OUTLOOK THERAPEUTICS

CORPORATE PRESENTATION

October 2020

NASDAQ: OTLK

outlooktherapeutics.com

Disclaimer

This presentation contains forward-looking statements about Outlook Therapeutics, Inc. (“Outlook Therapeutics” or the “Company”) based on management’s current expectations, which are subject to known and unknown uncertainties and risks. Words such as “anticipated,” “initiate,” “expect,” “intend,” “plan,” “believe,” “seek,” “estimate,” “may,” “will,” and variations of these words or similar expressions are intended to identify forward-looking statements. These forward-looking statements include statements regarding our expectations for ONS-5010 market exclusivity, its ability to replace and address issues with off-label use of Avastin, other drug candidates in development, commercial drivers for ONS-5010 and its potential, as well as the success of ongoing ONS-5010 trials for wet AMD and regarding planned trials for ONS-5010 for DME and BRVO. Our actual results could differ materially from those discussed due to a number of factors, including, but not limited to, the risks inherent in developing pharmaceutical product candidates, conducting successful clinical trials, and obtaining regulatory approvals, as well as our ability to raise additional equity and debt financing on favorable terms, among other risk factors. These risks are described in more detail under the caption “Risk Factors” in our Annual Report on Form 10-K and other filings with the Securities and Exchange Commission (“SEC”). Moreover, Outlook Therapeutics operates in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statement. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this presentation may not occur and actual results could differ materially and adversely from those anticipated or implied.

Except as required by law, neither Outlook Therapeutics nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We are providing this information as of the date of this presentation and do not undertake any obligation to update any forward-looking statements contained in this presentation as a result of new information, future events or otherwise. This presentation contains trademarks, registered marks and trade names of Outlook Therapeutics and of other companies. All such trademarks, registered marks and trade names are the property of their respective holders.

Late clinical-stage biopharmaceutical company working to develop the first FDA-approved ophthalmic formulation of bevacizumab-vikg for use in retinal indications.

Investment Highlights

Advancing on Multiple Fronts Towards Potential FDA Approval

Potential FDA approval in wet AMD in 2022 with lead product candidate, ONS-5010 / LYTENAVA™ (bevacizumab-vikg)[1], an investigational ophthalmic formulation of bevacizumab-vikg, targeting $13.1 billion global anti-VEGF market[2]

Phase 3 Clinical Program

- Demonstrated safety and efficacy in clinical experience trial
- Ongoing Phase 3 pivotal trial with topline data expected mid-2021

Commercial Planning Activities Underway

- Outreach to physicians, patients, KOLs and payors
- Market research indicates ONS-5010, if approved, will be a significant therapy in anti-VEGF market

Manufacturing and Regulatory

- Partnered with Fujifilm and Ajinomoto as best-in-class cGMP global manufacturers
- Tentatively granted ATC code for ophthalmic bevacizumab by the World Health Organization

Global Strategic Partnership

- Discussions with potential strategic partners progressing
- Signing of definitive agreement could be as soon as the end of 2020

OUTLOOK THERAPEUTICS

1: ONS-5010 / LYTENAVA™ (bevacizumab-vikg) is an investigational ophthalmic formulation of bevacizumab
2: Guidehouse Triangulation of Global Data, Market Scope and Investor Forecasts (2020);*9MM is US, EU5, Japan, China & Australia

Leadership Team: Global Ophthalmic Development and Commercial Launch Excellence

LAWRENCE KENYON
President, CEO, CFO

ARNO THERAPEUTICS · TAMIR Targeting microRNAs · PAR PHARMACEUTICAL an endo international company

JEFF EVANSON
Chief Commercial Officer

NOVARTIS · Alcon · Medtronic · NAVIGANT

TERRY DAGNON
Chief Operating Officer

NOVARTIS · Alcon · Johnson & Johnson · DOHMEN LIFE SCIENCE SERVICES

RANDY THURMAN
Executive Chairman of the Board

MARK HUMAYUN, MD PhD
Medical Advisor

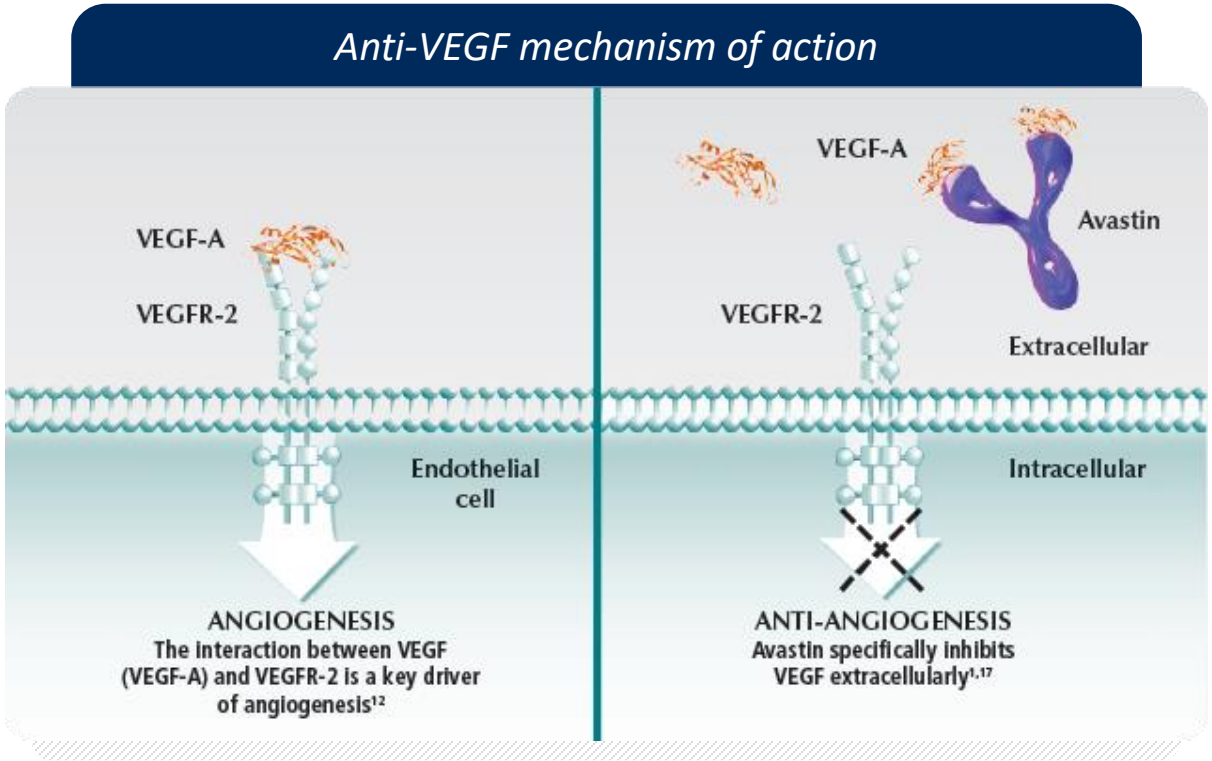
ONS-5010

Addresses Significant Unmet Medical Need in a $13.1 Billion Global Anti-VEGF Market

Standard of Care in Wet AMD

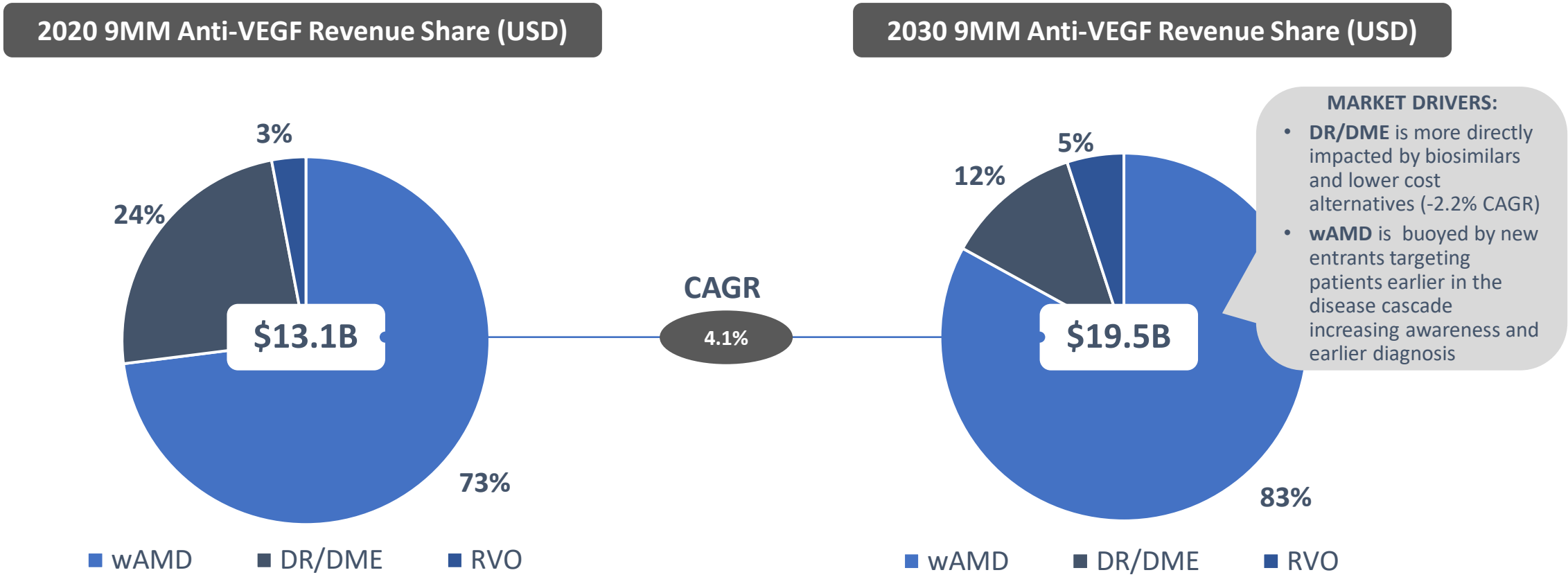
ONS-5010 / LYTENAVA™, if approved, will be the
first on-label ophthalmic formulation of bevacizumab-vikg

- Anti-VEGF drugs have been standard of care since 2006
  - Block growth of abnormal blood vessels and leakage of fluid from the vessels behind the retina
- Several new clinical-stage anti-VEGF drugs, including biosimilars, in development and/or recently approved
  - Require significant time and capital to achieve commercialization
  - New drugs expected to price at or near the high price points of current approved therapies



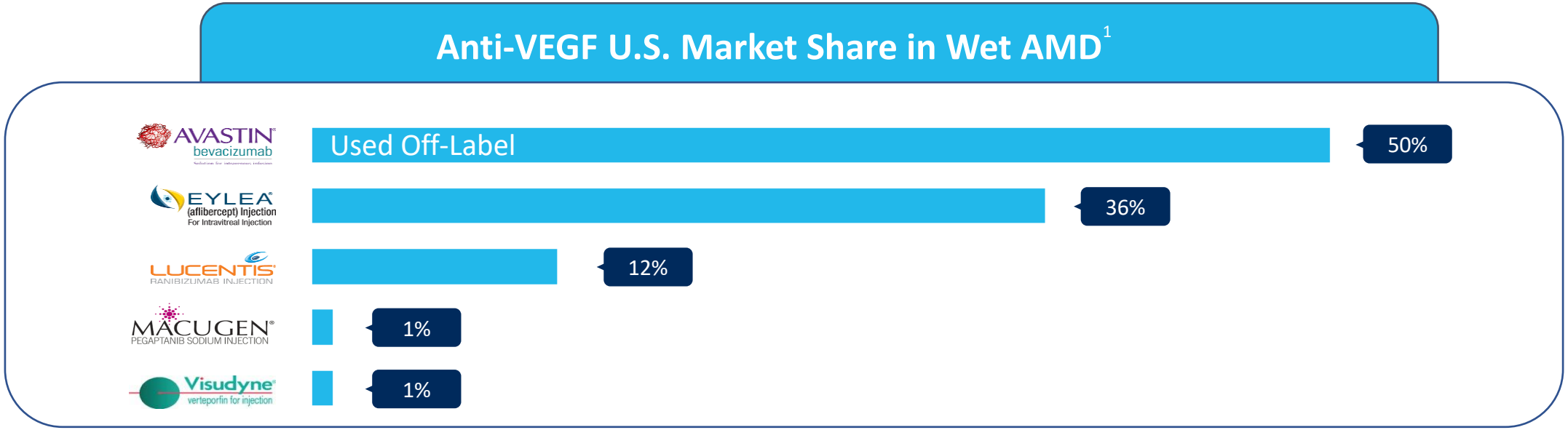
Targeting Large and Growing Ophthalmic Markets

ONS-5010, if approved, will be a significant therapy in the
retinal anti-VEGF market, currently estimated to be in excess of $13.1 billion worldwide



Sources: Guidehouse Triangulation of Global Data, Market Scope and Investor Forecasts (2020);*9MM is US, EU5, Japan, China & Australia
AMD = Age-Related Macular Degeneration; DME = Diabetic Macular Edema ; BRVO = Branch Retinal Vein Occlusion

Unapproved Bevacizumab Represents 50% of U.S. Wet AMD Market



Expected Drivers to Compete Across All Anti-VEGF Therapeutics

1. Provide safe and cost-effective on-label bevacizumab
2. Become first line ”step-edit” drug of choice
3. 12 years market exclusivity under new BLA
4. Penetrate EU and developing markets

1: Source: Global Data estimates, 2016

Unapproved Repackaged IV Bevacizumab Presents Safety Issues

Once approved, ONS-5010 will reduce the need for use of unapproved repackaged IV Avastin® from compounding pharmacists

Variability in Potency[1]

- 81% of samples had lower protein concentrations than required
- Samples had statistically significant variations in protein concentration among samples

JAMA Ophthalmology

Safety and Sterility Adverse Events[2]

- Unvalidated hold times in syringes not designed to be primary packages
- Patients have lost eyesight due to infections
- Multiple unapproved repackaged IV bevacizumab recalls due to unsterile compounding practices

FDA
Warning Letter

Syringe Malfunctioning[3]

- Variability in repackaging can lower quality of syringe products, resulting in adverse events
- Silicone oil droplets may be released by the syringe into the eye

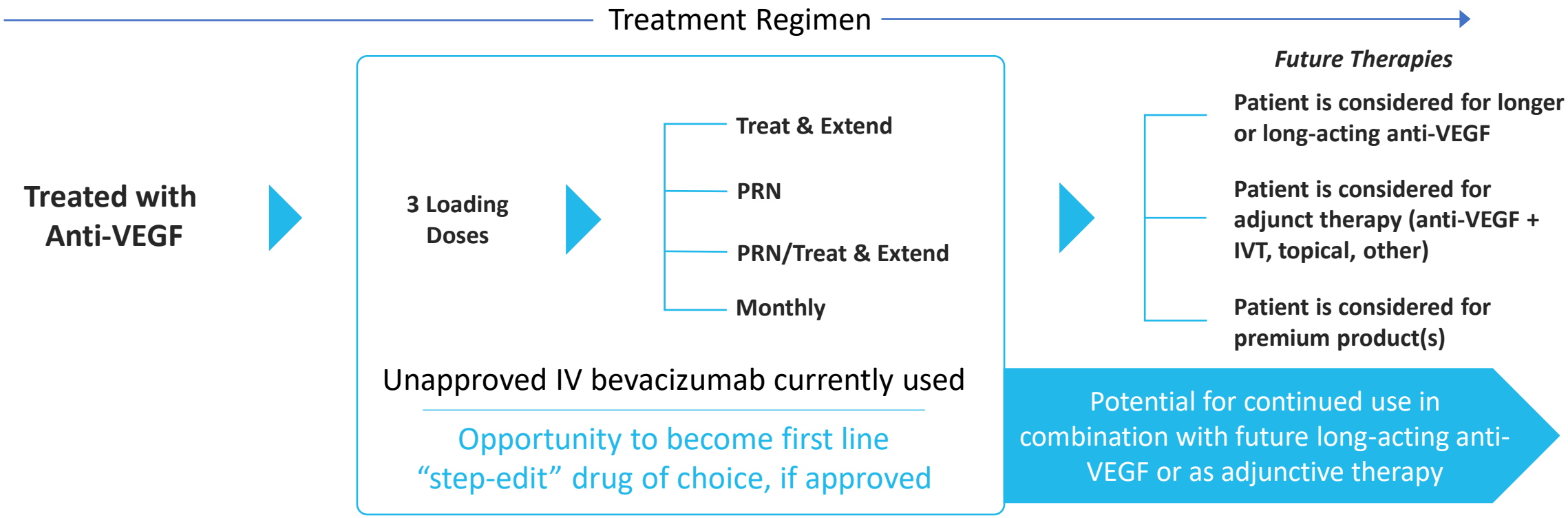
ASRS American Society of Retina Specialists

1: JAMA Ophthalmol. 2015 Jan;133(1):32-9. doi: 10.1001/jamaophthalmol.2014.3591; 2: Goldberg, Roger A et al. “An outbreak of streptococcus endophthalmitis after intravitreal injection of bevacizumab.” American journal of ophthalmology vol. 153,2 (2012): 204-208.e1. doi:10.1016/j.ajo.2011.11.035; 3: ASRS Member Alert, April 2019

ONS-5010

Potential to be the first ophthalmic formulation of bevacizumab-vikg approved as an anti-VEGF therapy addressing vision loss from wet age-related macular degeneration (wet AMD)

ONS-5010: If approved, Potential First Access in Treatment Paradigm with Step-Edit Therapy



Step-Edit is a Payor Cost Saving Measure

- Less expensive therapies are covered first
- Patient must "fail" medication before advancing to more costly treatments

Clinical Progress Drives ONS-5010 Towards U.S. and EU Filings in 2021

Recently completed clinical experience trial provides a high level of confidence in the outcome of the ongoing fully-enrolled pivotal trial

Ongoing U.S.-based Phase 3 pivotal trial

- Completed enrollment of 227 patients
- Pivotal data are expected mid-2021

Demonstrated safety and efficacy

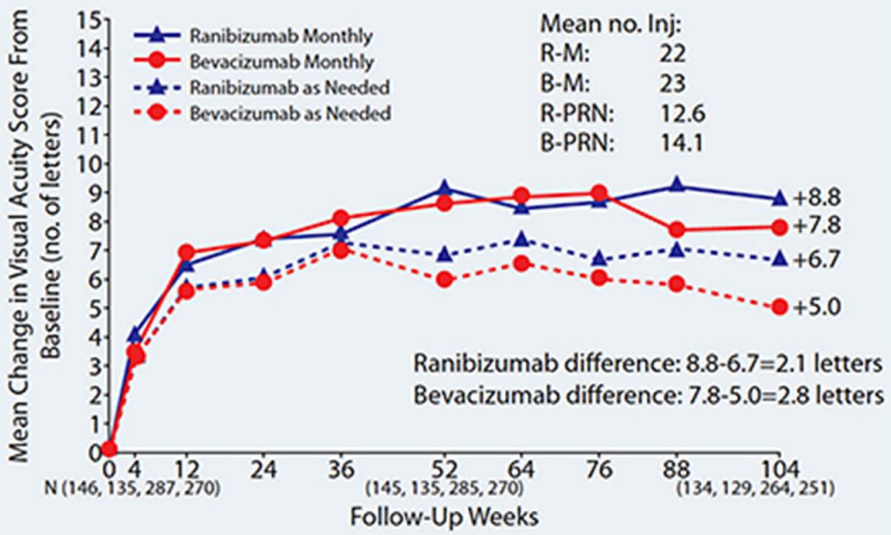
- Recently reported data from clinical experience trial

Regulatory Strategy Aligned With FDA

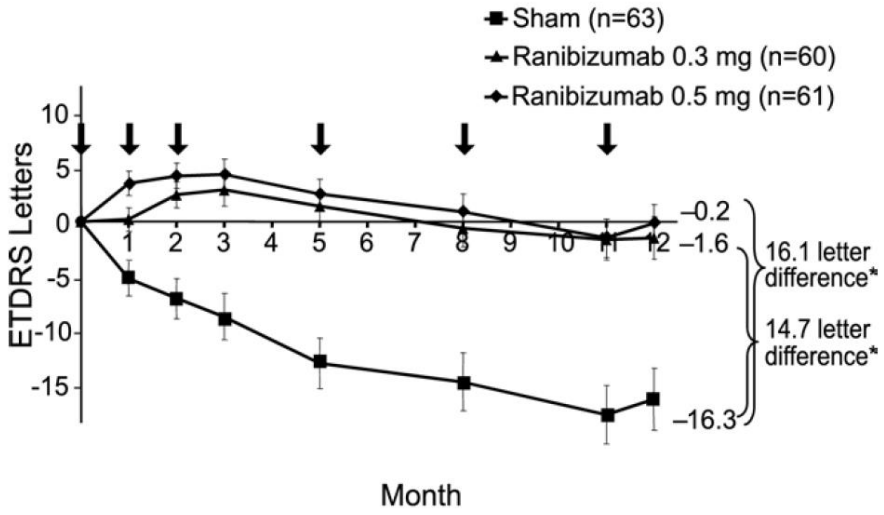
- Pursuing New Biologics License Application (BLA) submission in wet AMD

Bevacizumab Demonstrated to be Equivalent to LUCENTIS® in CATT Trial

CATT Study Results[1]



LUCENTIS® PIER Study[2]



1: Comparison of Age-related Macular Degeneration Treatments Trials (CATT) Research Group, Daniel F. Martin, Ophthalmology, July 2012 Volume 119, Issue 7, Pages 1388–1398
2: Am J Ophthalmol. 2010 Sep;150(3):315-324.e1. doi: 10.1016/j.ajo.2010.04.011. Epub 2010 Jul 3.

Completed Clinical Experience Trial

Phase 3 Clinical Program

Provides high level of confidence in the outcome of the ongoing fully-enrolled pivotal trial

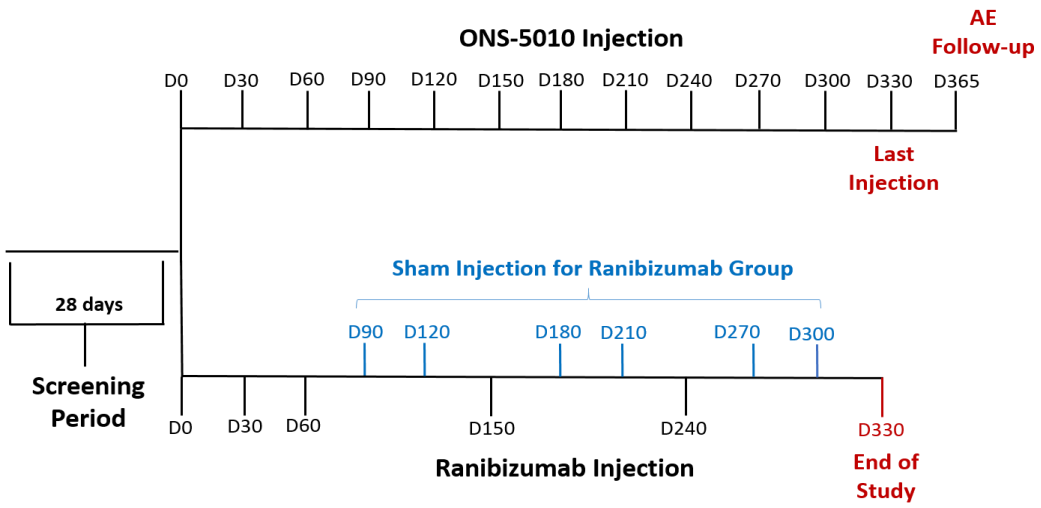
Demonstrated anticipated safety and efficacy signals consistent with previously published results for ophthalmic bevacizumab

Trial Design Highlights:

- Randomized Masked Controlled Trial
- ONS-5010 vs LUCENTIS® (ranibizumab)
- 61 subjects enrolled
- Trial conducted in Australia
- Expected to support planned new U.S. BLA filing in 2021

ONS-5010 Demonstrated Safety and Efficacy in Clinical Experience Trial

Title: A clinical effectiveness, multicenter, randomized, double-masked, controlled trial of the efficacy and safety of ONS-5010 in subjects with subfoveal choroidal neovascularization (CNV) secondary to age-related macular degeneration



Trial Design:

- 30 treatment-naïve or previously treated wet AMD patients per arm
- Baseline visual acuity 20/40 to 20/320
- ONS-5010 dosed monthly vs ranibizumab dosed 3 initial monthly injections, followed by quarterly dosing
- Efficacy read-out at the Month 11 visit

Proof-of-Concept Achieved

- Desired proportion of 3-line visual acuity gainers achieved
- Desired mean gain in visual acuity achieved
- Zero ocular inflammation observed
- In this trial, safety was comparable to published bevacizumab studies, such as CATT

Positive Results From Clinical Experience Trial

- ONS-5010 demonstrated anticipated safety and efficacy signals consistent with previously published ophthalmic bevacizumab research
- No significant statistical differences in efficacy and safety
- Results provide support for the established design and protocol for ongoing U.S.-based Phase 3 pivotal trial
- No ocular adverse events of intraocular inflammation, vasculitis or retinal artery occlusion such as those recently reported for other anti-VEGFs in treating retinal diseases

Trial Enrollment

Parameter		ONS-5010 (N=31)	Ranibizumab (N=30)	Overall (N=61)
Prior Anti-VEGF Treatment	Yes	25 (80.6%)	15 (50.0%)	40 (65.6%)
	No	6 (19.4%)	15 (50.0%)	21 (34.4%)

Overall Response

	ONS-5010	Ranibizumab
Subjects achieving > 15 letters BCVA at Month 11	2/26 (7.7%)	5/24 (20.8%)

Subgroup Analysis of Treatment-Naïve Subjects

	ONS-5010	Ranibizumab
Subjects achieving > 15 letters BCVA at Month 11	2/6 (33%)	4/14 (28.6%)

Subgroup Analysis

	ONS-5010	Ranibizumab
Proportion of Treatment-Naïve Subjects with baseline visual acuity of <67 Letters (20/50 or worse)	2/4 (50%)	4/10 (40%)

Results From Clinical Experience Trial Align With Historical Bevacizumab Data & Pivotal Trial Population

- ONS-5010 ITT BCVA Subgroup Summary
  - Treatment-naïve **7.3** (historical **CATT 8.0**)
  - Treatment-naïve & 20/50 or worse **8.3** (historical **CATT 8.0**)
- ONS-5010 ITT 3-line Visual Acuity Gainers Subgroup Summary
  - Treatment-naïve ONS-5010: **2/6 - 33.3%** (historical **CATT 31% bevacizumab monthly** historical **PIER 13.1% ranibizumab quarterly** historical **EXCITE 14.2% ranibizumab quarterly**)
  - Treatment-naïve & 20/50 or worse ONS-5010: **2/4 - 50%** (historical **CATT 31% bevacizumab monthly** historical **PIER 13.1% ranibizumab quarterly** historical **EXCITE 14.2% ranibizumab quarterly**)

Historical Comparison

- Martin D.F.,Maguire M.G., Fine S.L. et al. Comparison of Age-related Macular Degeneration Treatments Trials (CATT) Research Group Ranibizumab and bevacizumab for treatment of neovascular age-related macular degeneration: two-year results. Ophthalmology. 2012; 119: 1388-1398
- Regillo C.D., Brown D.M., Abraham P., et al. PIER Study Group Randomized, double-masked, sham-controlled trial of ranibizumab for neovascular age-related macular degeneration: PIER Study year 1. Am J Ophthalmol. 2008; 145: 239-248
- Schmidt-Erfurth U., Eldem B., Guymer R. et al. EXCITE Study Group Efficacy and safety of monthly versus quarterly ranibizumab treatment in neovascular age-related macular degeneration: the EXCITE study. Ophthalmology. 2011; 118: 831-839

Clinical Experience Trial Provides Confidence in Design and Sample Size of Pivotal Trial

Historical Comparison

Study	Endpoint	Ranibizumab	Bevacizumab	Sham
Clinical Experience Trial (33.3% 20/40 or better) (N = 21)	% ≥15 letters BCVA mean change in BCVA letters	Treatment-naïve, quarterly 28.6% +12.0 ITT / +11.9 PP	Treatment-naïve, monthly 33.3% +7.3 ITT / +8.4 PP	
PIER (18.5% 20/40 or better) (N = 184)	% ≥15 letters BCVA mean change in BCVA letters	Quarterly 13.1% -0.2		9.5% -16.3
EXCITE (19.8% 20/40 or better) (N = 353; 3 arms)	% ≥15 letters BCVA mean change in BCVA letters	14.2% quarterly / 28.7% monthly +4.0 quarterly / +8.0 monthly		
CATT (34.3% 20/40 or better) (N = 1185)	% ≥15 letters BCVA mean change in BCVA letters	34.2% monthly / 24.9% PRN +8.5 monthly / +6.8 PRN	31% monthly / 28% PRN +8.0 monthly / +5.9 PRN	

Take-home messages:

1. Clinical experience trial provided the expected level of treatment effect based on historical data
   Safety data are consistent with other intravitreally administered anti-VEGF therapies
2. Our pivotal trial sample size was powered on data from PIER and EXCITE studies
   Our pivotal trial population (N = 227) is almost all treatment-naïve with 20/50 as best VA entry criteria rather than 20/40 as in our clinical experience trial
3. Ranibizumab over-performed in this small study compared to larger, published trials; unlikely to see the same in our larger pivotal trial; if more subjects in our pivotal trial compared to historical studies are capable of demonstrating a visual acuity gain ≥15 letters, then randomization should distribute these subjects equally across both study arms

Ongoing Pivotal Trial

Phase 3 Clinical Program

Enrollment Completed

Topline Data Expected mid-2021

Trial Highlights:

- Randomized Masked Controlled Trial
- ONS-5010 vs LUCENTIS® (ranibizumab)
- 227 patients enrolled
- Trial conducted in the United States
- Both trial arms include predominantly treatment-naïve patients with baseline VA less than 20/50 at trial start
- Safety & efficacy data expected to support planned new U.S. BLA filing in 2021

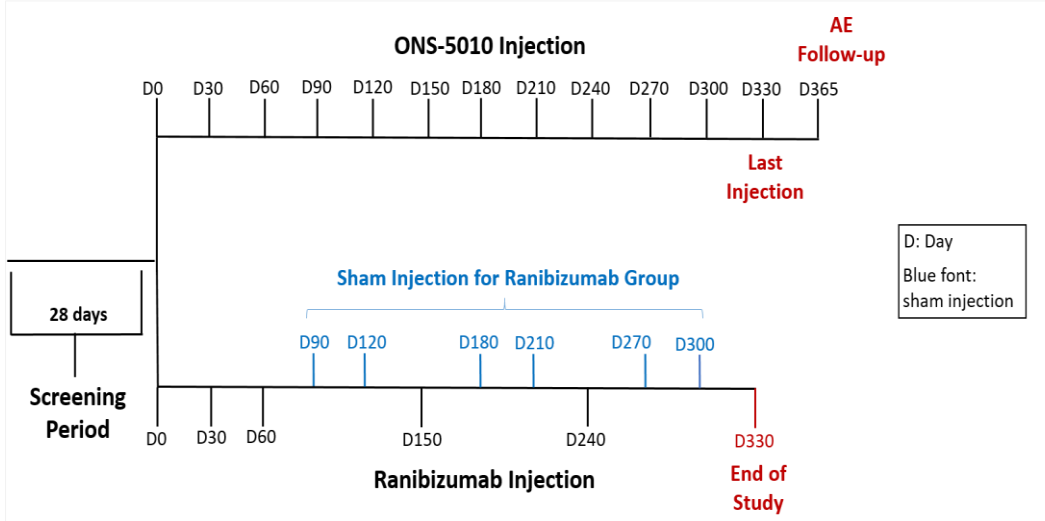
Ongoing Pivotal Trial Design Informed by Clinical Experience Trial – With Larger Sample Size

Randomized masked controlled trial with 227 subjects

ONS-5010 administered monthly X 12

LUCENTIS dosing arm (PIER Dosing) – Three initial monthly injections followed by fixed quarterly dosing

Primary endpoint difference in proportion of subjects gaining 15 letters of BCVA at Day 330



Comparison of trial Parameters	Clinical Experience Trial	Pivotal Trial	Rationale for Change from Clinical Experience Trial to Pivotal Trial Parameters
Prior Treatment	Both treatment-naïve and previously treated	Treatment-naïve, only	Treatment-naïve subjects have more active disease (leakage on fluorescein angiography) and worse vision; more room to improve
Baseline Visual Acuity	20/40 to 20/320 BCVA (73 to 25 letters)	20/50 to 20/320 BCVA (67 to 25 letters)	Better baseline VA (20/40 or better) is associated with less gain in VA and a lower proportion gaining ≥3-lines compared to worse VA (20/50 or worse)
Planned Sample Size	25 per am	110 per arm	To support 90% power to detect a difference between arms in the proportion of responders

Commercial Planning Activities Underway

With enhanced safety and cost-effective profile, Outlook Therapeutics expects ONS-5010 to be widely adopted by payors and clinicians worldwide and to become the first-line drug of choice for payor-mandated “step edit” in the United States for retinal indications

Physician and Patient Outreach

Aligning Key Opinion Leaders

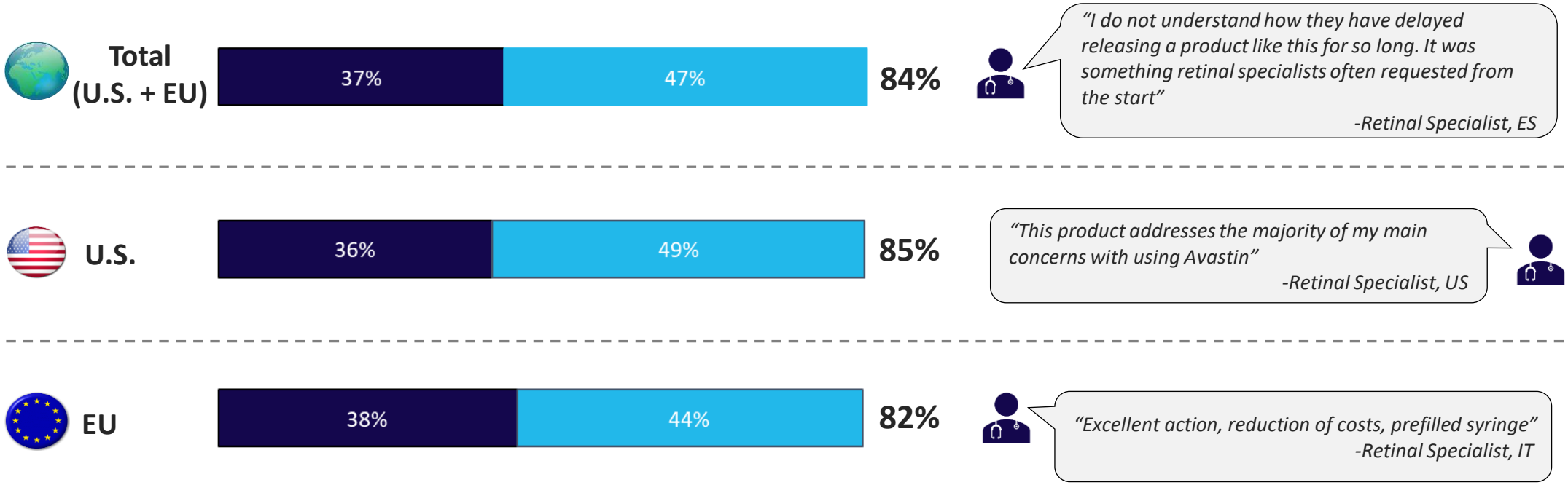
Payor Community Engagement

Discussions with Potential Strategic Partners Progressing

- Engaged with several life sciences companies that could result in a strategic partnership and definitive agreement for ONS-5010 as soon as the end of 2020
- Established joint venture with Syntone Technologies for commercializing ONS-5010 in Greater China

Physicians Want Approved Bevacizumab

>80% of retinal specialists express interest in an
FDA-approved bevacizumab to treat wet AMD, DME and BRVO



Source: Navigant Quantitative Survey (n=152), 2019
*Other survey options not shown *were "neutral, not likely to use, and not interested at all"*

Manufacturing and Regulatory Progress Towards Commercialization

Manufacturing

Best-in-class cGMP manufacturing partners

Pre-Filled Syringes

Supply agreement for a best-in-class pre-filled ophthalmic syringe

Regulatory

Tentatively granted ATC code for ophthalmic bevacizumab

Company Highlights

- Lead product candidate ONS-5010 / LYTENAVA™ has potential to be first FDA-approved ophthalmic formulation of bevacizumab for use in multiple retinal indications
- Potential FDA Approval in 2022
- Targeting $13.1 Billion Global Anti-VEGF Market[1]
- Potential for 12 Years of Market Exclusivity
- Management Team with Extensive Clinical/Regulatory Ophthalmology & Drug Development Experience

1: Guidehouse Triangulation of Global Data, Market Scope and Investor Forecasts (2020);*9MM is US, EU5, Japan, China & Australia