NASDAQ: **IDYA**

Darovasertib Accelerated Approval Trial Design
and Phase 2 Clinical Data Update

April 24, 2023

IDEAYA Biosciences

Improving Lives Through Transformative Precision Medicines

Safe Harbor Statement

Certain statements in this presentation and the accompanying oral commentary are forward-looking statements. These statements relate to future events or the future financial performance of IDEAYA Biosciences, Inc. (the “Company”) and involve known and unknown risks, uncertainties and other factors that may cause the actual results, levels of activity, performance or achievements of the Company or its industry to be materially different from those expressed or implied by any forward-looking statements. In some cases, forward-looking statements can be identified by terminology such as “may,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “intend,” “believe,” “estimate,” “predict,” “potential” or other comparable terminology. All statements other than statements of historical fact could be deemed forward-looking, including the trial design and planned initiation of a Phase 2/3 potential registrational clinical trial for evaluation of the darovasertib and crizotinib combination in metastatic uveal melanoma in the second quarter of 2023, the potentially addressable patient population for MUM and (neo)adjuvant UM, any expectations regarding the Company’s target discovery platform or new target validation efforts as creating opportunities for research and development initiatives; any projections of financial information, market opportunities, cash runway or profitability; any statements about historical results that may suggest trends for the Company's business; any statements of the plans, strategies, and objectives of management for development programs or future operations; any statements about the timing of preclinical research, clinical development, regulatory filings, manufacturing or release of data; any statements of expectation or belief regarding future events, potential markets or market size, technology developments, or receipt of cash milestones, option exercise fees or royalties; and any statements of assumptions underlying any of the items mentioned. The Company has based these forward-looking statements on its current expectations, assumptions, estimates and projections. While the Company believes these expectations, assumptions, estimates and projections are reasonable, such forward-looking statements are only predictions and involve known and unknown risks and uncertainties, many of which are beyond the Company's control. Such risks and uncertainties include, among others, the uncertainties inherent in the drug development process, including IDEAYA’s programs’ early stage of development, the process of designing and conducting preclinical and clinical trials, the regulatory approval processes, the timing of regulatory filings, the challenges associated with manufacturing drug products, IDEAYA’s ability to successfully establish, protect and defend its intellectual property, and other matters that could affect the sufficiency of existing cash to fund operations. These and other important factors may cause actual results, performance or achievements to differ materially from those expressed or implied by these forward-looking statements. The forward-looking statements in this presentation are made only as of the date hereof. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of the Company in general, see the Company's periodic filings with the Securities and Exchange Commission (the "SEC"), including its Annual Report on Form 10-K for the year ended December 31, 2022, and any current and periodic reports filed thereafter. Except as required by law, the Company assumes no obligation and does not intend to update these forward-looking statements or to conform these statements to actual results or to changes in the Company's expectations.

This presentation concerns anticipated products that are under clinical investigation and which have not yet been approved for marketing by the U.S. Food and Drug Administration (FDA). It is currently limited by Federal law to investigational use, and no representation is made as to its safety or effectiveness for the purposes for which it is being investigated.

Welcome and Introduction

Yujiro S. Hata – President and Chief Executive Officer
IDEAYA Biosciences

Welcome to our Participants and Key Opinion Leader Guest Speakers

Darovasertib FDA Guidance on Accelerated Approval Trial Design & Clinical Data Update

Meredith McKean, MD MPH
Director, Melanoma and Skin Cancer Research, Sarah Cannon Research Institute

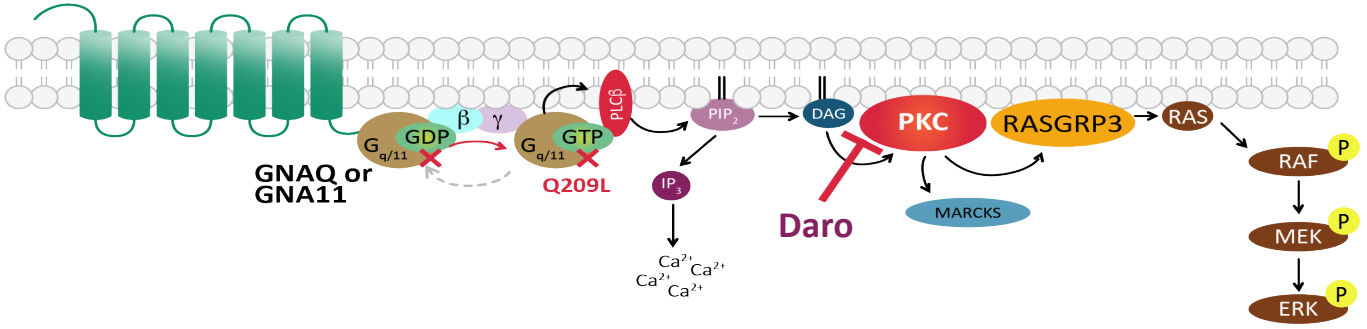
Anthony Joshua, MBBS PhD FRACP
Head of the Department of Medical Oncology, Kinghorn Cancer Centre, St Vincent's Hospital/Garvan Medical Research Institute, Sydney, Australia

Mark Shackleton, MBBS PhD FRACP
Professor of Oncology, Monash University
Director of Oncology, Alfred Health
Chair, Melanoma and Skin Cancer Trials, Melbourne, Australia

Darovasertib – Potential to Broadly Impact Uveal Melanoma

Potential First-in-Class and Best-in-Class in (Neo)adjuvant UM and Metastatic UM

Mutations in GNAQ / GNA11 activate PKC Signaling, a genetic driver of Uveal Melanoma



Darovasertib is an oral, potent and selective PKC inhibitor

GNAQ or GNA11 (~95%) and other upstream mutations activate PKC signaling in UM and MUM patients

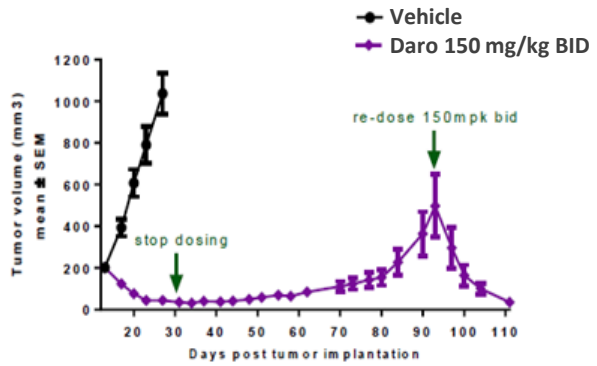
UM is typically treated with radiation and/or enucleation, with no approved systemic therapies for Neoadjuvant UM

MUM occurs in approximately 50% of UM patients and predominantly as liver metastasis in ~90% of MUM patients, with no approved therapies for HLA-A*02:01 negative MUM

Daro Mono Rationale in Primary UM

Single Agent Daro Induces Tumor Regression

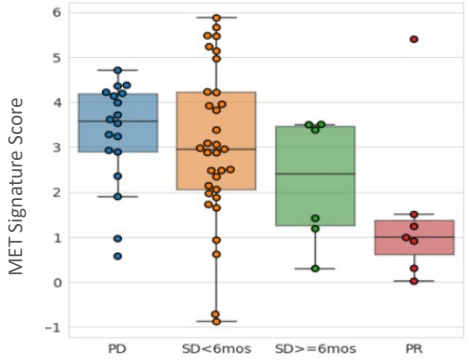
Uveal Melanoma Xenograft (92.1 mutant GNAQ)



Van Raamsdonk, CD, et. al, Nature 2009; Van Raamsdonk CD, et. al, NEJM 2010; Piperno-Neumann S, et. al, J Clin Oncol 2014

Daro + Crizo Combo Rationale for Use in Metastatic Uveal Melanoma (MUM)

Daro Phase 1 Monotherapy Efficacy Association with cMET Expression

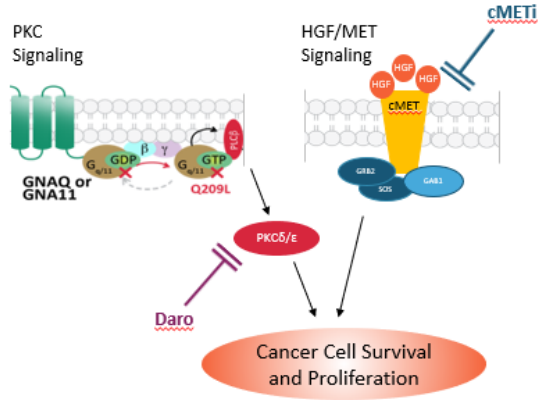


Ph 1 Clinical Outcomes

PD=Progressive Disease, SD=Stable Disease, PR=Partial Response

IDEAYA Data, AACR 2021

Activation of PKC and cMET Pathways with Observed cMET Overexpression in MUM Liver Metastases



Pfizer +

[+] Pfizer Clinical Trial Collaboration and Supply Agreements for Darovasertib + Crizotinib Combination in MUM

IDEAYA owns or controls all commercial rights in darovasertib, including in Primary UM and MUM

FDA Guidance Provides Path to Accelerated Approval in First-Line HLA-A2 Negative MUM

Dr. Darrin Beaupre, M.D., Ph.D.
Chief Medical Officer, IDEAYA Biosciences

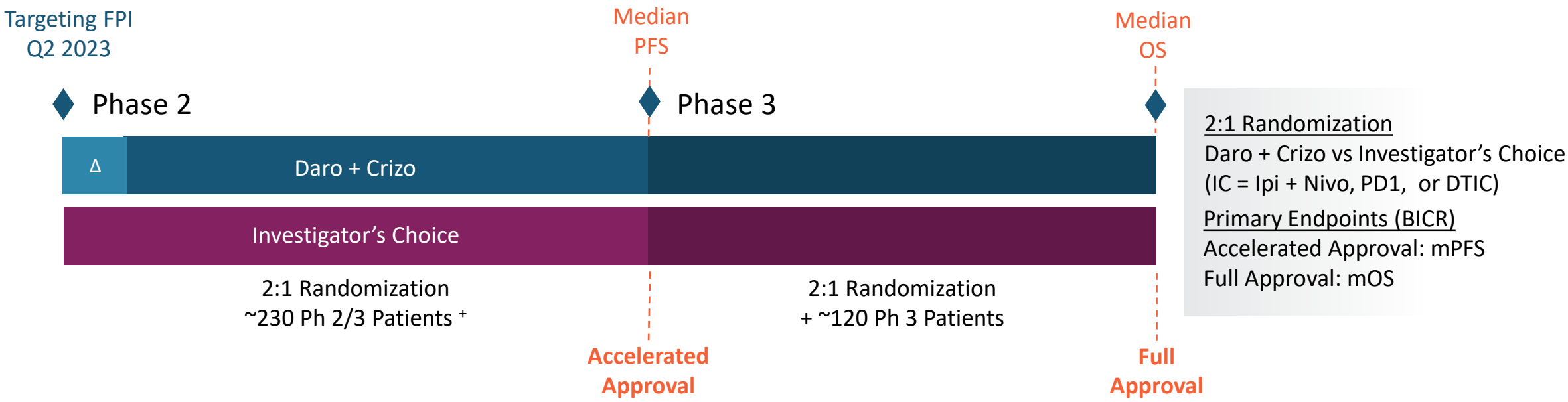
Accelerated Approval Trial Design in First-Line HLA-A2 Negative MUM

FDA Guided Design: Open Label Ph2/3 Evaluation of Daro + Crizo vs. Investigator's Choice

FDA Project FrontRunner: Target First-Line approval strategy to enhance patient benefit in MUM

FDA Accelerated Approval: Address unmet need in MUM, which has limited effective treatment options

Integrated Phase 2/3 Study within Study Enables Potential Accelerated Approval & Full Approval



FDA Fast Track Designation for Daro + Crizo in MUM

Δ Nested study to confirm move forward dose: (i) Daro 300 mg BID + Crizo 200 mg BID or (ii) Daro 200 mg BID + Crizo 200 mg BID

+ Phase 2 study contemplates data set of n=200 patients randomized 2:1 with treatment arm at move forward dose in support of potential accelerated approval based on mPFS

Daro = Darovasertib, Crizo = Crizotinib, MUM=Metastatic Uveal Melanoma, HLA-A2 = HLA-A2*02:01 Serotype, IC = Investigator's Choice, Ipi = ipilimumab, nivo = nivolumab; DTIC = dacarbazine

Darovasertib Clinical Data Update in Metastatic Uveal Melanoma

Dr. Meredith McKean, M.D., MPH
Sarah Cannon Research Institute

Phase 2 Clinical Trial - Comparatively High-Risk, Poor Prognosis Population

Disease Burden Significantly Higher in Both Any-Line and First-Line MUM Population+

Baseline Characteristics		IDE196-001 Phase 2* Darovasertib + Crizotinib		Tebentasfusp First-Line Phase 3#	
		Any-Line n=63 (%)	First-Line n=20 (%)	Tebe Arm n=252 (%)	Control Arm^ n=126
Age	< 65	35 (56)	10 (50)	64 Median	66 Median
	≥65	28 (44)	10 (50)		
Sex	F	32 (51)	9 (45)	124 (49)	64 (51)
	M	31 (49)	11 (55)	128 (51)	62 (49)
ECOG PS	0	43 (68)	14 (70)	192 (76)	85 (67)
	1	20 (32)	6 (30)	49 (19)	31 (25)
Baseline LDH	Normal	25 (40)	10 (50)		
	>ULN	**38 (60)**	**10 (50)**	**90 (36)**	**46 (37)**
Largest metastatic lesion	≤3.0 cm	22 (35)	8 (40)	139 (55)	70 (56)
	3.1 to 8.0 cm	**35 (56)**	**9 (45)**	**92 (37)**	**46 (37)**
	≥ 8.1 cm	**6 (10)**	**3 (15)**	**21 (8)**	**10 (8)**
Location of metastases	Hepatic Only	20 (32)	10 (50)	131 (52)	59 (47)
	Extrahepatic Only	3 (5)	0	9 (4)	10 (8)
	Hepatic and Extrahepatic	**40 (64)**	**10 (50)**	**111 (44)**	**55 (44)**

+ Cross-trial comparisons are not based on head-to-head studies and are presented for informational purposes; no direct comparisons are being made

*IDEAYA Data as of March 08, 2023 (based on preliminary analysis of unlocked database by investigator review)

N Engl J Med 2021; 385:1196-1206; ECOG data missing in Tebentafusp and Control arm of 4% and 7% respectively

^Investigator Choice distribution in the control group: 103 (82%) received pembrolizumab, 16 (13%) received ipilimumab, and 7 (6%) received dacarbazine.

Darovasertib + Crizotinib Combination Safety Summary

Overall Manageable AE Profile with Limited Grade 4/5 AEs and Discontinuations

Drug-Related AE Summary

Safety Summary	n=68 (%)
Drug-Related Adverse Events (AE)	
AEs	67 (99%)
Grade 3	21 (31%)
Grade 4/5 AEs	0 (0%) / 1 (2%)*
SAEs⁺	6 (9%)
AEs leading to Discontinuation^	4 (6%)

Drug-Related AEs with >20% Total Prevalence

Adverse Event	Grade 1	Grade 2	Grade 3	Grade 4/5	Total
Diarrhea	50%	37%	4%	0%	91%
Nausea	40%	38%	2%	0%	79%
Edema peripheral	28%	27%	3%	0%	57%
Vomiting	38%	13%	0%	0%	52%
Dermatitis acneiform	34%	10%	0%	0%	44%
Fatigue	9%	25%	6%	0%	40%
Hypotension	16%	12%	6%	0%	34%
Hypoalbuminaemia	9%	24%	0%	0%	32%
Dizziness	18%	9%	2%	0%	28%

IDEAYA Data as of March 08, 2023 (based on preliminary analysis of unlocked database)

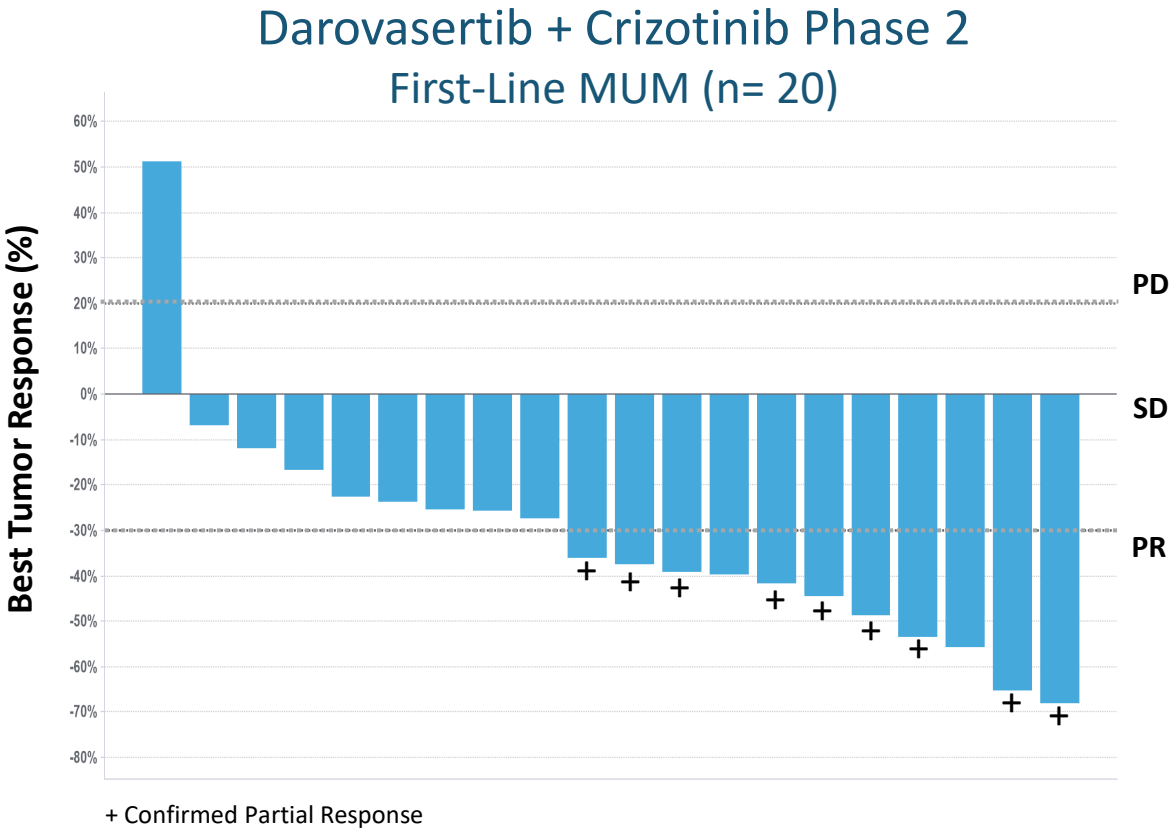
* One patient observed a Grade 5 SAE which the treating investigator assessed as most likely related to disease progression, and possibly related to the study therapies; principal investigators on the study reviewed the event and concluded this SAE was most likely due to disease progression, and Sponsor concluded it was most likely due to disease progression and not likely related to study therapies

⁺ The six patients experienced SAE's that included diarrea, vomiting, sepsis, respiratory failure, syncope and hypotension

^ AEs leading to discontinuation include reference to either darovasertib or crizotinib.

Compelling Confirmed Overall Response Rate & Disease Control Rate

First-Line MUM Clinical Efficacy: Confirmed 45% ORR and 90% DCR by RECIST 1.1



Response by RECIST 1.1 First-Line MUM	Evaluable (N=20)
Confirmed ORR (9/20)	45%
Tumor Shrinkage (19/20)	95%
>30% Tumor Shrinkage (11/20)	55%
Best Overall Response	
cPR (9/20)	45%
uPR (1/20)	5%
SD (8/20)	40%
DCR (18/20)	90%

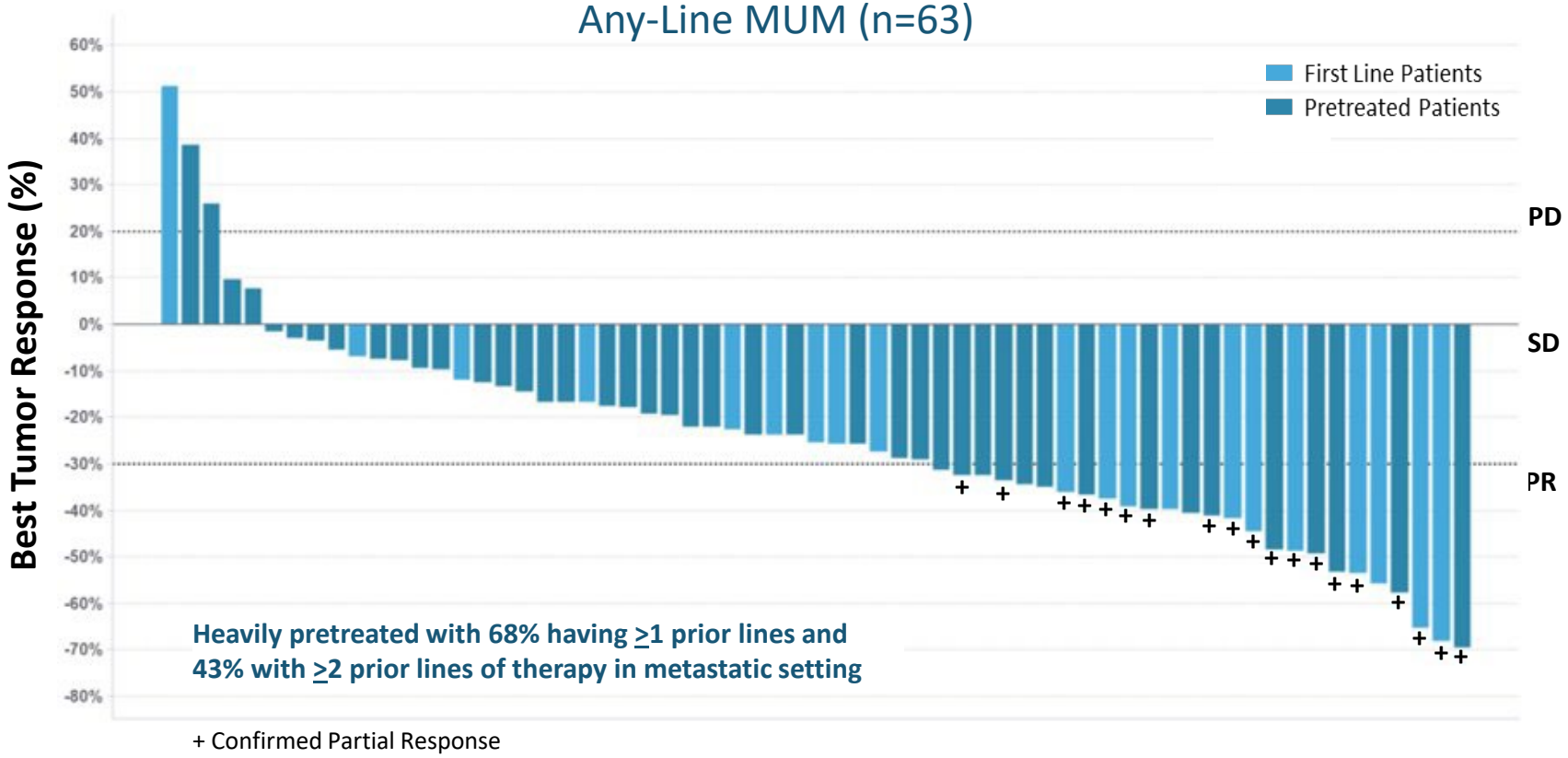
Clinical Efficacy supports Registrational Strategy in First-Line MUM to Enhance Patient Benefit

IDEAYA Data: preliminary analysis of unlocked database as of 03/08/2023 by investigator review; data cutoff based on treatment Day 1 of Cycle 1 (C1D1) as of 9/22/2022, based on 20 evaluable First-Line MUM patients
ORR = Overall Response Rate; DCR = Disease Control Rate; cPR = Confirmed Partial Response; uPR = Unconfirmed Partial Response; SD = Stable Disease

Compelling Confirmed Overall Response Rate & Disease Control Rate

Any-Line MUM Clinical Efficacy: Confirmed 30% ORR and 87% DCR by RECIST 1.1

Darovasertib + Crizotinib Phase 2
Any-Line MUM (n=63)



+ Confirmed Partial Response

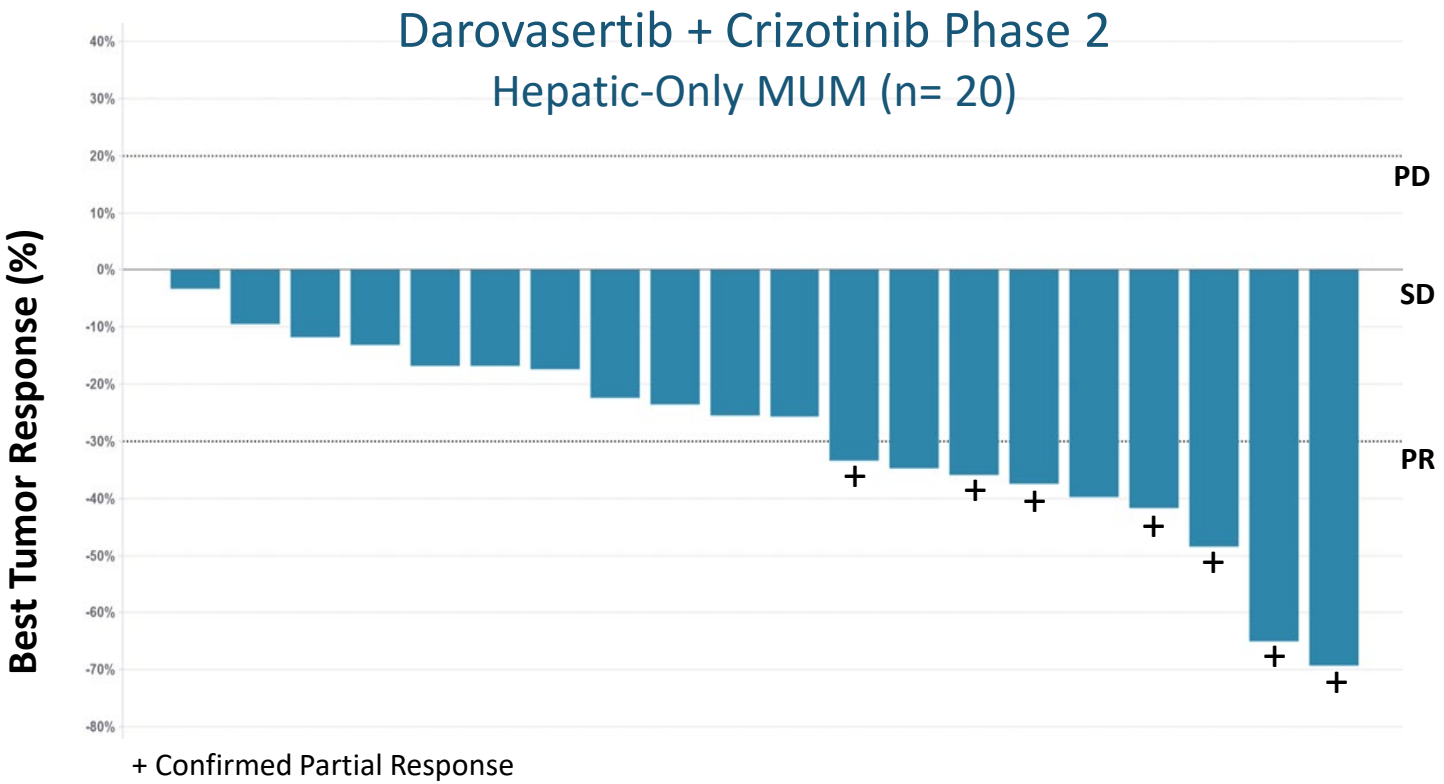
Response by RECIST 1.1 Any-Line MUM	Evaluable (N=63)
Confirmed ORR (19/63)	30%
Tumor Shrinkage (58/63)	92%
>30% Tumor Shrinkage (26/63)	41%
Best Overall Response	
cPR (19/63)	30%
uPR (4/63)	6%
SD (32/63)	51%
DCR (55/63)	87%

Clinical Efficacy in Any-Line MUM irrespective of HLA-A2 status and in Hepatic & Extra-Hepatic Metastases

IDEAYA Data: preliminary analysis of unlocked database as of 03/08/2023 by investigator review; C1D1 cutoff as of 9/22/2022, based on 63 evaluable Any-Line MUM patients.
ORR = Overall Response Rate; DCR = Disease Control Rate; cPR = Confirmed Partial Response; uPR = Unconfirmed Partial Response; SD = Stable Disease

Compelling Confirmed Overall Response Rate & Disease Control Rate

Hepatic-Only MUM Clinical Efficacy: Confirmed 35% ORR and 100% DCR by RECIST 1.1



+ Confirmed Partial Response

Response by RECIST 1.1 in Hepatic-Only MUM	Evaluable (N=20)
Confirmed ORR (7/20)	35%
Tumor Shrinkage (20/20)	100%
>30% Tumor Shrinkage (9/20)	45%
Best Overall Response	
cPR (7/20)	35%
uPR (1/20)	5%
SD (12/20)	60%
DCR (20/20)	100%

All Hepatic-Only MUM Patients observed Tumor Shrinkage and 100% Disease Control Rate

IDEAYA Data: preliminary analysis of unlocked database as of 03/08/2023 by investigator review; C1D1 cutoff as of 9/22/2022, based on 20 evaluable Hepatic-Only metastasis patients (includes 1L and 2L+/pre-treated MUM patients)
ORR = Overall Response Rate; DCR = Disease Control Rate; cPR = Confirmed Partial Response; uPR = Unconfirmed Partial Response; SD = Stable Disease

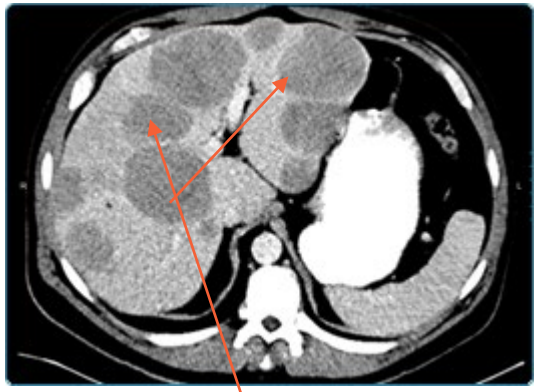
Darovasertib + Crizotinib First-Line MUM Combo Efficacy

Examples of cPRs with Significant Tumor Shrinkage in First-Line MUM Patients

First-Line MUM Patient

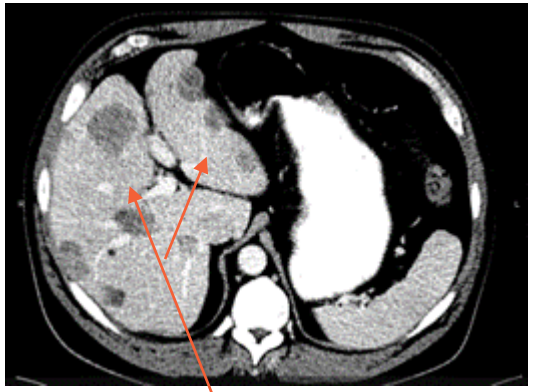
- 40+ year old HLA-A2 positive patient with Class 1A diagnosis metastasized after ~6 years
- Diffuse disease in liver and pelvis with elevated LDH of 800 normalized within one month of treatment
- Large tumors (SLD = 210 mm) reduced by 49%
- On treatment for over 15 months

Baseline



Many lesions distorting and replacing the liver

12 months

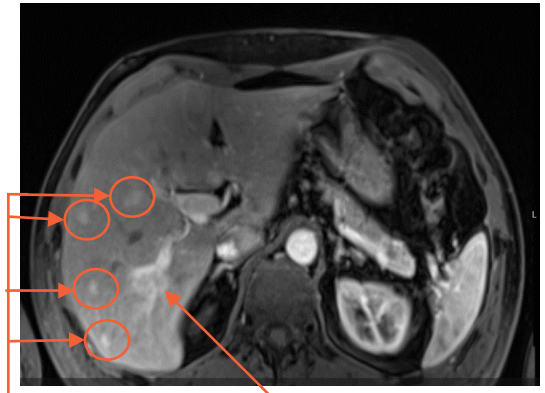


Marked improvement across all lesions

First-Line MUM Patient

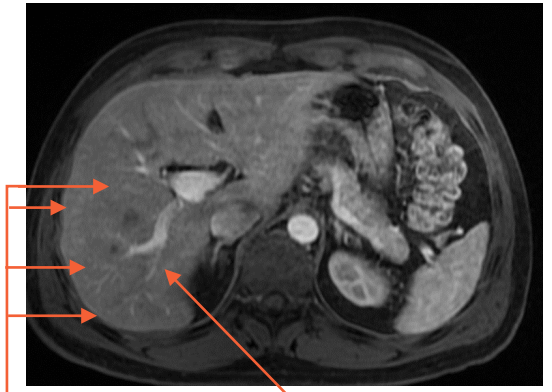
- 40+ year old HLA-A2 negative patient with Class 1A diagnosis metastasized in ~1 year
- Many liver lesions with maximal target lesion reduction of 65%
- Ongoing response
- Remains on treatment at 10 months

Baseline



Many liver lesions & target lesion

8 months



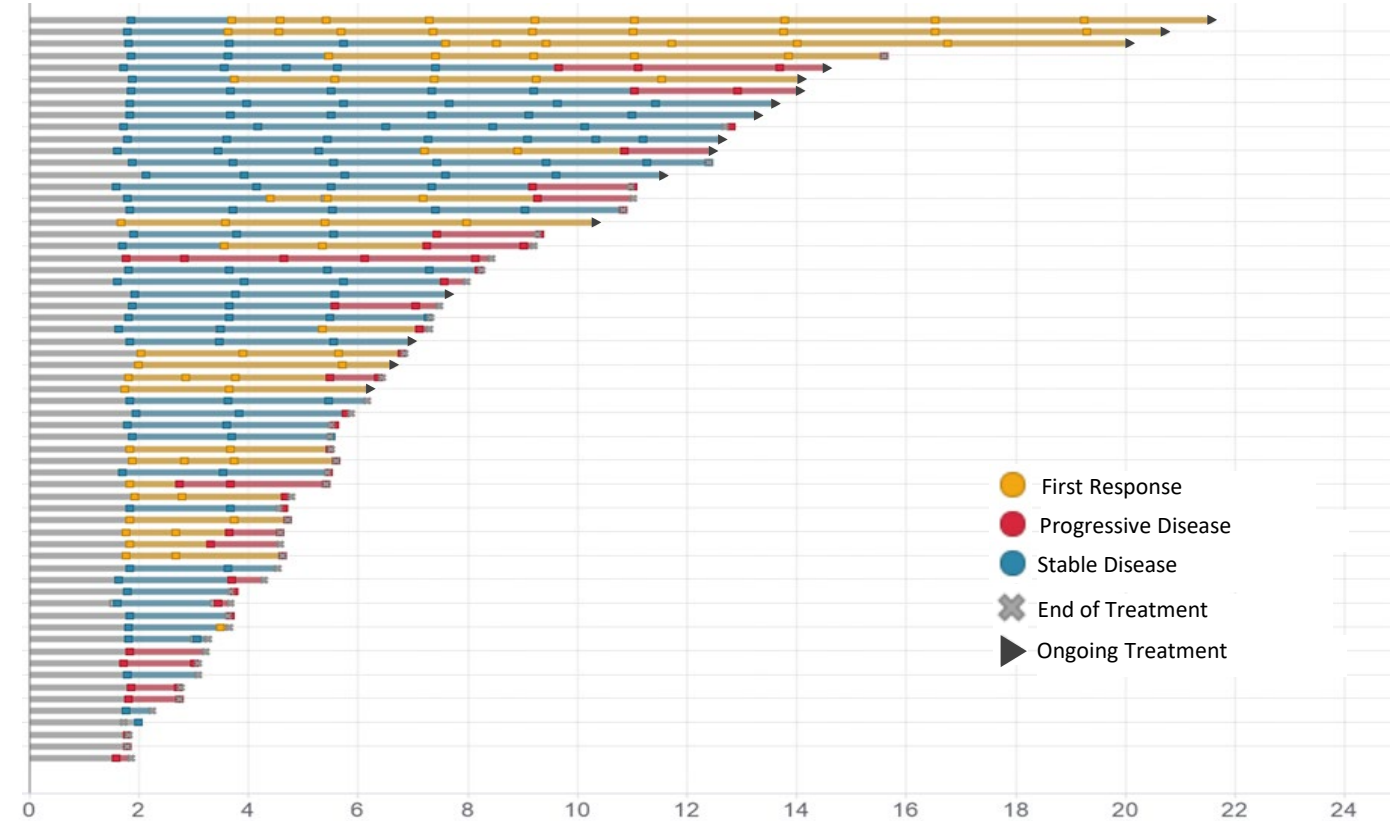
Marked improvement across all lesions

IDEAYA Data as of 03/08/2023 (based on preliminary analysis of unlocked database); tumor lesion reductions by investigator review

Compelling Median Progression Free Survival in MUM

First-Line & Any-Line: mPFS of ~7 months; Hepatic-Only: mPFS of ~11 months

Any-Line MUM Swimlane Plot



Darovasertib + Crizotinib Phase 2 Median Progression Free Survival

- First-Line (n=20): ~7 months
- Any-Line (n=63): ~7 months
  - Median PFS increased versus previously reported mPFS of ~5 months (n=35, September 2022*)
- Hepatic-Only (n=20): ~11 months

IDEAYA Data: preliminary analysis of unlocked database as of 03/08/2023 by investigator review; C1D1 cutoff as of 9/22/2022, based on 63 evaluable Any-Line MUM patient

* IDEAYA Press Release September 11, 2022

Darovasertib + Crizotinib Combination Clinical Summary in MUM

Highly Differentiated Clinical Efficacy & AE Profile Observed[+, ++]

	Darovasertib + Crizotinib	Cabozantinib Mono / Crizotinib Mono	Selumetinib + DTIC	Ipi + Nivo	Tebentafusp
Target / Mechanism	PKC + cMET	cMET	MEK + Chemotherapy	CTLA4 + PD1	HLA-A2-0201 Bi-Specific
Study Name(s)	NCT03947385	A091201^ / NCT05063058 ^^^^	NCT01974752^^^	NCT02626962[##]	IMCgp100-102[#]
Population	1L/2L/3L+ MUM (n=63)	1L+ MUM (n=31) / 1L (n=6) 2L (n=1) MUM	1L+ MUM (n=97)	1L MUM (n=52)	2L+ MUM (n=127)
Patient Selection	NA	NA / MET Overexpression	NA	NA	HLA-A2-positive
Drug Form	Oral Tablets	Oral Capsules	Oral Capsules + chemo	IV infusion	IV Infusion (Weekly)
Tolerability (Grade ≥3 Drug-Related AE)	33%	51.6% / NA	63% (All Cause)	58%	46.5%
% of Patients with Tumor Shrinkage	First-Line = 95% / Any-Line = 92% / Hepatic Only = 100%*	23% ^^ / NA	35% ^^	27% ^^	44% ^^
Confirmed ORR% (by RECIST 1.1)	**First-Line = 45% / Any-Line = 30% / Hepatic Only = 35%***	**0% / 0%**	**3%**	**11.5% (not confirmed ORR)**	**4.7%**
Median PFS	**First-Line: ~7 months / Any-Line: ~7 months / Hepatic-Only: 11 months***	**2 months / NA**	**2.8 months**	**3 months**	**2.8 months**

+ Cross-trial comparisons are not based on head-to-head studies and are presented for informational purposes; no direct comparisons are being made

++ ESMO 2022: F. Dimitriou, et.al: IPI + Nivo Combo in HLA-A2-0201 MUM reports ~6% ORR (2 PRs out of 33 patients)

* IDEAYA Data: preliminary analysis of unlocked database as of 03/08/2023 by investigator review, and C1D1 cutoff as of 9/22/2022

[#] Based on Immunocore reported 2L+ study data (to reflect comparative patient population) and by independent review and ORR% was with confirmed PRs; [##] ASCO 2021, J. Piulats, et. Al, Ipi = ipilimumab, nivo = nivolumab, ORR% did not require PR/CR confirmation

^ Randomized Phase II Trial and Tumor Mutational Spectrum Analysis from Cabozantinib versus Chemotherapy in Metastatic Uveal Melanoma (Alliance A091201); Clin Cancer Res 2020;26:804–11

^^ Estimated from Waterfall plot

^^^ Journal of Clinical Oncology, Carjaval, et. al, 2018; 1232-1239; ^^^^ European Journal of Cancer, Leyraz, et. al, 2022; 146-155

IDEAYA BIOSCIENCES

Daro + Crizo and Ipi + Nivo Combo ORR% and Median PFS in MUM

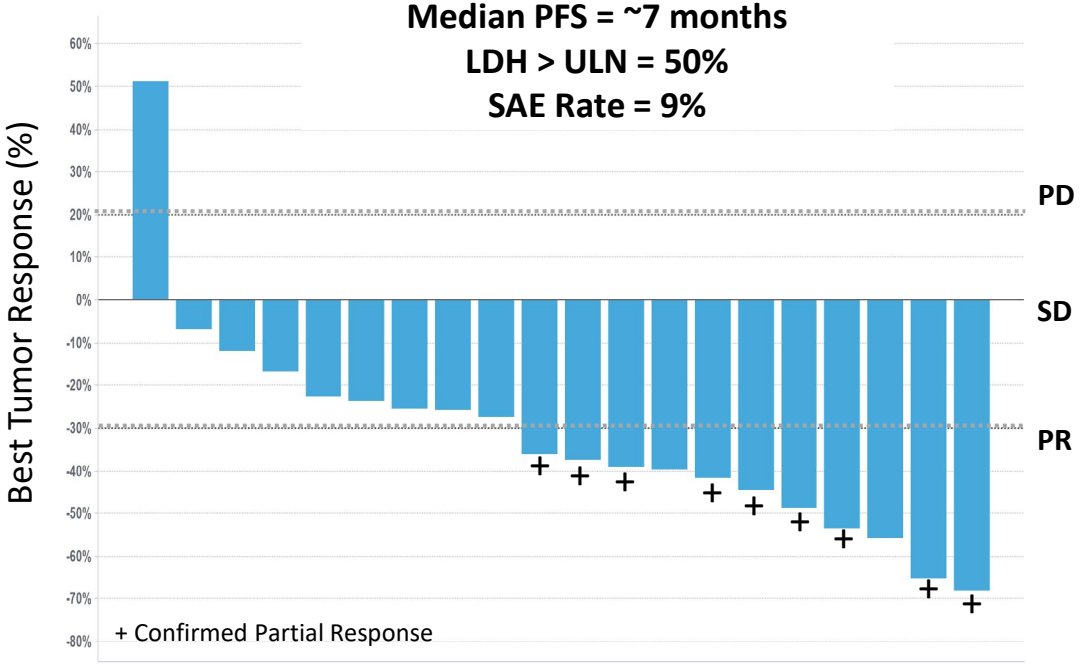
Potential for Class Leading Clinical Efficacy in First-Line MUM[+, ++]

Opportunity to Differentiate from a Key Investigator Choice Treatment in MUM

Darovasertib + Crizotinib Phase 2

First-Line MUM (n= 20)*

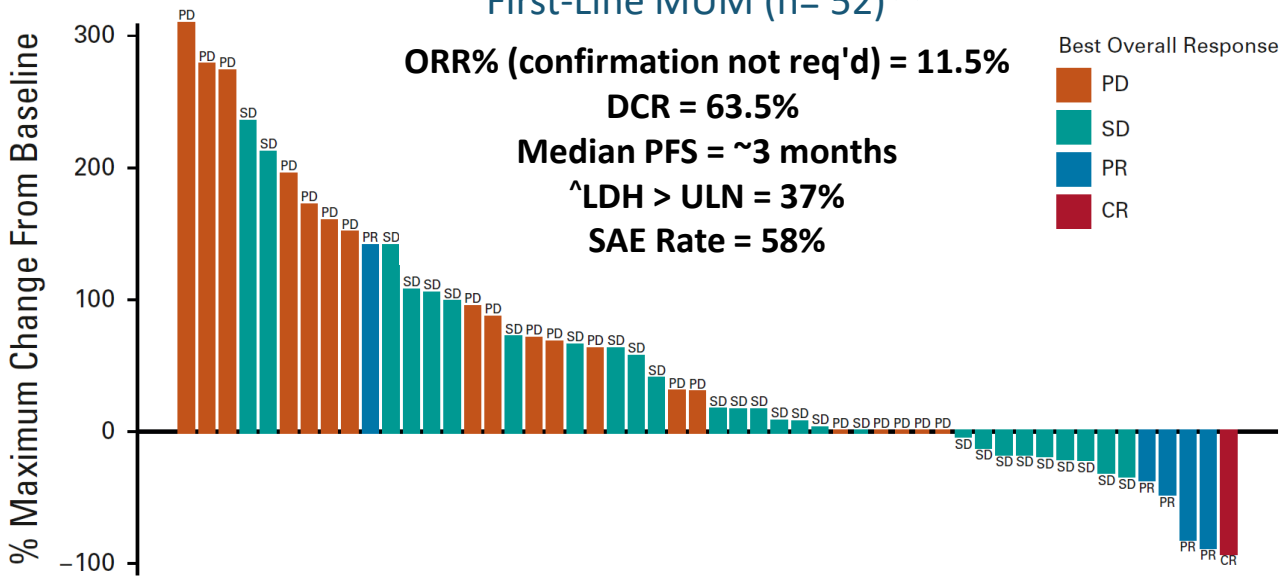
Confirmed ORR% = 45%
DCR = 90%
Median PFS = ~7 months
LDH > ULN = 50%
SAE Rate = 9%



Ipi + Nivo Phase 2

First-Line MUM (n= 52)**

ORR% (confirmation not req'd) = 11.5%
DCR = 63.5%
Median PFS = ~3 months
^LDH > ULN = 37%
SAE Rate = 58%



ESMO 2022: Ipi + Nivo Combo in HLA-A2-0201 reports 6% ORR (2 PRs in 33 MUM pts)[++]

\+ Cross-trial comparisons are not based on head-to-head studies and are presented for informational purposes; no direct comparisons are being made
++ ESMO 2022: F. Dimitriou, et.al: IPI + Nivo Combo in HLA-A2-0201 MUM reports ~6% ORR (2 PRs out of 33 patients)
*IDEAYA Data: preliminary analysis of unlocked database as of 03/08/2023 by investigator review, and C1D1 cutoff as of 9/22/2022
** ASCO 2021, J. Piulats, et. Al, Ipi = ipilimumab, nivo = nivolumab. Note: ORR% did not require confirmation of PRs/CRs by protocol (based on swim lane plot ~1/3rd of PRs progressed at next confirmatory scan)
^ Sixteen of 43 patients (37%) with known values had elevated LDH

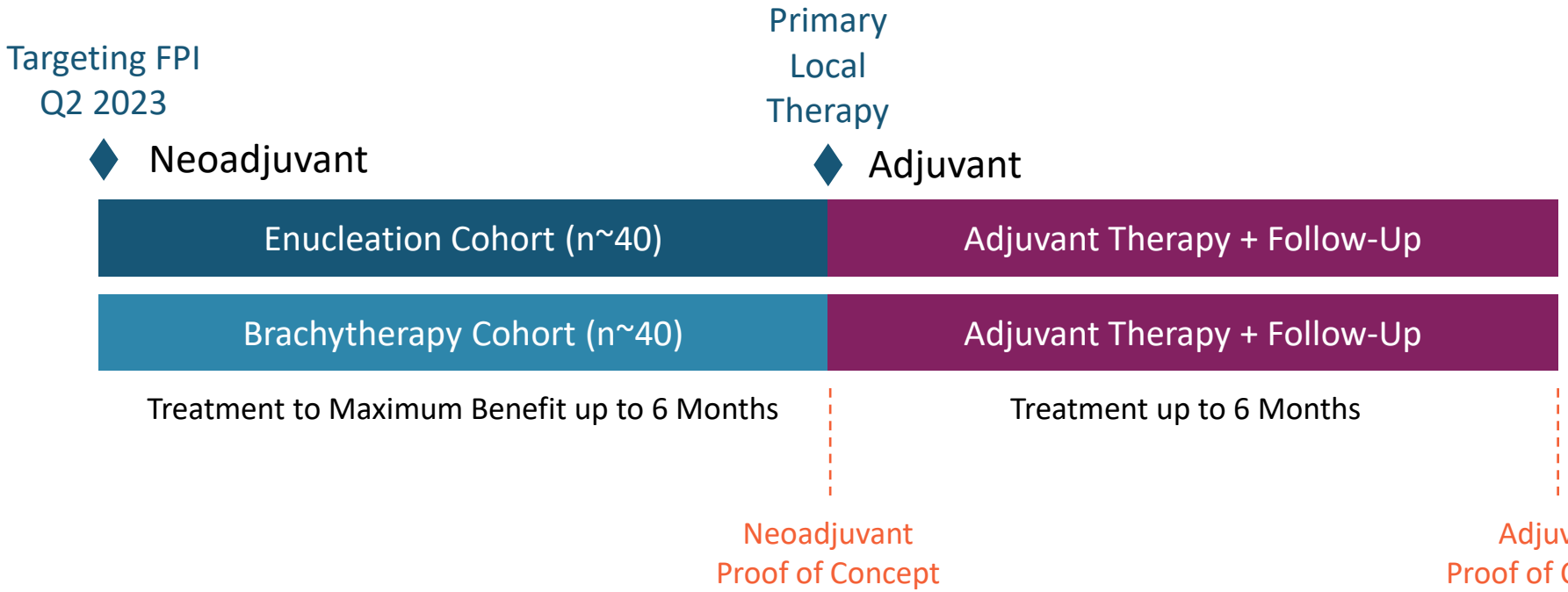
Darovasertib Clinical Data Update in Neoadjuvant Uveal Melanoma

Professor Anthony Joshua, MBBS PhD FRACP
St. Vincent's Hospital, Australia

(Neo)Adjuvant Darovasertib in Primary Uveal Melanoma (UM)

Paradigm Shifting Opportunity to Save the Eye, Protect Vision and Save Lives

Phase 2 Study of Darovasertib Monotherapy as Neoadjuvant Therapy followed by Adjuvant Therapy



Primary Endpoints

- Safety
- Cohort 1: Eye Preservation
- Cohort 2: Decrease Radiation Dose

Secondary Endpoints

- Useful Vision (1 yr)
- Relapse Free Survival (RFS)
  - 1-year and 3-year

Three Independent Approaches for demonstrating Clinical Benefit and defining potential Approval Pathways

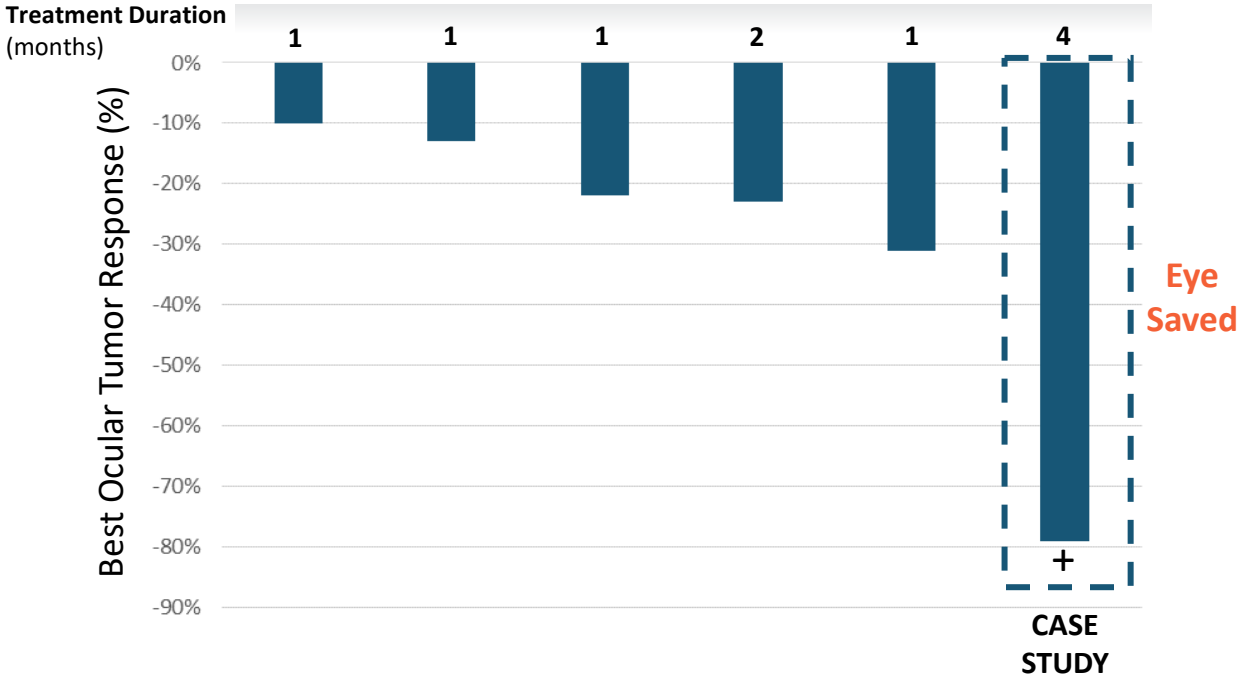
Enucleation Cohort → Save the Eye Brachytherapy Cohort → Protect Vision Adjuvant Therapy → Save Lives

Darovasertib Ocular Tumor Shrinkage in UM and MUM Patients

100% of Patients (9 of 9) experienced Ocular Tumor Shrinkage, including an Eye Saved *

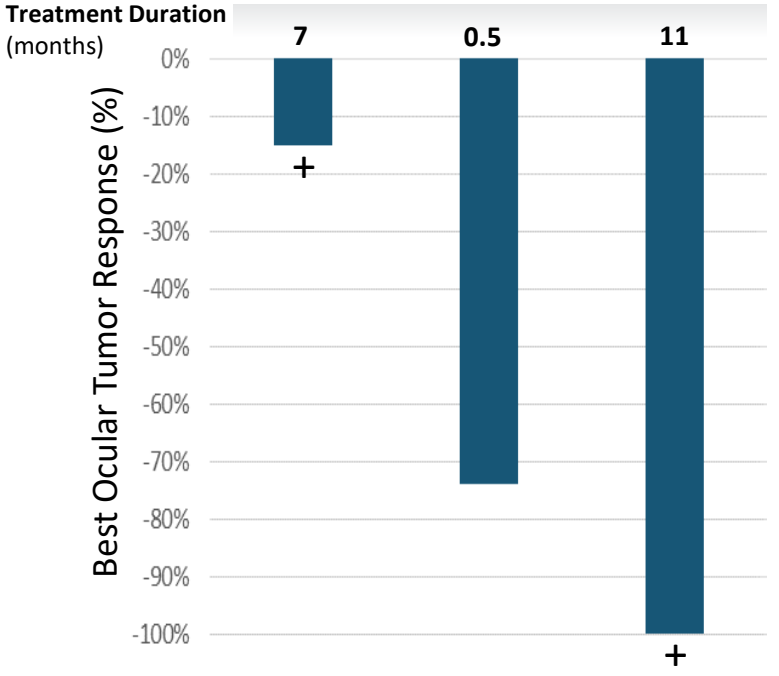
Neoadjuvant UM

Enucleation Cohort ᶲ (n=6)



MUM

Intact Primary Ocular Tumors ^ (n=3)



+ Neoadjuvant UM or MUM patients treated with Darovaserib + Crizotinib

ᶲ Data by investigator assessment as of April 15, 2023, from (i) NADOM IST courtesy of Professor Anthony Joshua, MBBS, PhD, FRACP, St. Vincent's Hospital and (ii) Compassionate Use Case Study – see Slides 22-25
For NADOM IST, by initial protocol the first 3 neoadjuvant UM patients were required to stop treatment at ~1 month; IST protocol was subsequently amended to treat up to 6 months

*Best Ocular Tumor Response based on maximal % reduction in measured Apical Height or Longest Basal Diameter (LBD)

^ Ocular tumor shrinkage were measured by either MRI, ultrasound, CT-scan, or PET scan (0.5 month scan for MUM patient, SUV Max% tumor response measurement)

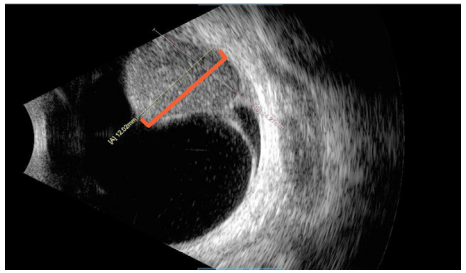
Darovasertib Clinical Efficacy in Neoadjuvant UM Enucleation Cohort

Significant Tumor Shrinkage observed with only 1 to 2 Months of Treatment *

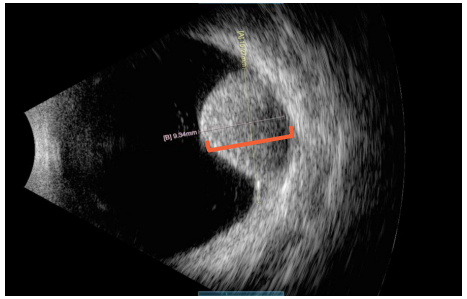
UM Neoadjuvant: 1 month of Darovasertib

22% Tumor Shrinkage after 1-month

Baseline



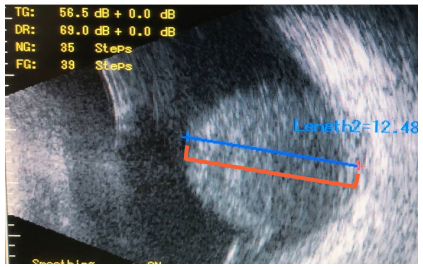
Month 1



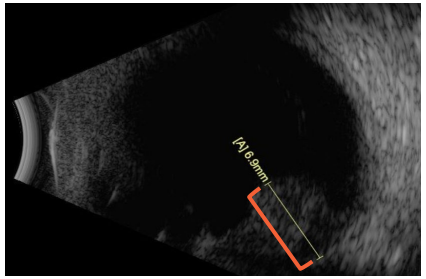
UM Neoadjuvant: 1 month of Darovasertib

31% Tumor Shrinkage (Partial Response) after 1-month

Baseline



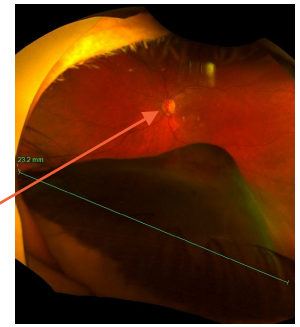
Month 1



UM Neoadjuvant: 2 months of Darovasertib

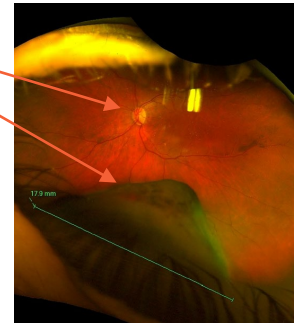
23% Tumor Shrinkage after 2-months

Baseline



Reduced tumor size & increased distance from optic disc and fovea

Month 2



*Data and images (ultrasound and fundus photography) from NADOM IST courtesy of Professor Anthony Joshua, MBBS, PhD, FRACP, St. Vincent's Hospital; tumor lesion reductions by investigator review based on maximal % reduction in measured Apical Height or Longest Basal Diameter (LBD)

IDEAYA BIOSCIENCES

Compassionate Use Case Study in Neoadjuvant Uveal Melanoma

Professor Mark Shackleton, MBBS PhD FRACP
Alfred Health, Australia

Compassionate Use Case Study: Neoadjuvant Treatment of UM Patient

Patient History and Background

70+ year old UM patient was blind in one eye and developed a large ocular tumor in the other eye

- Past history of 40+ years of smoking and left retinal artery infarction causing left eye blindness
- Regular medications include atorvastatin, perindopril and low-dose aspirin
- Noticed rapidly declining vision in right eye; referred for ophthalmological evaluation

Ocular Lesion was a large uveal melanoma – 16.5 mm Apical Height x 18 mm LBD (baseline)

- Associated with severe cataract

Commenced Neoadjuvant Therapy with darovasertib + crizotinib with goals to avoid enucleation and prevent complete blindness of patient

Substantial Tumor Shrinkage observed at each monthly ophthalmological review

- Enucleation avoided and eye has been preserved
- Patient is on 4th month of treatment and remains on therapy

Tolerable Treatment with main side-effect being G1-2 diarrhea managed with anti-diarrheal therapies

Initial Case of Systemic Neoadjuvant Therapy resulting in Prevention of Enucleation

Case study courtesy of Prof. Mark Shackleton, MBBS PhD FRACP, Professor of Oncology, Monash University, Director of Oncology, Alfred Health Chair, Melanoma and Skin Cancer Trials Ltd, Australia
LBD = Largest Basel Diameter

Compassionate Use Case Study: Neoadjuvant Treatment of UM Patient

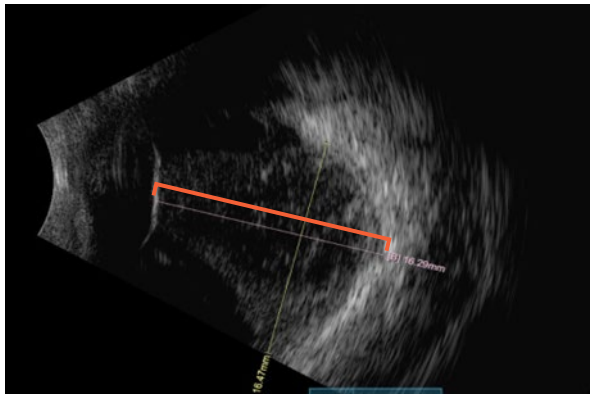
Initial Case of Systemic Treatment resulting in Spared Enucleation

Daro + Crizo Combination Therapy in UM with Intact Primary

- Treatment initiated 2 wks after compassionate use request
- Clinical Impact of Neoadjuvant Treatment [+]
  - ~30% ocular tumor shrinkage after 1 month with tumor size approaching threshold for plaque placement
  - ~50% ocular tumor shrinkage after 2 months
  - ~70% ocular tumor shrinkage after 3 months
  - ~80% ocular tumor shrinkage after 4 months
  - Avoided enucleation → prevented complete blindness
- With tumor complications and severe cataract, patient had limited opportunity for vision improvement
- With neoadjuvant treatment and IOL replacement (cataracts) the patient has reported excellent vision*
  - Pre-treatment vision score: 6/120 (6/60 = legally blind)
  - Post-treatment vision score: 6/5 (>20x improvement)
- Patient remains on Treatment

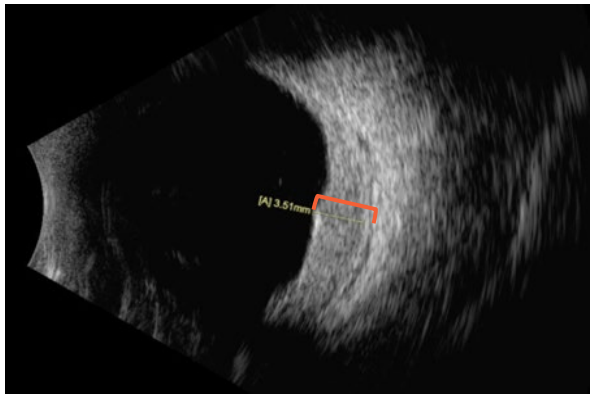
Baseline & 4 Month Scan: ~80% Ocular Tumor Shrinkage

Baseline



Tumor Apical Height Measurements

Month 4



Tumor Size[+] Reduced ~80%

Patient Remains on Treatment at ~4 mo

Data and images (ultrasound) courtesy of Dr Rod O'Day, LLB (Hons), BSc, MBBS (Hons), FRANZCO, Ocular Oncology Unit Royal Victoria Eye and Ear Hospital, Melbourne Australia. Additional patient care provided by Dr Daniel McKay, MBBS(Hons) FRANZCO FRCPA and Dr John McKenzie, MBBS, FRACS, FRCOphth, FRANZCO

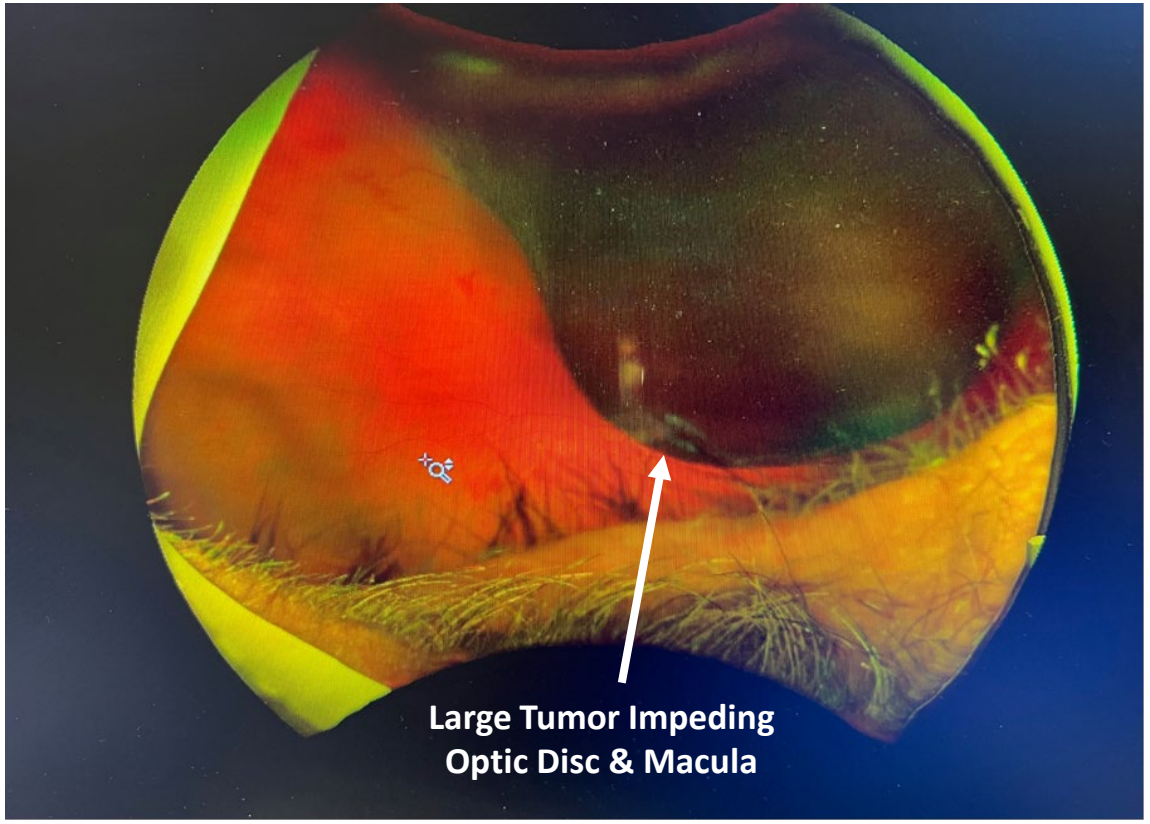
[+] Ocular tumor shrinkage based on % reduction in tumor apical height

* vision score reflects AU measurement system (meters vs. feet); 20/20 = 6/6 vision score (normal vision); IOL = intra ocular lens

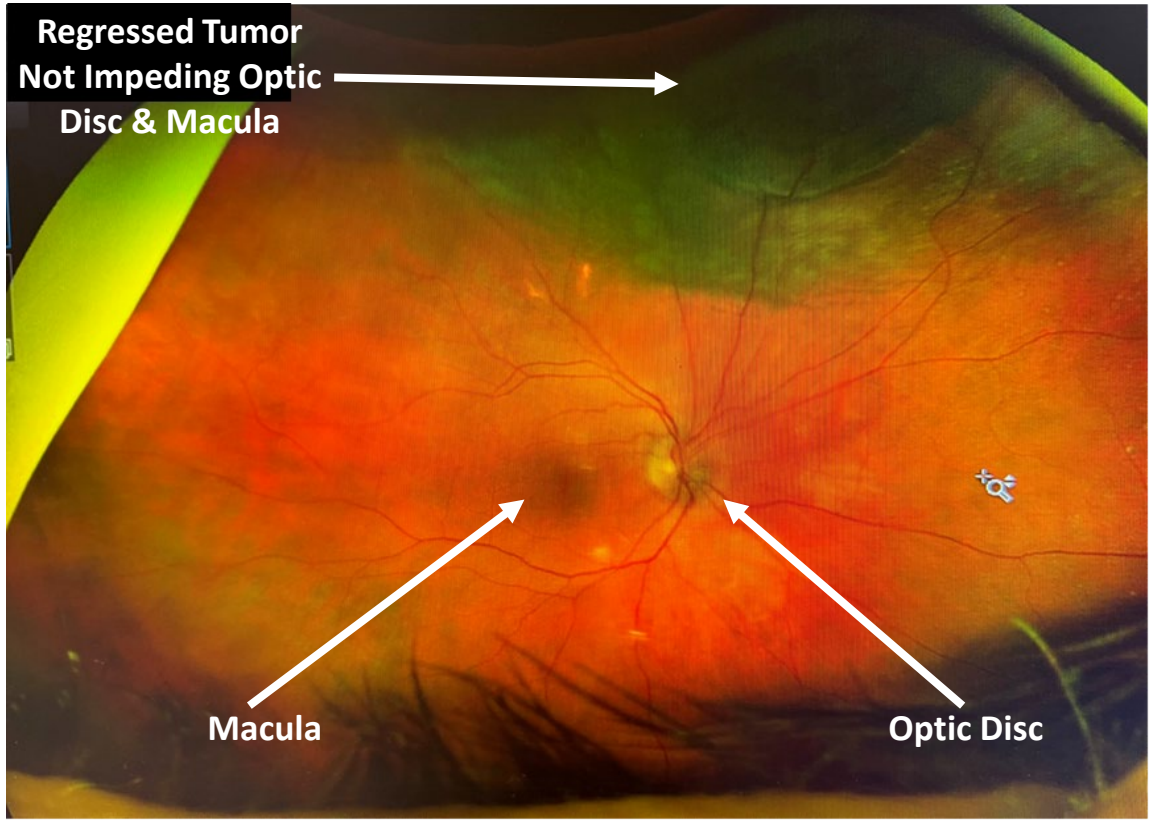
Eye Saved: Remarkable Ocular Tumor Shrinkage as a Neoadjuvant Therapy

Ocular Tumor Shrinkage of 79% with Patient Still Responding to Treatment [+]

Baseline Scan: 16.5 mm Apical Height



4 Month Scan: 3.5mm Apical Height



Investigator-reviewed data and images (fundus photography) courtesy of Prof. Mark Shackleton, MBBS PhD FRACP, Professor of Oncology, Monash University, Director of Oncology, Alfred Health Chair, Melanoma and Skin Cancer Trials Ltd, Australia

[+] Ocular tumor shrinkage based on % reduction in tumor apical height

Closing Remarks

Yujiro S. Hata – President and Chief Executive Officer
IDEAYA Biosciences

Closing Remarks on Darovasertib Clinical Update

Accelerated Approval Clinical Trial Design based on FDA Guidance

- Initiating accelerated approval registration-enabling trial in First-Line HLA-A2-negative MUM in Q2 2023
- Median PFS as primary endpoint for accelerated approval and median OS for full approval

Darovasertib + Crizotinib Clinical Efficacy & AE Summary in MUM

- Unprecedented ORR, DCR, and mPFS in MUM, irrespective of HLA-A2 status
  - 45% Confirmed ORR, 90% DCR and ~7 months mPFS in 20 evaluable First-Line MUM
  - 30% Confirmed ORR, 87% DCR and ~7 months mPFS in 63 evaluable Any-Line MUM
  - 35% Confirmed ORR, 100% DCR and ~11 months mPFS in 20 evaluable Hepatic-Only MUM
- mPFS has increased to ~7 mo's vs. previously reported mPFS of ~5 mo's (n=35, Sept 2022) in Any-Line MUM
- Historical MUM Efficacy (high unmet need): ~0 to 5% Confirmed ORR and mPFS from ~2 to 3 months
- Manageable safety profile with low rate of discontinuations & high-grade adverse events

Neoadjuvant / Adjuvant UM Clinical Efficacy & Opportunity

- 9 of 9 (100%) UM / MUM patients observed ocular tumor shrinkage, including a patient spared enucleation
- Company-sponsored Phase 2 study in (Neo)Adjuvant UM initiated to define accelerated approval path(s)

Darovasertib Clinical & Commercial Strategy in Uveal Melanoma Indication

High Unmet Need and Multiple First-Line Opportunities across the Patient Journey

Indication is the Diagnostic: +95% of UM patients harbor GNAQ/GNA11 or upstream activating mutation of PKC-signaling, enabling Broad Applicability of Darovasertib in this Indication

Uveal Melanoma Patient Journey

	Neoadjuvant UM	Adjuvant UM	First-Line MUM	Pretreated MUM
HLA-A2-Negative (~60-65% of UM / MUM)**	No FDA Approved Therapies*: **Daro** Phase 2 Enucleation Define Accelerated Approval Path; **Daro** Phase 2 Radiation Define Accelerated Approval Path	No FDA Approved Therapies*: **Daro** Phase 2 Define Accelerated Approval Path	No FDA Approved Therapies*: **Daro + Crizo** Registrational Trial Accelerated Approval	→
HLA-A2-Positive (~35-40% of UM / MUM)**			**Daro + Crizo** Target NCCN / Compendia Listing	
Target Treatment Duration	≥6 months	≥6 months	mPFS + ~3 months	mPFS + ~3 months
Target Clinical Endpoints	Eye & Vision Preservation	Relapse Free Survival	ORR, mPFS, mOS	ORR, mPFS, mOS
Annual Incidence US/EU**	~8-10k	~8-10k	~4-5k	
Total Prevalence US/EU**	~100k	~100k	~14k	

FDA Orphan Drug Designation in Uveal Melanoma+

*No FDA approved systemic therapies in multiple UM and MUM indications across the patient journey

**IDEAYA data: HLA-A2-positive and HLA-A2-negative prevalence in MUM based on IDEAYA clinical trial data; US/EU MUM annual incidence and total prevalence based on market research analysis

+ Orphan Drugs benefit from certain tax credits and may be excluded from certain mandatory price negotiation provisions of the 2022 Inflation Reduction Act

IDEAYA BIOSCIENCES

Building a Fully-Integrated Biotech in Precision Medicine Oncology

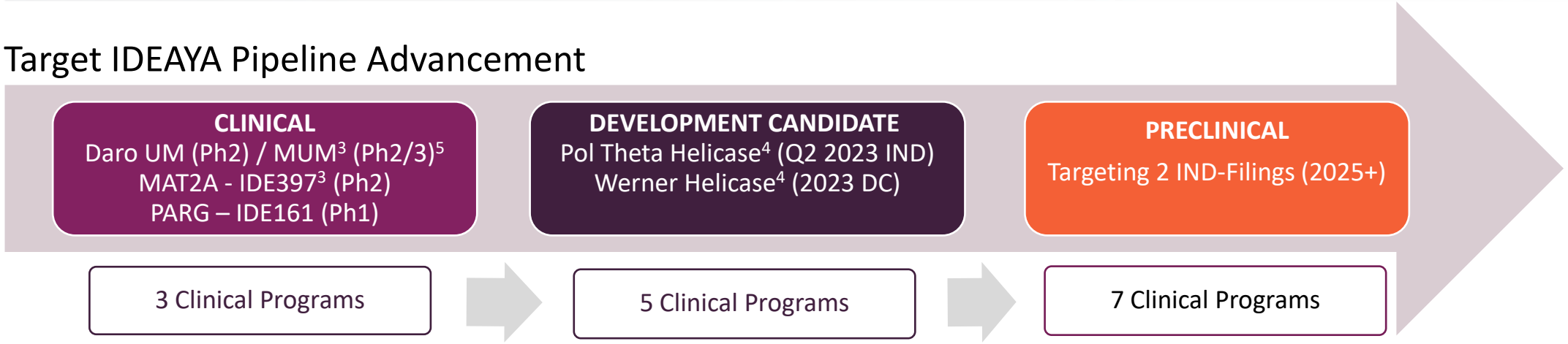
Potential *First-in-Class* Pipeline and Novel Target / Biomarker & Drug Discovery Platform

Darovasertib Registration-Enabling Potential Accelerated Approval / Full Approval Study provides potential path to product revenue to re-invest in broad *first-in-class* precision medicine oncology pipeline and is tractable for commercial execution

Emerging Pipeline of Potential First-in-Class Precision Medicine Oncology Programs with large addressable solid tumor patient populations, including IDE397 (Phase 2), IDE161 (Phase 1), Pol Theta (Q2 2023 IND), and Werner Helicase (2023 DC)

Strong Balance Sheet & Validating Pharma Partnerships and Collaborations with ~$373 M in cash anticipated to fund operations into 2026 [1, 2] and opportunity for GSK milestones to extend cash runway; clinical collaborations with Amgen & Pfizer

Target IDEAYA Pipeline Advancement



(1) Includes aggregate of ~$373.1M cash, cash equivalents and marketable securities as of December 31, 2022
(2) IDEAYA Form 10-K dated March 7, 2023, as filed with the U.S. Securities and Exchange Commission
(3) Clinical Trial Collaboration and Supply Agreements, independently with Pfizer (Darovasertib + Crizotinib) and Amgen (IDE397 + AMG193); IDEAYA retains all commercial rights
(4) Cost Share for Pol Theta and Werner Helicase Programs: 100% GSK and 80% GSK / 20% IDEAYA, respectively
(5) Targeting initiation of Phase 2/3 potential registration-enabling clinical trial Q2 2023

Analyst Q&A

Yujiro S. Hata – President and Chief Executive Officer
IDEAYA Biosciences