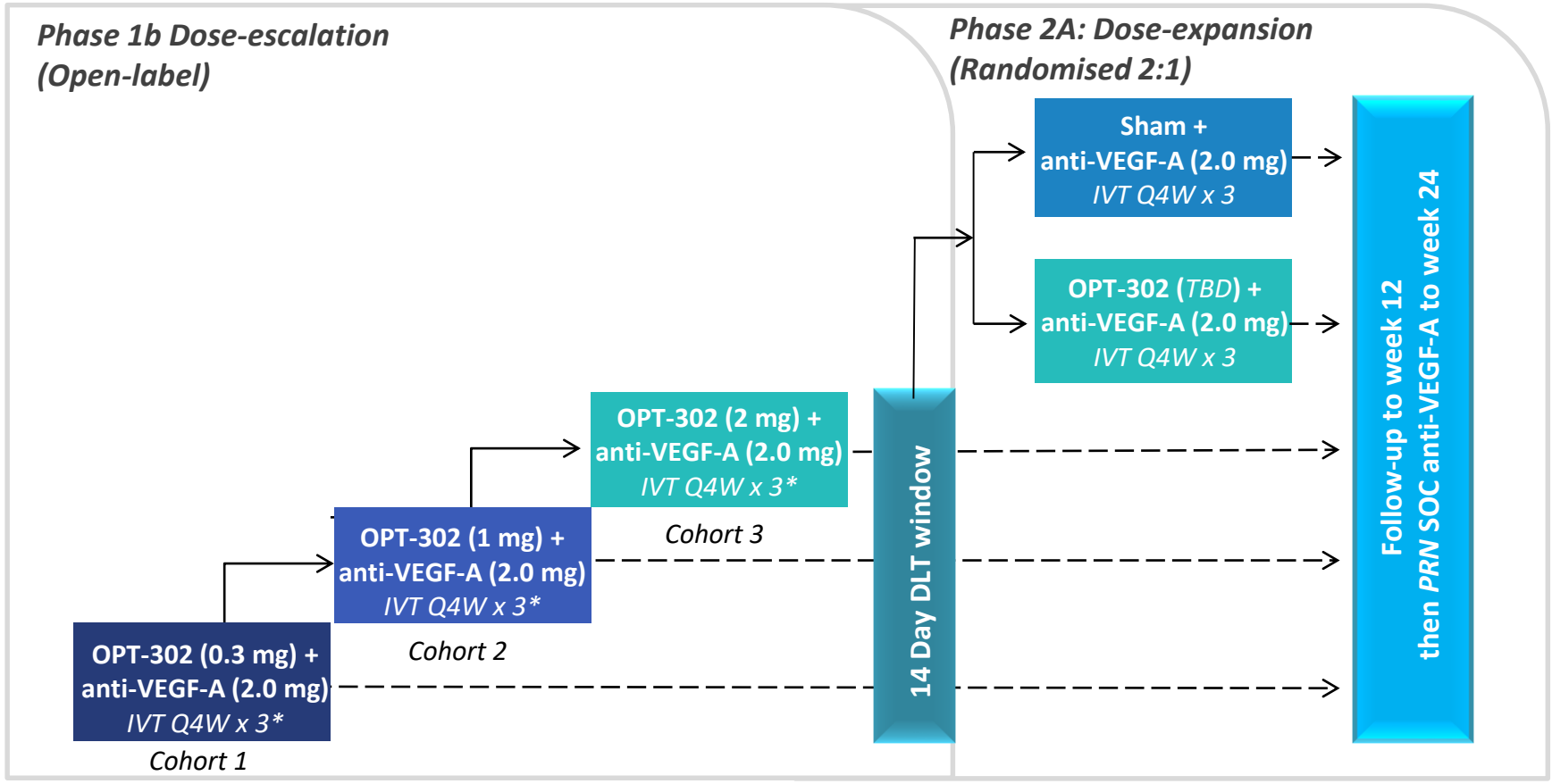
OPT-302 Phase 2a Trial in Diabetic Macular Edema



- *Males & females, ≥ 18 years of age*
- *Diabetes mellitus (Type 1 or Type 2)*
- *Recurrent / persistent central-involved DME despite prior anti-VEGF-A therapy with a suboptimal response*

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Milestones

OPT-302 Wet AMD Program:

- ✓ Phase 1/2a Data Analysis $45m Cap. Raise **April '17**
- Phase 2b wAMD First Patient Dosed (USA) **4Q'17**
- Publication Ph1/2a trial results in peer-reviewed journal **2Q'18**
- Phase 2a wAMD Trial (eg. Prior-Tx Pts) Design Finalised/Initiation **1H'18**
- Phase 2b wAMD Primary Data Analysis **1H'20**

OPT-302 DME Program:

- Phase 1b/2a DME Trial Initiation **4Q'17**
- Phase 1b/2a DME Trial Primary Data Analysis **1Q'19**

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OPT-302 Program Highlights

- Broad development potential
- Targets validated pathway
- Targets incomplete response to existing a-VEGF-A therapies
- Large unmet medical need for wet AMD & market opportunity
- Phase 1/2a study:
  - Demonstrated OPT-302 safety & tolerability (met primary objective)
  - Evidence of clinical activity in all treatment groups:
    - Treatment naïve, prior-treated pts
    - Monotherapy & combination therapy
- Consistency of responses across multiple endpoints
- Phase 2b wAMD and Phase 2a DME trials on-track for FPI 4Q'17
- Additional Phase 2a trial in wet AMD to initiate 1H'18
- Multiple near-term and long-term milestones
- Fully-funded through 2020 and clinical trial program

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