



# TARGETING CANCER

**New Science. New Cancer Therapies. New Hope.**

Company Overview – November 2022

## FORWARD-LOOKING STATEMENTS

This presentation contains forward-looking statements (including within the meaning of §21E of the U.S. Securities Exchange Act of 1934, as amended, and § 27A of the U.S. Securities Act of 1933, as amended). Forward-looking statements, which generally include statements regarding goals, plans, intentions and expectations, are based upon current beliefs and assumptions of Oncternal Therapeutics, Inc. (“Oncternal”) and are not guarantees of future performance. Statements that are not historical facts are forward-looking statements, and include statements regarding the expected timing for achieving key milestones, including the expected site initiation timeline for the ZILO-301 study, the potential that the ZILO-301 study can serve as a registrational study, the timing of regulatory communications and completing and announcing results of clinical trials of Oncternal’s product candidates, the anticipated market potential, duration of patent coverage, ability to obtain and maintain favorable regulatory designations, and potential accelerated approval pathways for Oncternal’s product candidates and preclinical programs, and Oncternal’s anticipated cash runway.

All forward-looking statements are subject to risks and uncertainties, including risks and uncertainties inherent in Oncternal’s business, including risks associated with the clinical development and process for obtaining regulatory approval of Oncternal’s product candidates such as potential delays in the commencement, enrollment and completion of clinical trials; the risk that results seen in a case study of one patient likely will not predict the results seen in other patients in the clinical trial; the risk that interim results of a clinical trial do not predict final results and that one or more of the clinical outcomes may materially change as patient enrollment continues, following more comprehensive reviews of the data, as follow-up on the outcome of any particular patient continues, and as more patient data become available; and other risks described in Oncternal’s filings with the U.S. Securities and Exchange Commission (“SEC”). Except as required by applicable law, Oncternal undertakes no obligation to revise or update any forward-looking statement. All forward-looking statements in this presentation are current only as of the date on which the statements were made. Additional factors that could cause actual results to differ materially from those expressed in the forward-looking statements are discussed in Oncternal’s filings with the SEC.

Zilovetamab, ONCT-808, and ONCT-534 are investigational product candidates or preclinical programs that have not been approved by the U.S. Food and Drug Administration for any indication.

This presentation includes certain information obtained from trade and statistical services, third-party publications, and other sources. Oncternal has not independently verified such information and there can be no assurance as to its accuracy.

## **ZILOVERTAMAB: POTENTIALLY FIRST-IN-CLASS MONOCLONAL ANTIBODY TARGETING ROR1**

- Initiated Phase 3 global registrational study for the treatment of patients with R/R MCL
- Safety and efficacy results for zilovertamab + ibrutinib in MCL/CLL compare favorably to historical single-agent ibrutinib
- Encouraging efficacy results in patients with p53 mutated CLL, with PFS of 100% at 24 and 30 months

## **ONCT-808: AUTOLOGOUS CAR T CELL THERAPY TARGETING ROR1**

- US IND cleared by FDA for the treatment of aggressive B-cell NHL, including CD19 CAR T treatment failures
- Clinical manufacturing agreement with the Dana-Farber Cancer Institute for first-in-human studies
- Research collaborations for next-gen allogeneic CAR T and CAR NK cell therapies with Karolinska Institutet & Celularity

## **ONCT-534: DUAL-ACTION ANDROGEN RECEPTOR INHIBITOR (DAARI)**

- Activity in preclinical prostate cancer models of androgen receptor inhibitor resistance, including AR mutations, AR overexpression and AR splice variants, such as AR-V7

## **MULTIPLE CATALYSTS**

- Zilovertamab clinical data updates in MCL and CLL at ASH 2022
- Planned opening of ex-US sites for global registrational Phase 3 Study ZILO-301 in 1Q 2023
- ONCT-808 clinical data update in aggressive B-cell NHL in 2023

## Hematological Malignancies

### **Zilovertamab – ROR1 monoclonal antibody**

- Demonstrated clinical benefit of combination with ibrutinib compared to historical ibrutinib monotherapy, including in difficult-to-treat p53 mutations
- Global registrational study in MCL initiated

### **ONCT-808 – ROR1 CAR T Cell Therapy**

- US IND cleared by FDA

## Prostate Cancer

### **ONCT-534 – Dual Action AR Inhibitor (DAARI)**

- First-in-class MOA interacting with both N-terminal and Ligand-Binding Domain of the AR and inducing AR protein degradation
- Active preclinically in AR amplification, splice variant and LBD mutation models

### **Zilovertamab – ROR1 monoclonal antibody**

- Ph1b study open for advanced prostate cancer

# Experienced Team



**James Breitmeyer, MD, PhD**  
CEO, Founder, Director



**Richard Vincent**  
CFO



**Salim Yazji, MD**  
CMO



**Gunnar Kaufmann, PhD**  
CSO



**Raj Krishnan, PhD**  
CTO



**Chase Leavitt**  
General Counsel



**Pablo Urbaneja**  
SVP, Corporate Development



**Steve Hamburger, PhD**  
SVP, Regulatory Affairs & Quality Assurance



**David Hale**  
Co-founder  
Board Chairman



**Michael Carter, MB**  
Director



**Jinzhu Chen, PhD**  
Director



**Daniel Kisner, MD**  
Director



**Rosemary Mazanet, MD, PhD**  
Director



**Bill LaRue**  
Director



**Xin Nakanishi, PhD**  
Director



**Charles Theuer, MD, PhD**  
Director

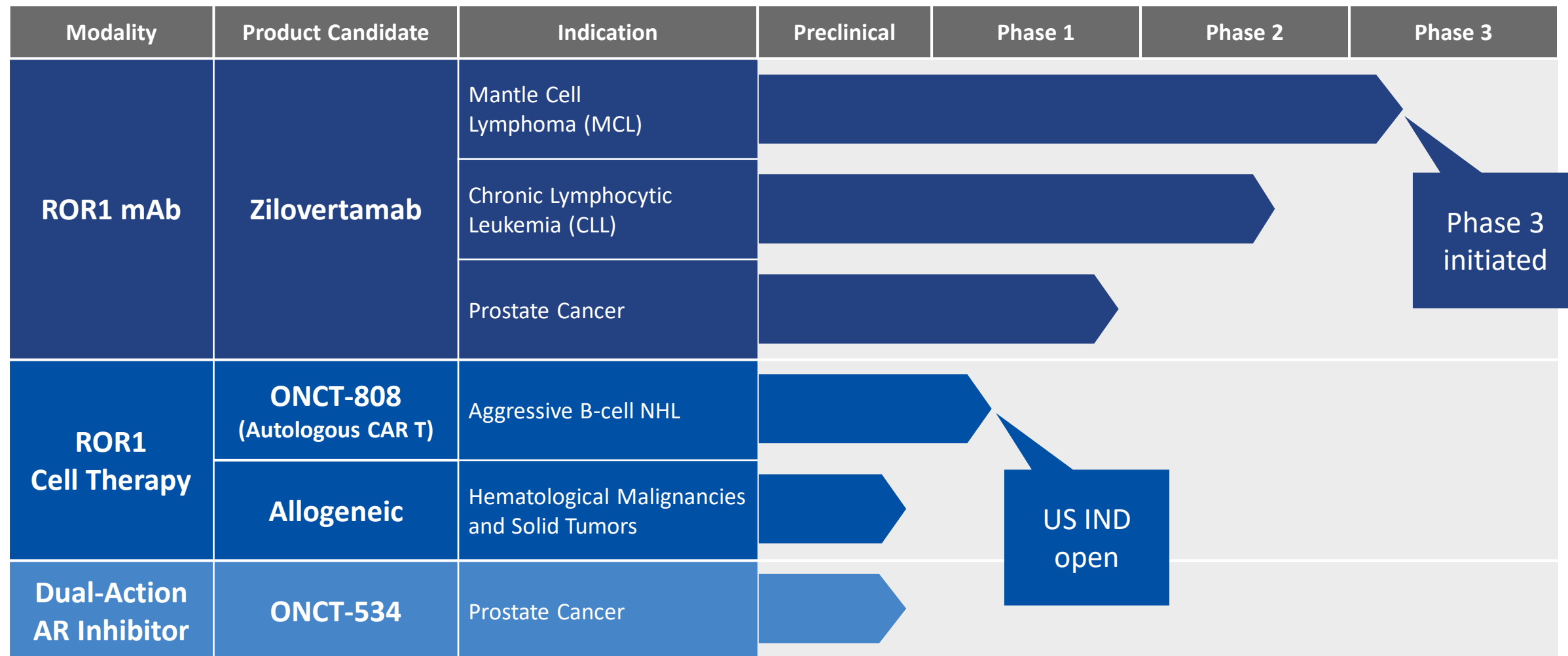


**Robert Wills, PhD**  
Director





# Robust Pipeline – Novel Product Candidates in Multiple Indications



# Table of Contents

## **ZILOVERTAMAB: MONOCLONAL ANTIBODY TARGETING ROR1**

### **ROR1 TARGETED CELL THERAPY PROGRAM**

### **ONCT-534: DUAL-ACTION ANDROGEN RECEPTOR INHIBITOR (DAARI)**

### **FINANCIAL INFO AND UPCOMING MILESTONES**

# ROR1 (Receptor Tyrosine Kinase-Like Orphan Receptor 1)

*Compelling Tumor-Specific Target*

- Expressed on **most B-cell malignancies**, including
  - Mantle cell lymphoma (MCL), diffuse large B-cell lymphoma (DLBCL), chronic lymphocytic leukemia (CLL)
- Expressed on **many solid tumors**
  - Increased ROR1 expression associated with more aggressive tumors, shorter PFS and OS
- ROR1 activity associated with **aggressive phenotype**
  - Invasion, metastasis, stem cell-like behavior, and resistance to treatment
- Subject of **large pharma acquisitions**
  - ROR1-ADCs: Merck (VelosBio), Boehringer (NBE)
- **Oncternal ROR1 pipeline differentiated and advancing**
  - Deep target biology expertise & immunotherapy experience

## ROR1 Expressed on Multiple Solid and Liquid Tumors

MCL	95%
CLL	95%
Uterus	96%
Lymphoma	90%
Prostate	90%
Skin	89%
Pancreatic	83%
Adrenal	83%
Lung	77%
Breast	75%
Testicular	73%
Colon	57%
Ovarian	54%

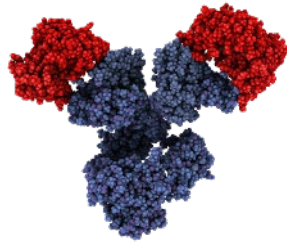
Green 2008 Trends Cell Biol. 2008; Matsuda T 2001 Mech Dev.; Fukuda 2008 PNAS; Hudecek 2010 Blood; Zhang 2012 Am J Pathology; Zhang 2014 PNAS

Zhang 2012 AJP



# Two Development Programs Targeting ROR1

## Zilovertamab ROR1 mAb



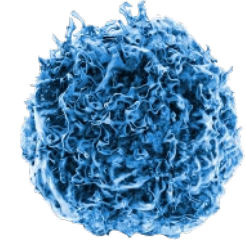
### Background

- High-affinity IgG1 humanized ROR1 mAb
- Binds to tumors but not normal adult tissues
- Patent coverage through at least 2033 (CoM); 2037 (MoU)
- Supported by ~\$14M non-dilutive CIRM grant and ibrutinib product donation
- Zilovertamab is the mAb used in MK-2140 ADC
  - Merck acquired the ADC from VelosBio for \$2.75B in 2020

### Development status

- MCL: Initiated Phase 3 registrational Study ZILO-301
- CLL: Phase 2 with ibrutinib prolonged PFS
- Enrolling MZL (marginal zone lymphoma) in Phase 2
- FDA Orphan Drug Designations for MCL and CLL
- mCRPC: P1b IST with docetaxel UC San Diego

## ROR1 CELL THERAPY PROGRAM



### Background

- ROR1 expression on many tumor types
- Potential safety and efficacy advantages
- MK-2140 ADC data at ASH 2021: no apparent off-tumor, on-target ROR1 toxicities

### Development status

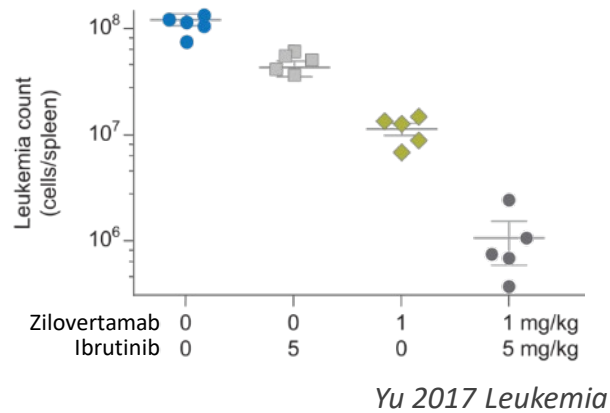
- US IND cleared for Phase 1/2 dose escalation study in aggressive B-cell NHL
- cGMP autologous CAR T clinical manufacturing at Harvard/Dana-Farber Cancer Institute
- Novel shortened manufacturing in closed system
- ONCT-808 utilizing zilovertamab scFv is lead autologous CAR T cell product candidate
- Collaborations with Celularity & Karolinska Institutet

# Zilovertamab Extensive Preclinical Research

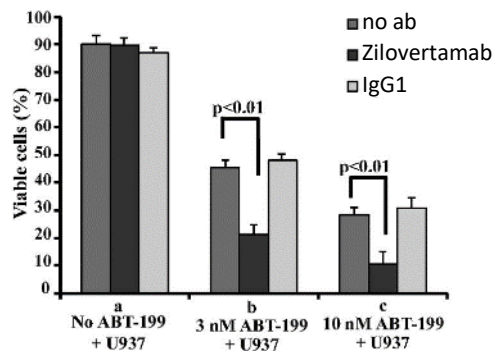
Potential as combination therapy, multiple tumor indications and safety advantage

## Synergistic with Targeted Agents

- Synergistic with ibrutinib in CLL and MCL

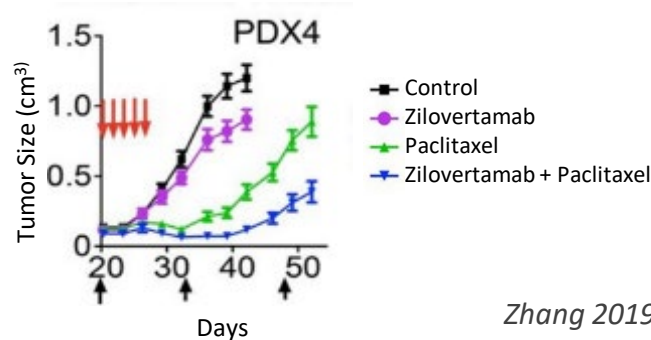


- Synergistic with venetoclax (ABT-199)

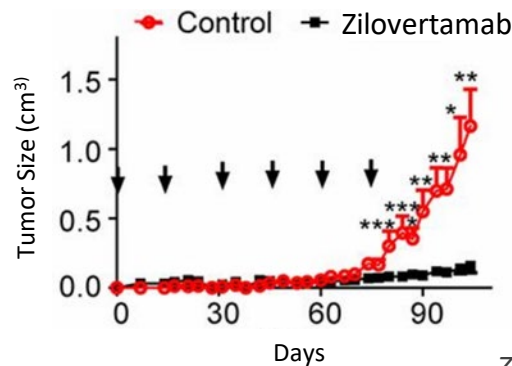


## Active in Solid Tumor Models

- Zilovertamab and paclitaxel are at least additive against TNBC PDX growth, and eliminate tumor forming cells

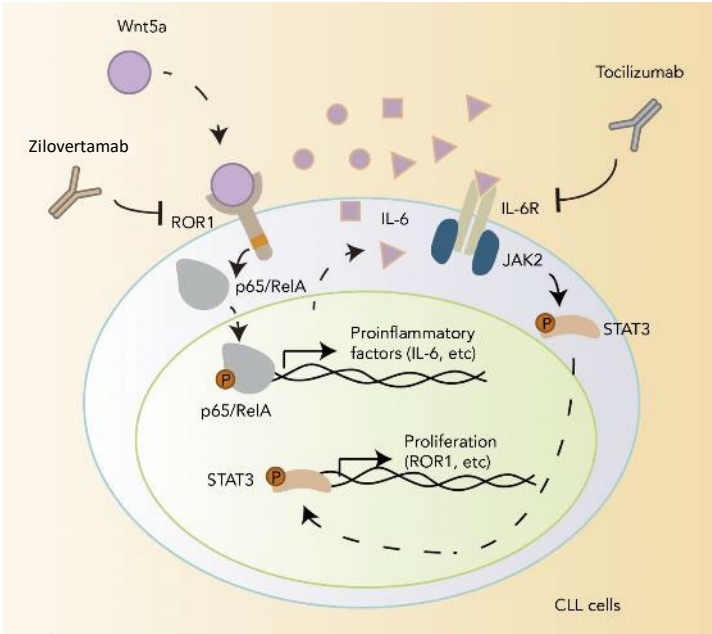


- Anti-tumor activity in PDX models of ovarian cancer



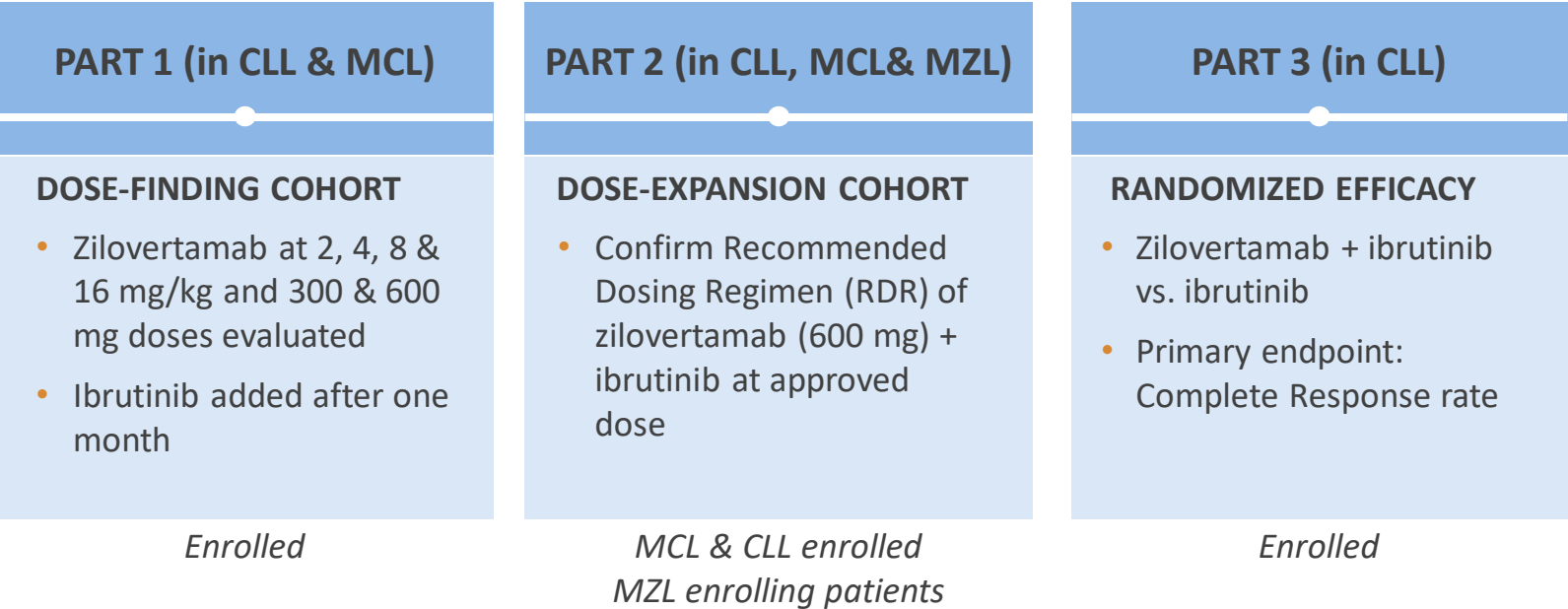
## Inhibits Inflammatory Pathway

- Zilovertamab blocks pro-inflammatory JAK/STAT signaling pathway in CLL cells
- Mechanism for potential safety advantage observed in patients



# CIRM-0001 Trial – Phase 1/2 Study of Zilovertamab and Ibrutinib in Patients with MCL, CLL and MZL

## STUDY DESIGN



- Encouraging interim clinical data in MCL and CLL presented at ASCO 2022, especially p53 altered disease
- Data support Phase 3 registrational study design
- Ibrutinib from Pharmacyclics/AbbVie
- Collaboration with UC San Diego and CIRM

MCL = Mantle Cell Lymphoma, CLL = Chronic lymphocytic leukemia, MZL = Marginal zone lymphoma  
CIRM = California Institute for Regenerative Medicine

ClinicalTrials.gov Identifier: NCT03088878

### MCL:

#### Clinical activity compares favorably to published single-agent ibrutinib data<sup>(1)</sup>

- ORR 85% (23/27)
- CR rate 41% (11/27)
- CRs durable for up to 35 months
- Median PFS of 35.9 months and OS not reached, regardless of prior # of therapies, after a median follow-up of 15.1 months

#### Encouraging clinical activity in high-risk sub-populations

- p53 loss of function: Median PFS of 17.3 months
- Prior SCT or CAR T (n=7): 100% ORR (5 CR, 2 PR)
- Ki-67 levels  $\geq 30\%$  (n=14): 86% ORR (5 CR, 7 PR)
- > 1 prior systemic therapy (n=12): 83% ORR (7 CR, 3 PR)
- Prior ibrutinib (n=5): 80% ORR (2 CR, 2 PR)

### CLL:

#### The combination of zilovertamab plus ibrutinib is a well-tolerated and active regimen in CLL

- Updated Part 1 & 2 results:
  - ORR 91% (31/34)
  - CR rate 9% (3/34)
  - Clinical Benefit 100% (34/34)
  - Median PFS not reached after median follow-up of 32.9 months
- Randomized cohort (Part 3) results
  - Data continue to mature with time
  - ORR 94% (15/16 combo) vs 100% (7/7 mono)
  - Median PFS not reached for either arm after median follow-up of 24.1 months
  - Median PFS of 100% at 24 and 30 months for patients p53 loss of function

### No additional toxicity when zilovertamab is combined with ibrutinib

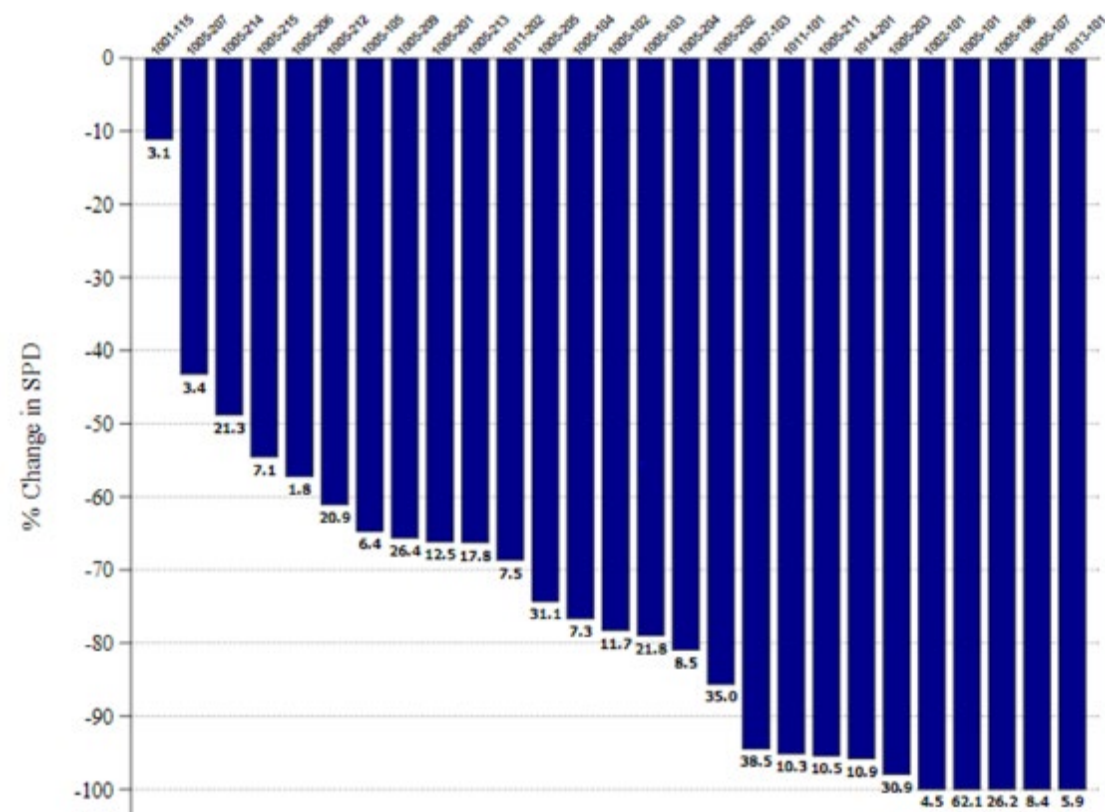
The combination has been well tolerated, with treatment emergent adverse events and hematologic abnormalities consistent with, or slightly lower than those reported for ibrutinib alone. For example, in patients with MCL, Grade 3-4 neutrophil decrease was documented in **9.1%** of patients with zilovertamab plus ibrutinib, compared to **29%** for ibrutinib alone from its registration study

There have been no dose-limiting toxicities and no serious adverse events attributed to zilovertamab alone

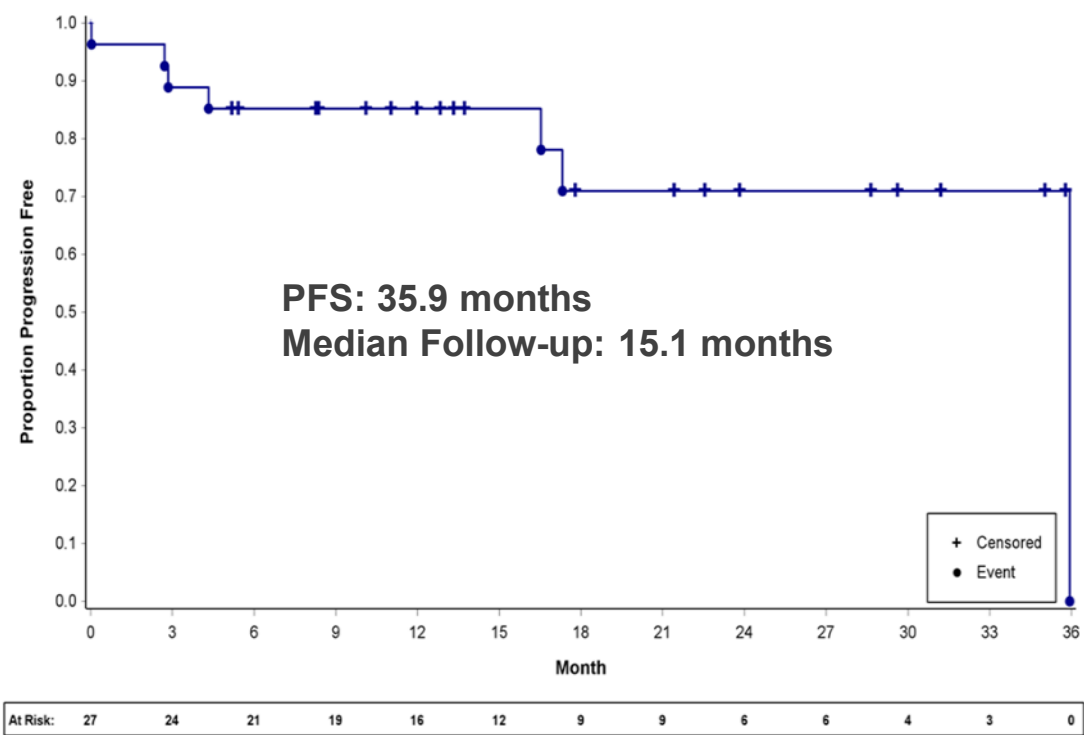
Data Cut: 8Apr2022, (1) Historical data with single-agent ibrutinib in MCL population reported overall ORR 66% and CR rate 20% (Rule et al. 2017 Br J Haem); such data may not be directly comparable due to differences in study protocols, conditions and patient populations.

## 85% ORR and median PFS of 35.9 months

Best Tumor Reduction (SPD)



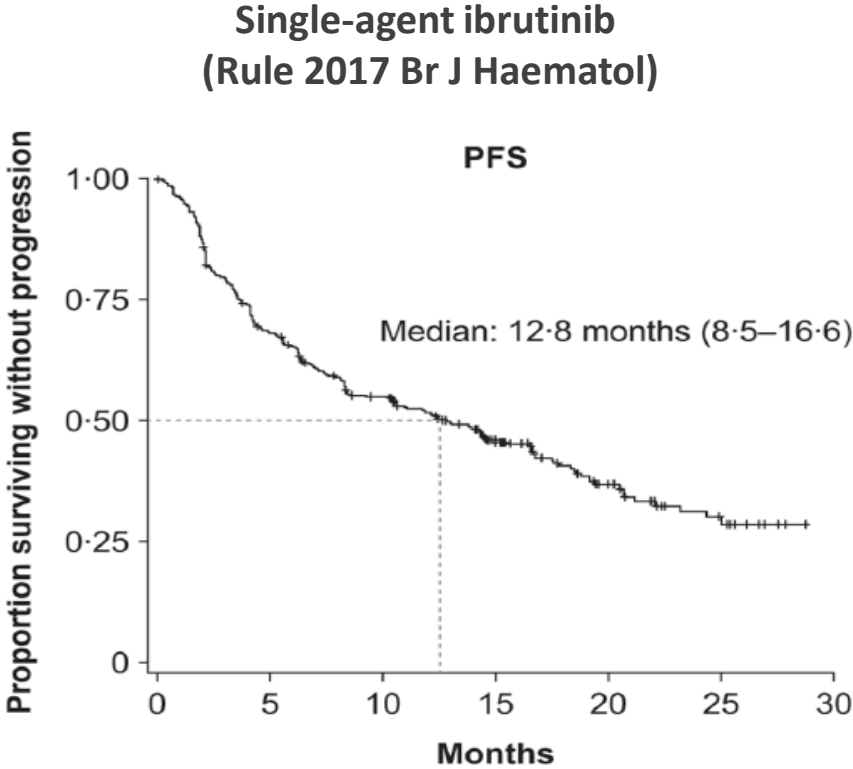
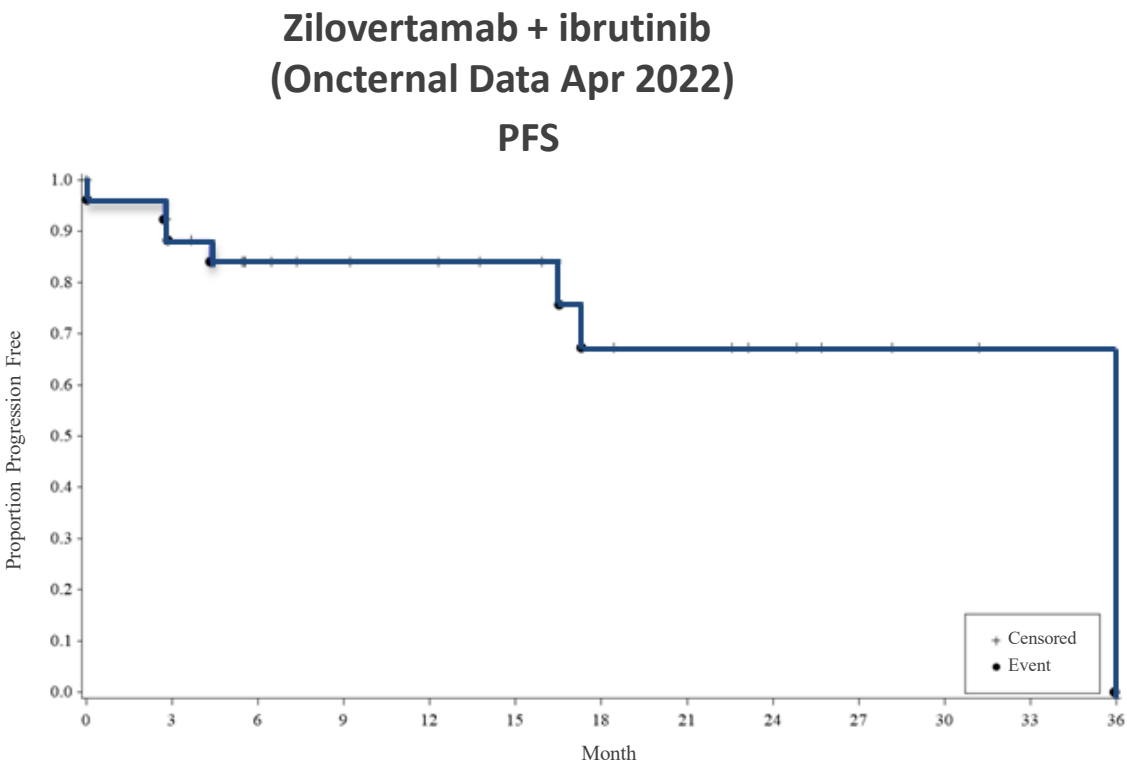
Progression-Free Survival



Median PFS: 35.9 (95% CI: 17.3, NE)

# R/R MCL: Compares Favorably to Historical Single-Agent Ibrutinib Data

Zilovertamab + Ibrutinib Data Update at ASCO 2022



Baseline characteristics	Median follow-up	15.1 months	24-25 months
	Median PFS	35.9 months 95% CI: (17.3 – NE months)	12.8 months. 95% CI: (8.5 – 16.6 months)
Clinical outcomes	ORR	85.2%	66%
	CR	40.7%	20%

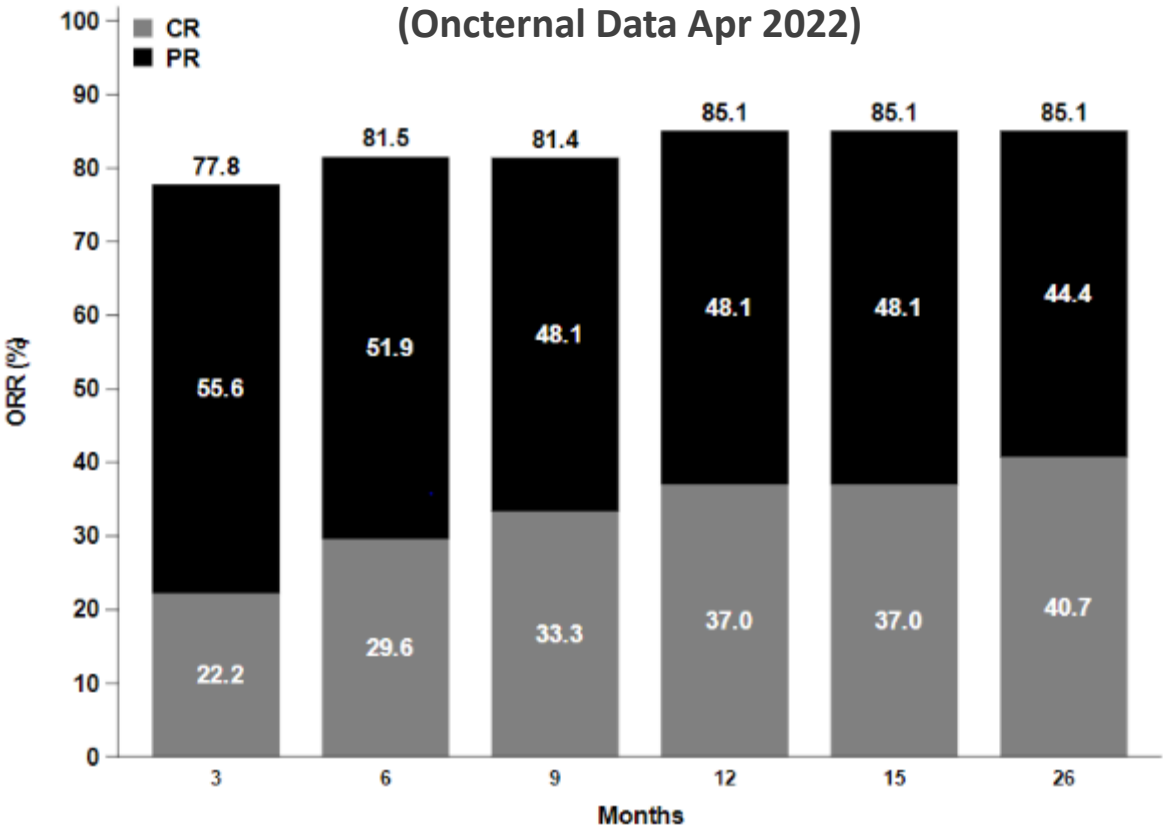
Study CIRM-0001 Data Cut: 8Apr2022; Note: Data presented are from separate studies and such data may not be directly comparable due to differences in study protocols, conditions and patient populations. Accordingly, cross-trial comparisons may not be reliable predictors of the relative efficacy or other benefits of the combination of zilovertamab and ibrutinib compared to single-agent ibrutinib; NE= not estimable



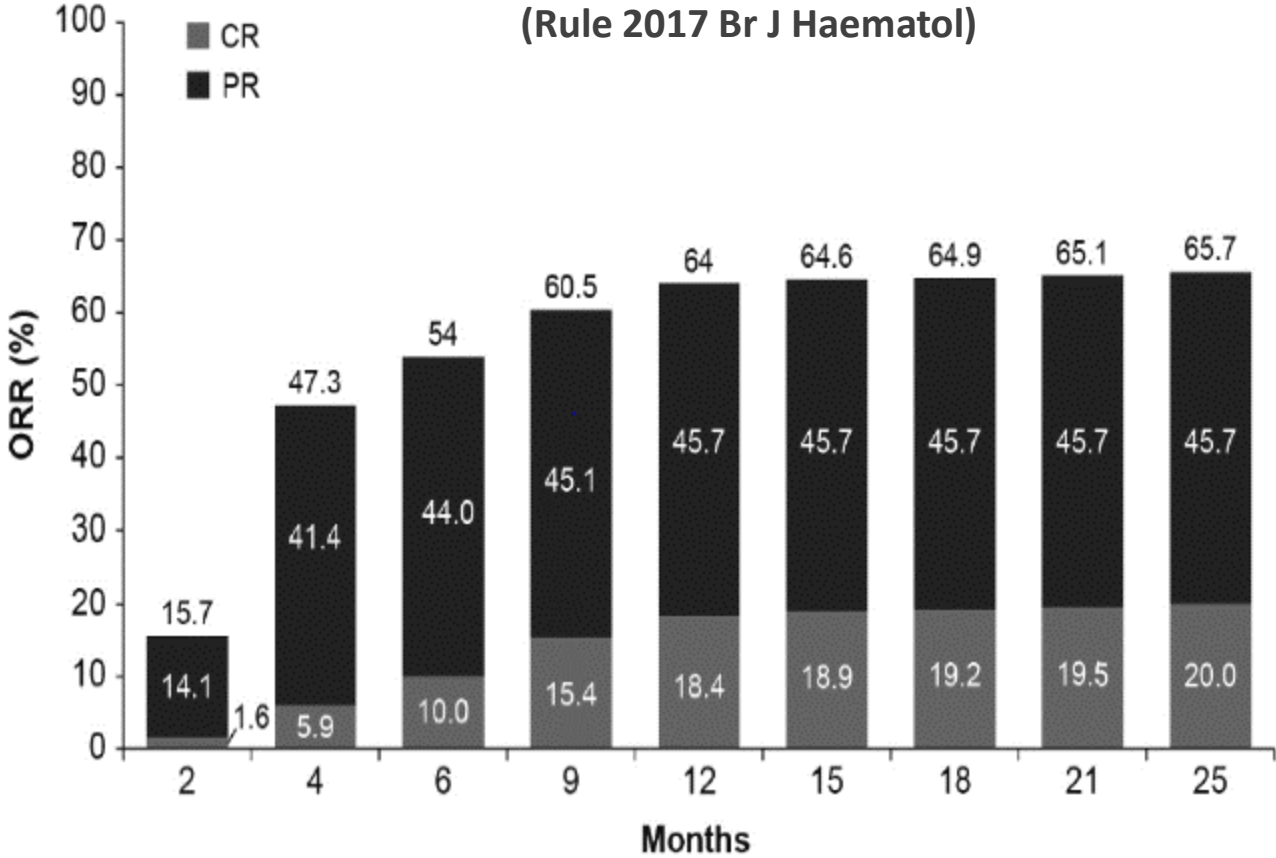
*Zilovertamab + ibrutinib combination shows encouraging response rates over time when compared to historical ibrutinib*

Clinical Response Rates Over Time in MCL

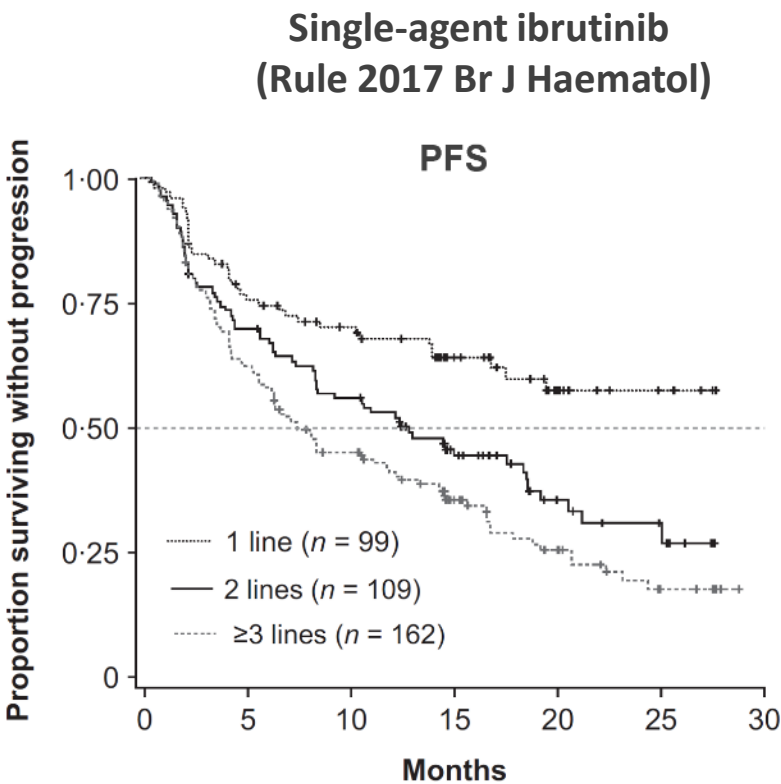
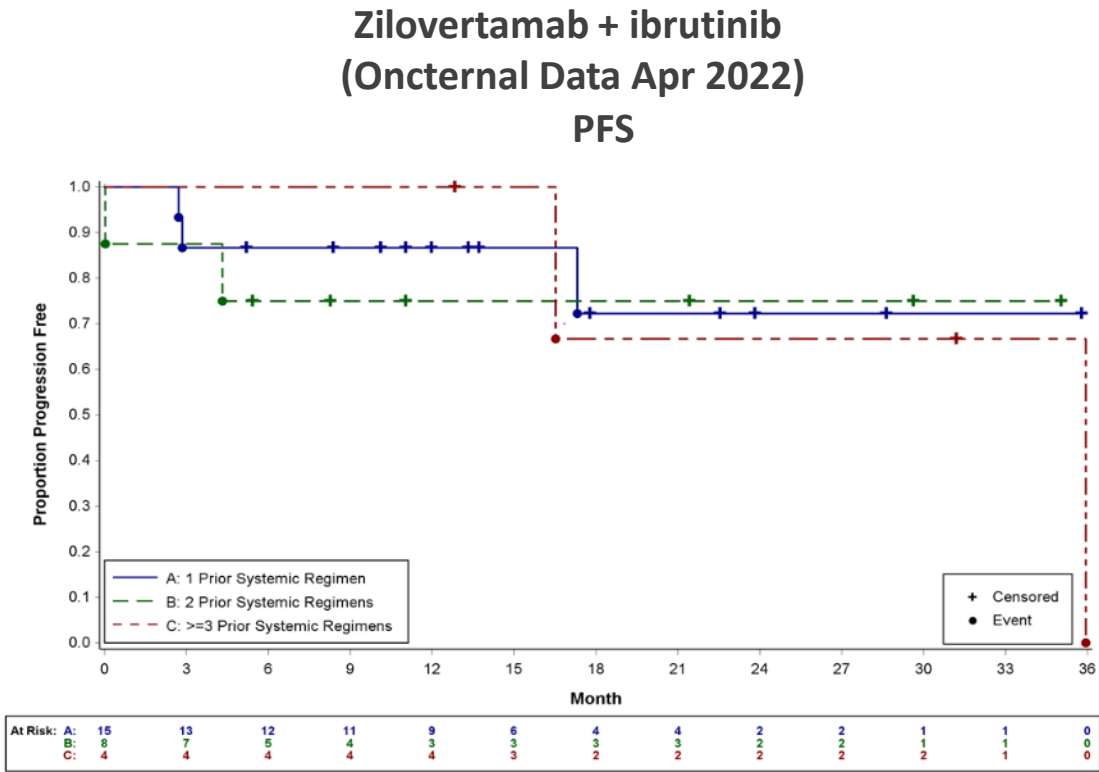
Zilovertamab + ibrutinib<sup>a</sup>  
(Oncternal Data Apr 2022)



Single-agent ibrutinib<sup>b</sup>  
(Rule 2017 Br J Haematol)



Study CIRM-0001 Data Cut: 8Apr2022; MCL Efficacy in Parts 1 & 2; (a) – includes 1 unconfirmed CR; (b) - Patient-level data from three single-agent ibrutinib studies, N = 370 from Rule, Br J Haematol., 2017



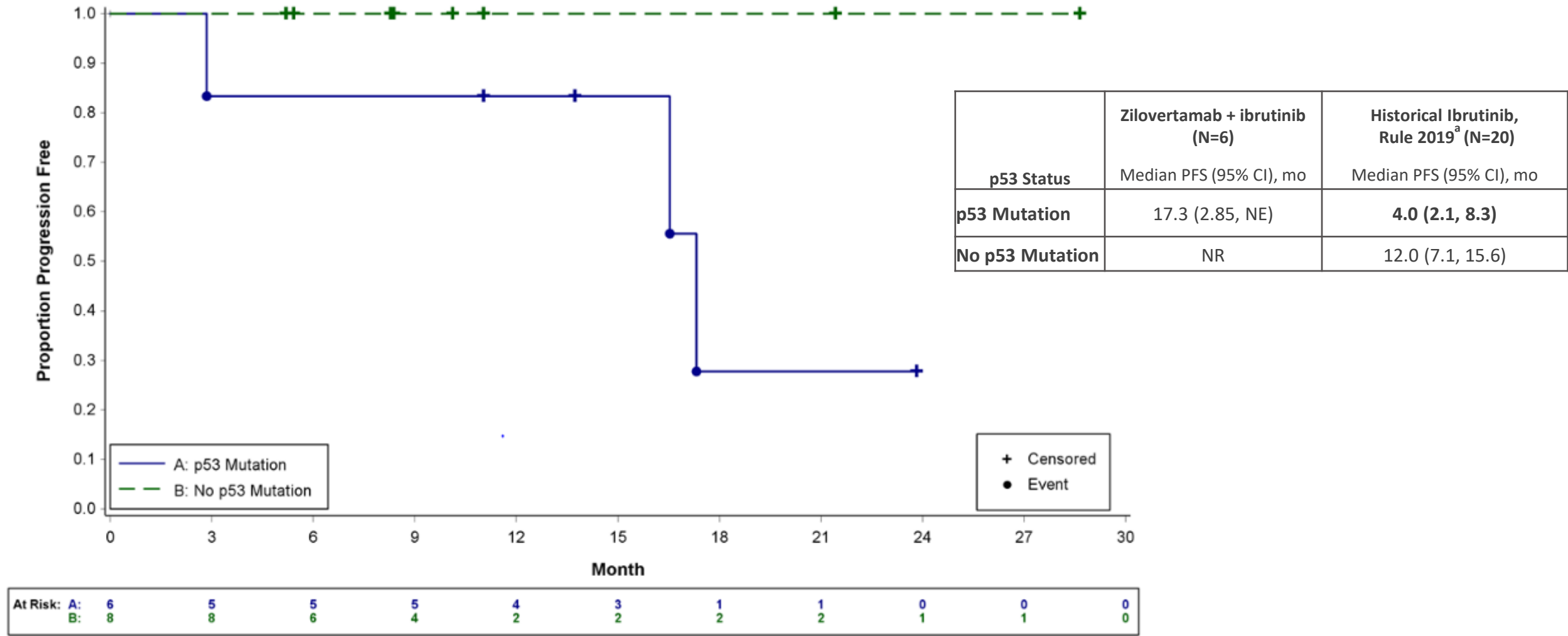
PFS by Subtypes – Prior Systemic Therapy (months)	Prior sys. therapy	Zilovertamab + Ibrutinib PFS , median (95% CI)	Ibrutinib PFS median
	1	NR (17.3, NE)	NR
	2	NR (0.03, NE)	~12
	≥ 3	35.9 (16.5, NE)	~8

Study CIRM-0001 Data Cut: 8Apr2022 ;Note: Data presented are from separate studies and such data may not be directly comparable due to differences in study protocols, conditions and patient populations. Accordingly, cross-trial comparisons may not be reliable predictors of the relative efficacy or other benefits of the combination of zilovertamab and ibrutinib compared to single-agent ibrutinib; NE= not estimable

# R/R MCL: Progression-free Survival by p53 Mutation Compares Favorably to Historical

## Single-Agent Ibrutinib Data

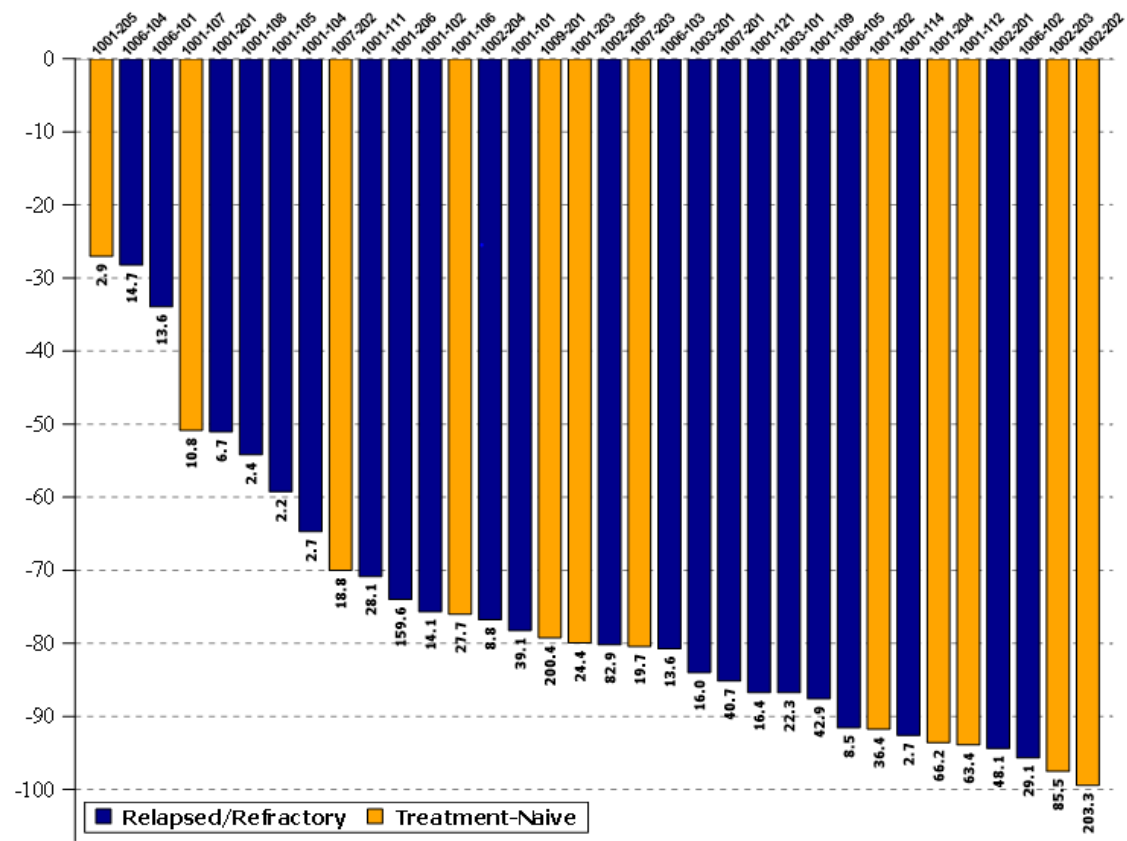
Zilovetamab + Ibrutinib Data Update at ASCO 2022



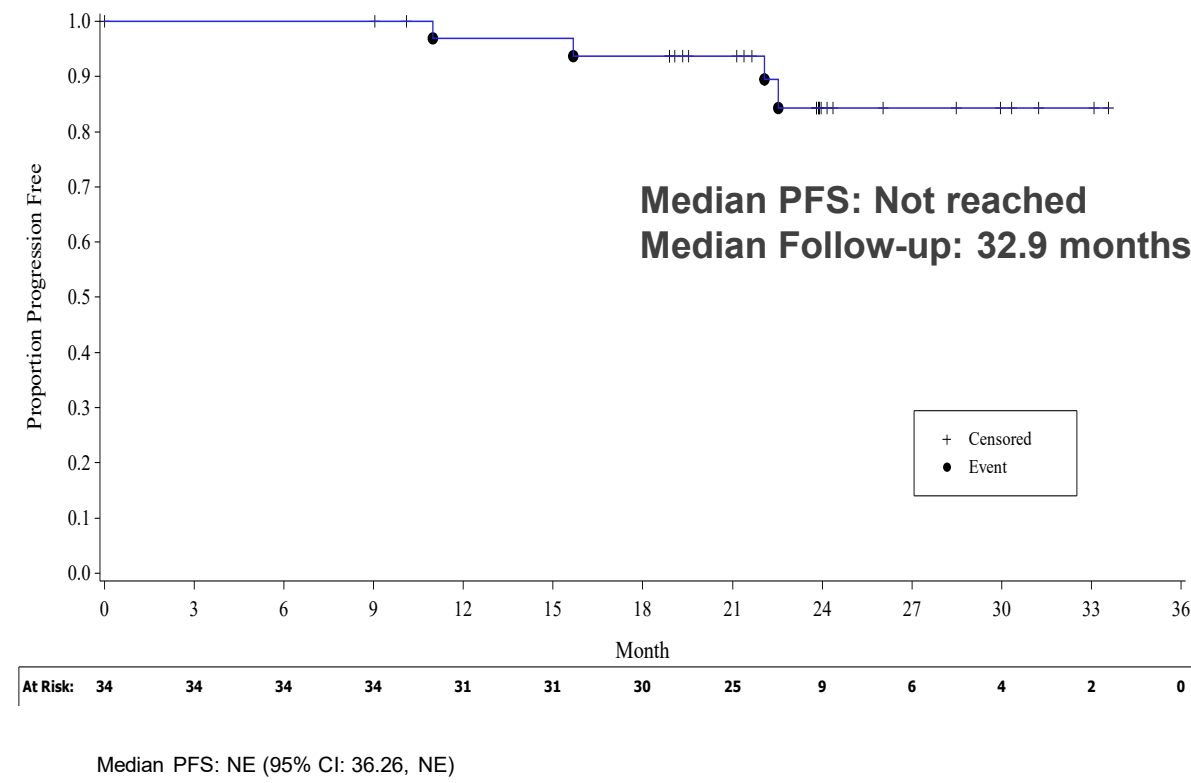
Study CIRM-0001 Data Cut: 8Apr2022; MCL Efficacy in Parts 1 & 2; PFS is defined as the time from the first dose to the time of disease progression or death from any cause, whichever comes first; NE = not evaluable; NR = not reached; a - Rule, Hematologica, 2019

## 91% ORR and median PFS was not reached in CLL

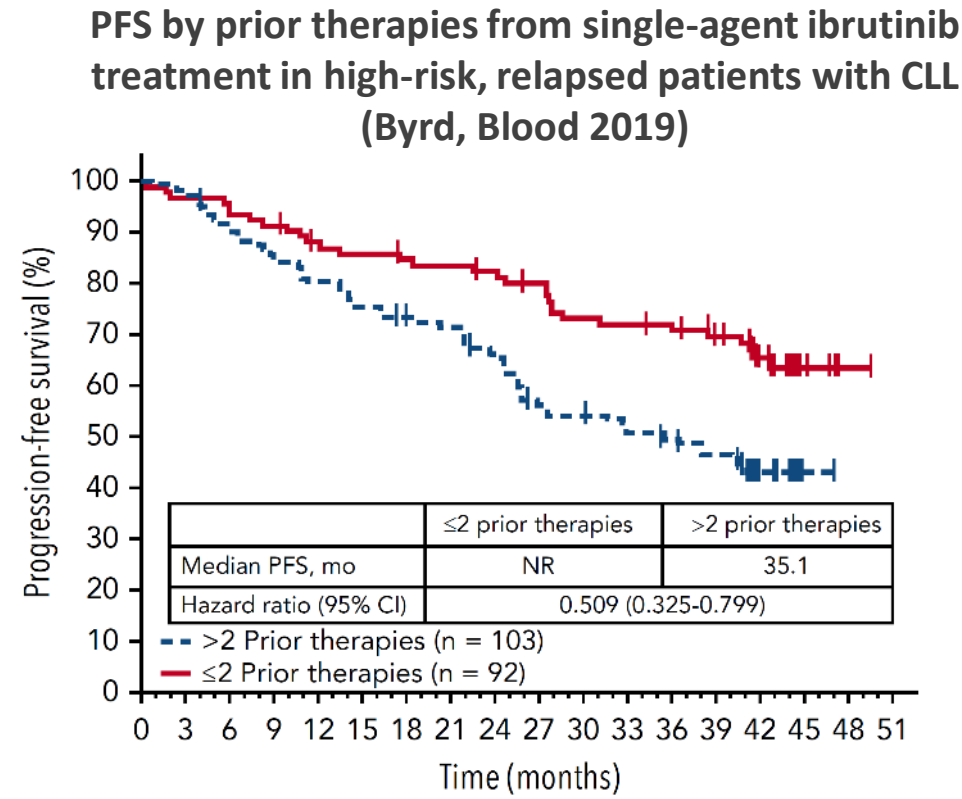
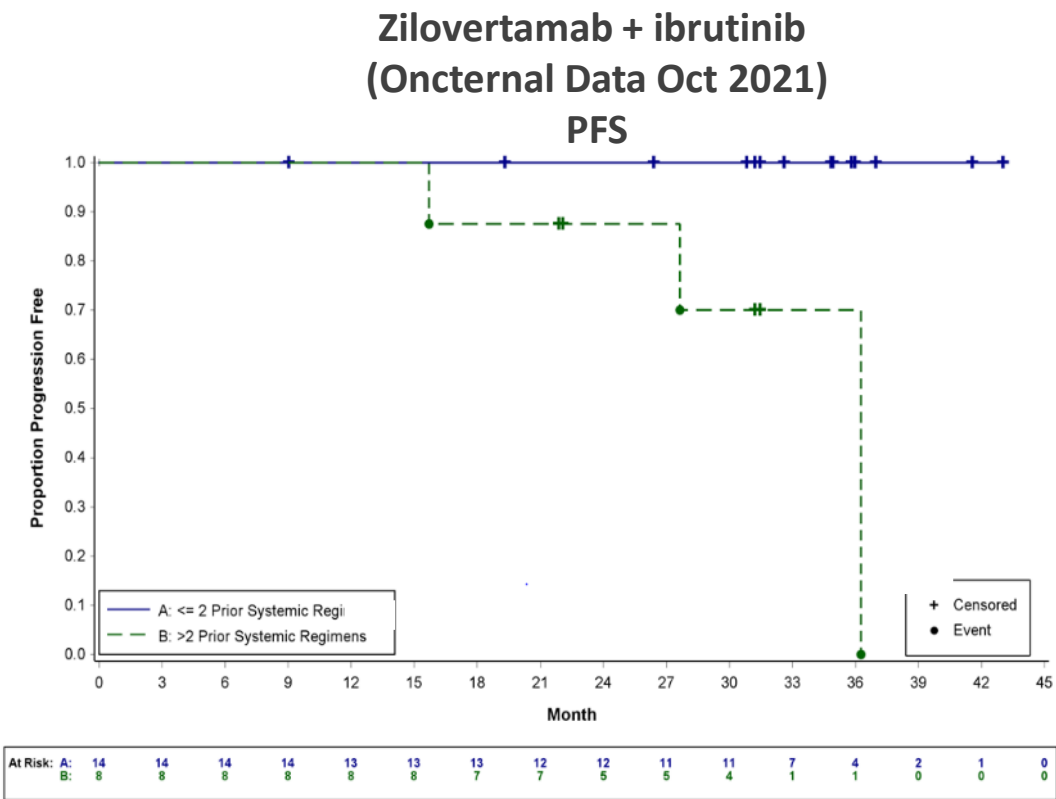
Best % Tumor Reduction  
CLL Parts 1 & 2



Progression-Free Survival  
CLL Parts 1 & 2



Study CIRM-0001 Data Cut: 8Apr2022; Evaluable CLL Part 1 & 2 patients (n=34); Patients were considered evaluable for response if they had 1-dose of zilovetamab and had 1-post baseline tumor assessment; SPD= sum of product of diameters; Number under bars represent baseline SPD; NE= not estimable



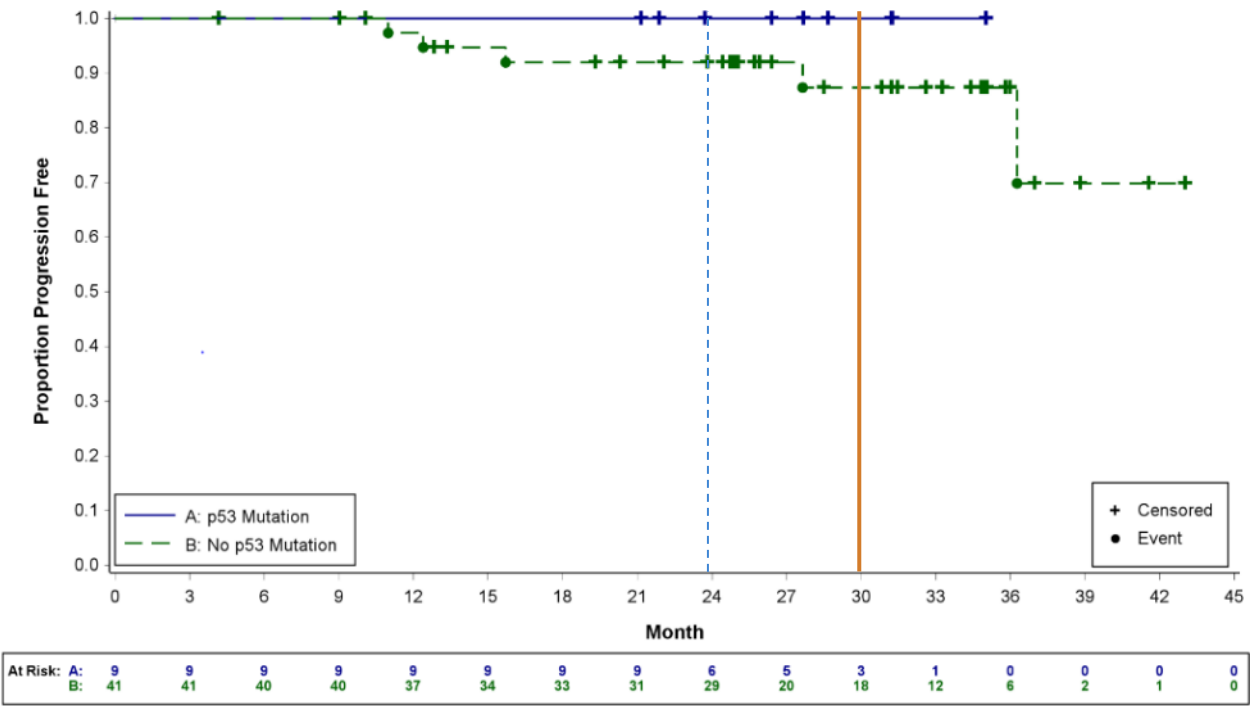
PFS by Subtypes – Prior Systemic Therapy	Prior sys. therapy	Landmark PFS 24 months	Landmark PFS 36 months	Landmark PFS 24 months	Landmark PFS 36 months
	1 or 2	~100%	~100%	~82%	~73%
	> 2	~85%	~65%	~65%	~50%

Study CIRM-0001 Data: 8Apr2022; PFS is defined as the time from the first dose to the time of objective disease progression or death from any cause, whichever occurs first; NR- not reached. NE – not evaluable

# CLL: Progression-free Survival in p53 Altered CLL patients

Zilovetamab + Ibrutinib Data Update at ASCO 2022

Zilovetamab + Ibrutinib (ASCO 2022)

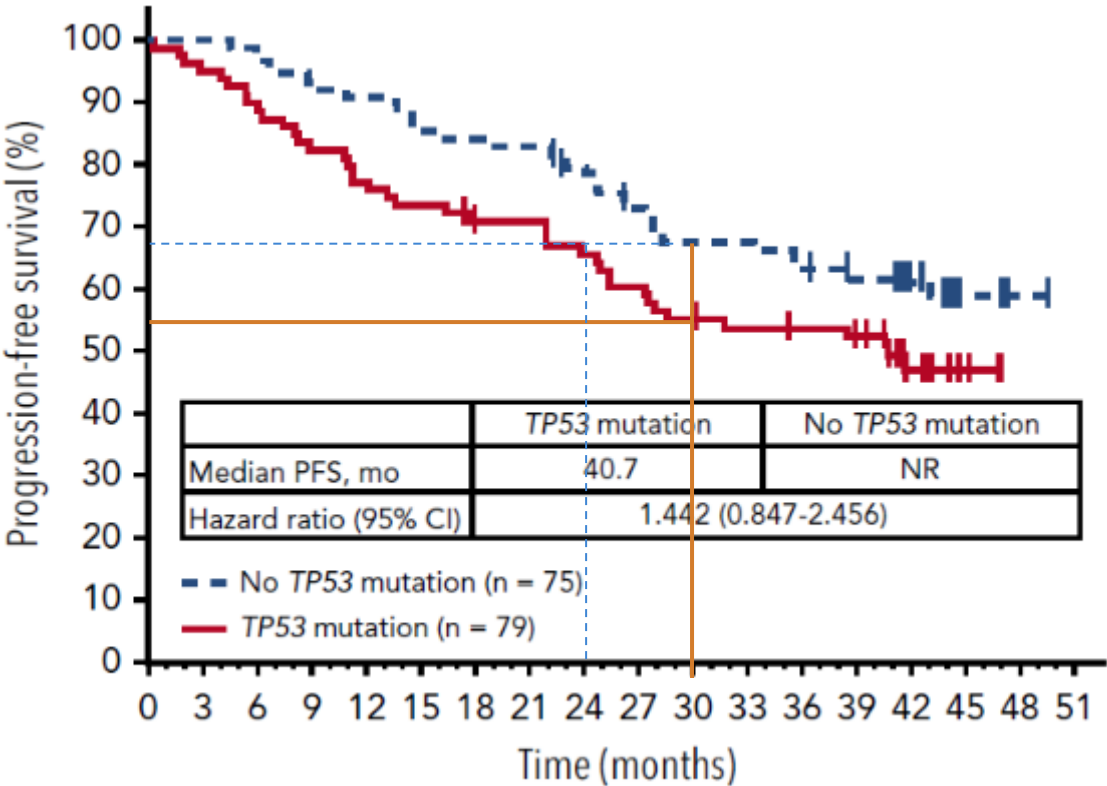


PFS in p53  
altered CLL  
patients

- 100% at 24 months
- 100% at 30 months

Study CIRM-0001 Data Cut: 8Apr2022; PFS is defined as the time from the first dose to the time of disease progression or death from any cause, whichever comes first; a – Pooled analysis includes all part 1 and 2 CLL patients + Part 3 CLL patients randomized to treatment with zilovetamab + ibrutinib

Historical Ibrutinib, Byrd, 2019



- 68% at 24 months
- 55% at 30 months



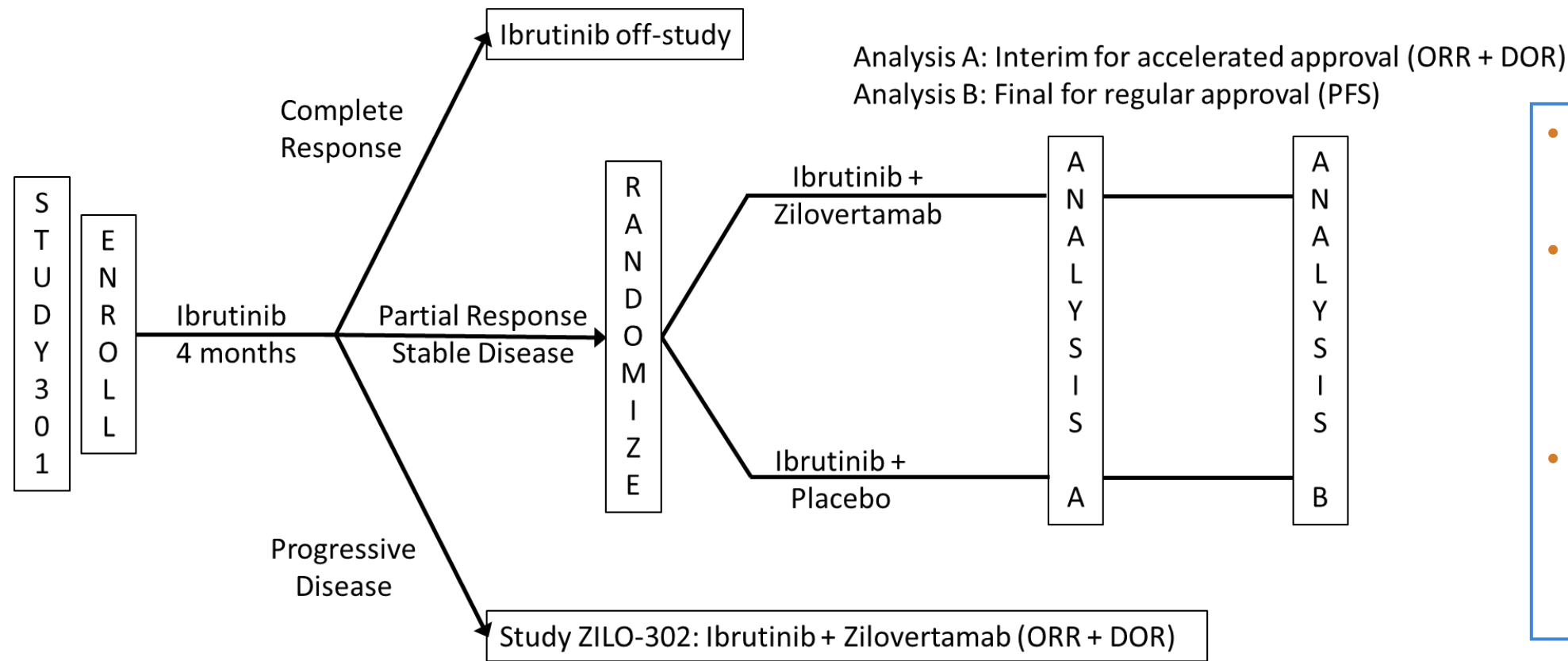
## Successful End-of-Phase 2 FDA meeting (December 2021)

- Reached consensus on design and major details of Phase 3 Study ZILO-301, to treat patients with R/R MCL with zilovertamab plus ibrutinib
- Positive feedback on the proposed key clinical and regulatory requirements of our development program for zilovertamab in MCL
- Agency previously provided positive feedback on the sufficiency of the preclinical and pharmacology studies of zilovertamab needed to support a BLA submission

# Zilovetamab Global Registrational Study Initiated

**ZILO-301:** Randomized, Double-blind, Placebo-controlled, Multicenter 3 Study of Zilovetamab (A ROR1 Antibody) Plus Ibrutinib Versus Ibrutinib Plus Placebo in Patients with Relapsed or Refractory Mantle Cell Lymphoma

**ZILO-302:** Open-label companion study of zilovetamab plus ibrutinib for rescue of patients refractory to ibrutinib during 4-month run-in



- Plan to randomize 250 patients
- Interim data as early as 2 years from first-patient-in (85% power)
- Final data as early as 3 years from first-patient-in (>90% power)

Established ibrutinib product donation from Pharmacyclics/AbbVie

- **CLL**
  - Potential registration study in P53 mutated CLL
- **Prostate Cancer**
  - Wnt5a overexpressed, ROR1 on neuroendocrine PC <sup>(a)</sup>
  - Investigator sponsored Phase 1b trial open at UC San Diego
- **Lung Cancer**
  - ROR1 inhibition might re-sensitize EGFRi-resistant cells <sup>(b)</sup>
- **Ovarian Cancer**
  - ROR1 expression is a negative prognostic factor, highly expressed <sup>(c)</sup>
- **DLBCL**
  - ROR1 expression is a negative prognostic factor <sup>(d)</sup>

(a) Ma 2022, Cancer Res 82:1518;

(b) Nakagawa 2021, Exp Cell Res 409:112940

(c) Zhang 2014, Sci Rep 24:5811;

(d) Mao 2019, Biofactors 45:416

# Table of Contents

**ZILOVERTAMAB: MONOCLONAL ANTIBODY TARGETING ROR1**

**ROR1 TARGETED CELL THERAPY PROGRAM**

**ONCT-534: DUAL-ACTION ANDROGEN RECEPTOR INHIBITOR (DAARI)**

**FINANCIAL INFO AND UPCOMING MILESTONES**

# Oncternal's Two-Stage ROR1 Cell Therapy Development Strategy

1

## ONCT-808 autologous ROR1 CAR T cell therapy

- Quick path to demonstration of safety and efficacy
- Reduced technology and indication risk
- Harvard/Dana-Farber Cancer Institute collaboration for clinical manufacturing
- FDA 'Study May Proceed' letter 30 days after IND submission for Phase 1/2 study in aggressive B-cell NHL, including failures to prior CD19 CAR T cell therapy



2

## Next-generation allogeneic cell therapies targeting ROR1

- Incorporate technologies to overcome immunosuppression & cell therapy resistance
- Partnerships with Celularity and Karolinska Institutet
- Allogeneic CAR T and CAR-NK cell therapies
- Hematologic and solid tumor indications



# Cell Therapy Scientific Advisory Board

*Supporting ONCT-808 development and next-gen ROR1 Cell Therapies*



## Michael Wang, MD

*Endowed Professor in the Department of Lymphoma & Myeloma at MD Anderson Cancer Center*

- Director of the Mantle Cell Lymphoma Program of Excellence and Co-Director of the B-Cell Lymphoma Moon Shot Program at MD Anderson Cancer Center
- Lead PI in Tecartus® registrational study
- Over 200 peer-reviewed publications

## Angela Shen, MD, MBA

*Clinical and Translational Market Sector Leader  
Mass General Brigham; CMO Walking Fish*

- Deep clinical, regulatory, and strategic expertise in autologous and allogeneic cell therapies
- Experienced CMO in the cell therapy biotech space
- Led clinical team responsible for designing and launching Kymriah® registrational study

## Marcela Maus, MD, PhD

*Associate Professor, Medicine, Harvard Medical School  
Director of Cellular Immunotherapy, Cancer Center,  
Massachusetts General Hospital*

- Translational physician-scientist in cancer immunology
- Lab focuses on the design, generation, and use of innovative forms of immune cell engineering
- Trained in the laboratories of Drs. Katherine High, Michel Sadelain, and Carl June

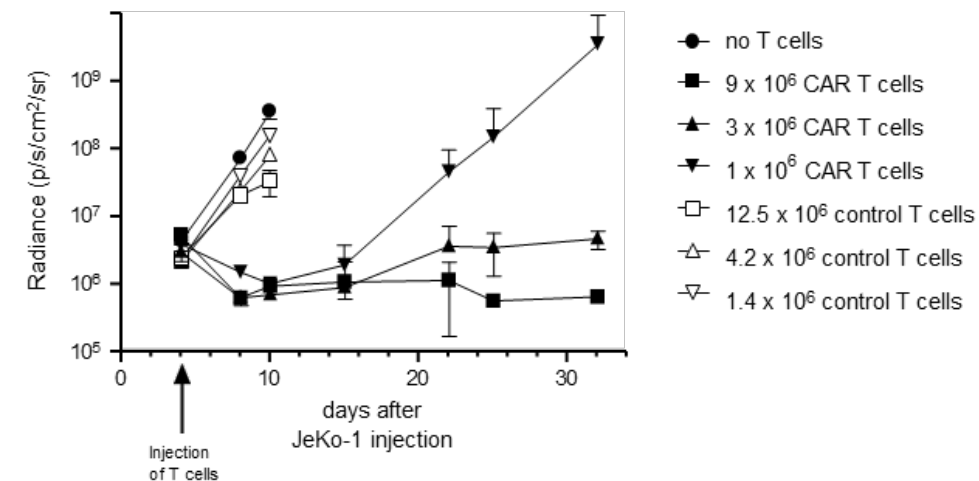
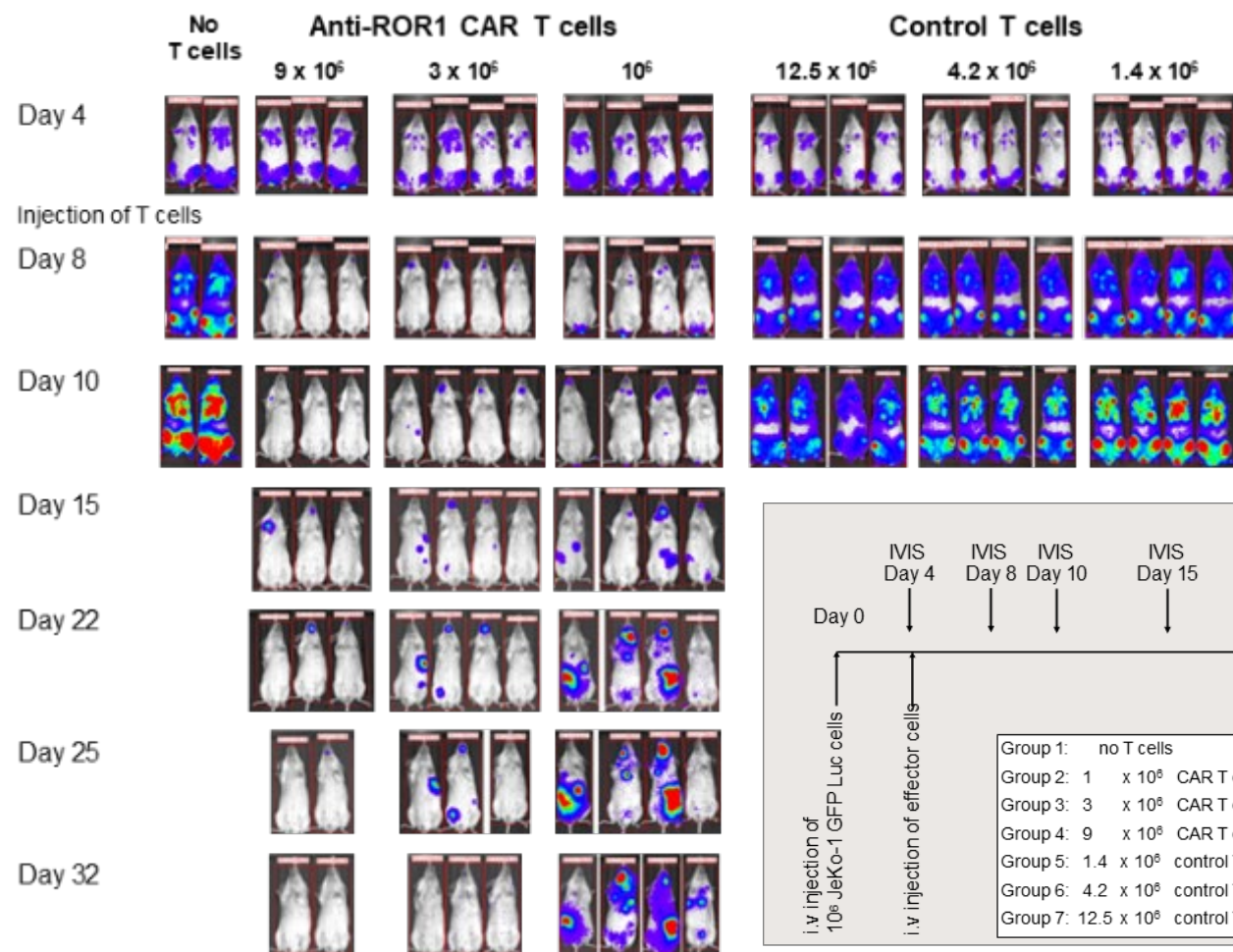
## Sadik Kassim, PhD

*CTO (Genomic Medicines) Danaher Corporation*

- Chief Technology Officer at Vor Biopharma
- Chief Scientific Officer at Mustang Bio
- Led the BLA and MAA CMC efforts for Kite's Tecartus®
- Former Head of Early Analytical Development for Novartis' Cell and Gene Therapies Unit
- Scientific news editor of Human Gene Therapy journal



# ONCT-808 – Strong Anti-tumor Activity in Preclinical Xenograft Model

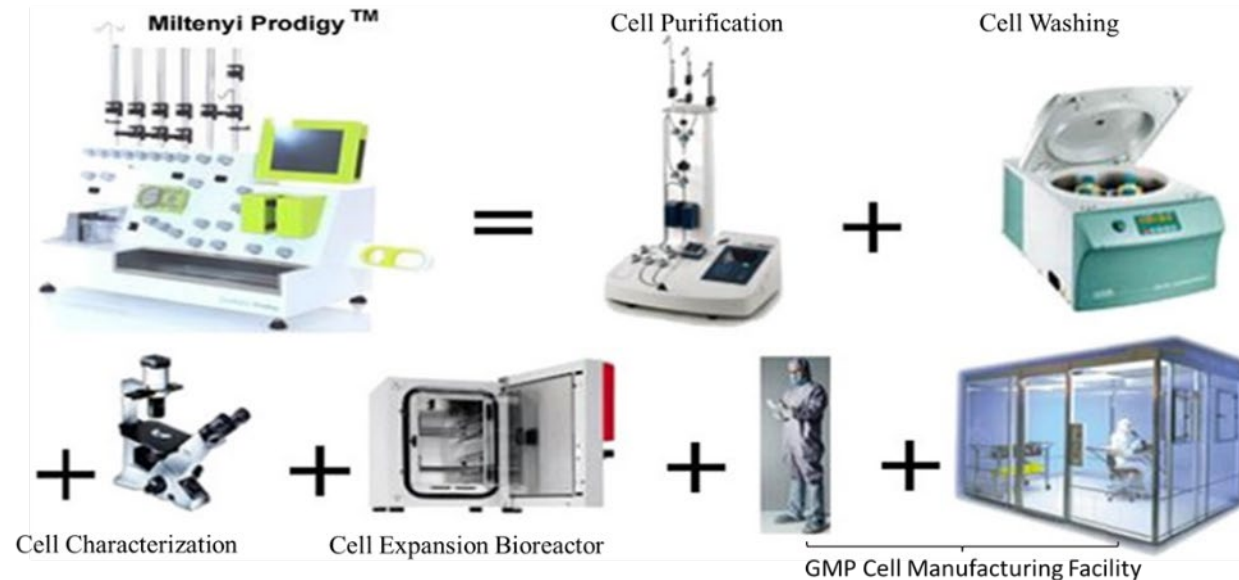
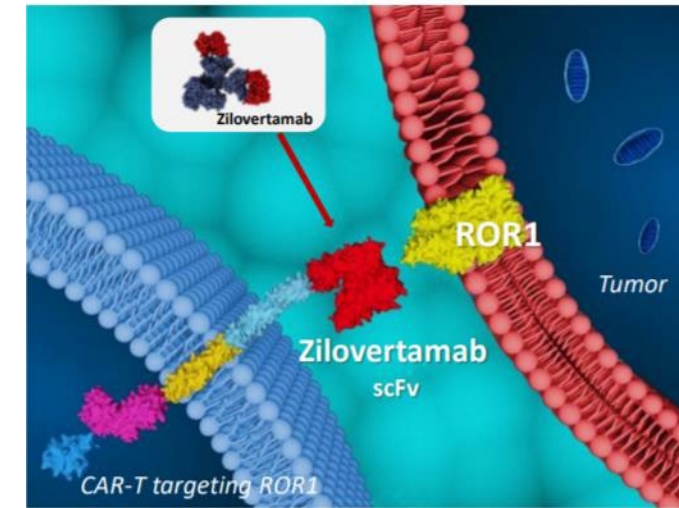


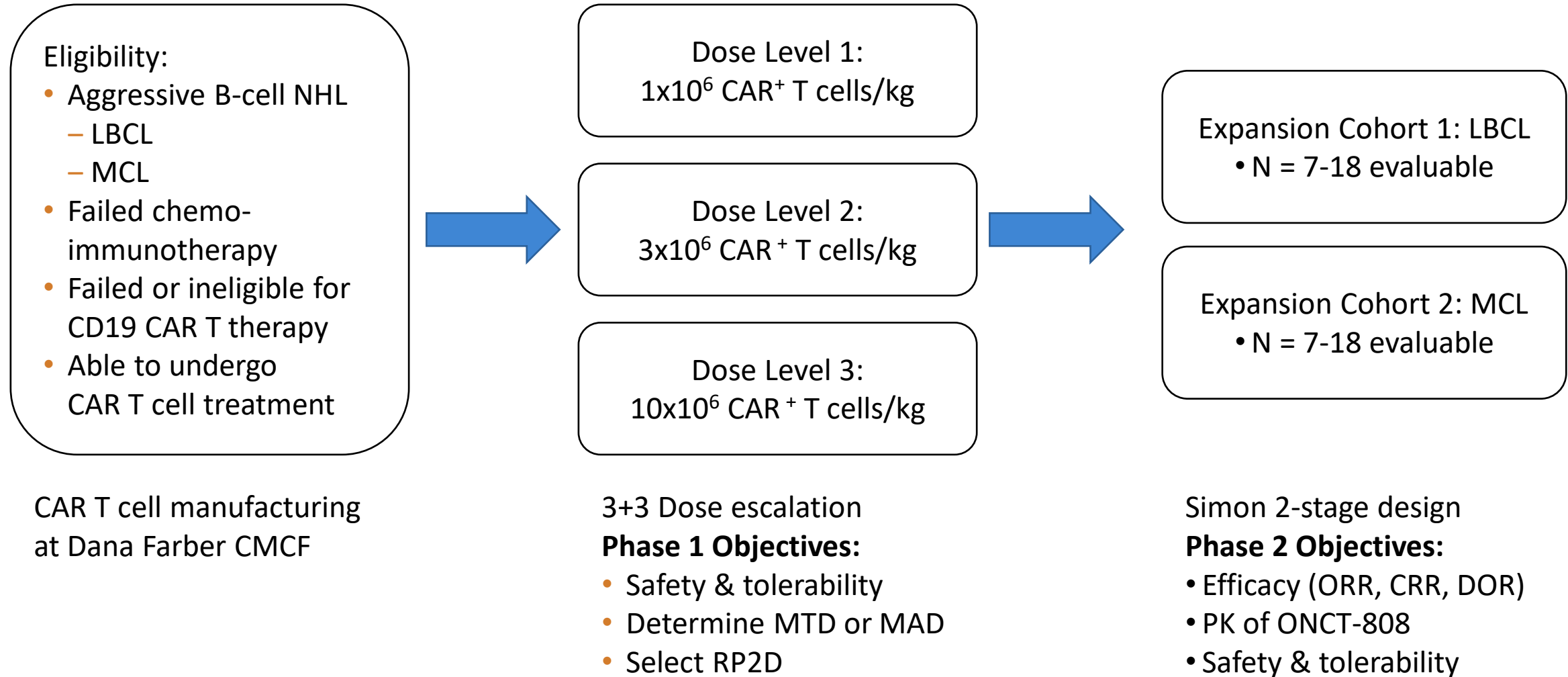
Data generated in collaboration with Dr. Evren Alici (Karolinska Institutet).

Data were presented at EHA 2022.

- Strong anti-tumor activity of ROR1 CAR T cells demonstrated in MCL xenograft mouse model
- Data from additional IND-supporting in vivo studies will be presented at upcoming scientific conferences

1. Lead ROR1 CAR construct optimized and selected with demonstrated high potency against ROR1+ cancer cell lines
2. Lentivirus production process confirmed
3. Oncternal ROR1 CAR T cell product process optimized and confirmed
  - Leveraging a flexible, closed fully-automated platform
  - 8-day production process post-activation
  - Greater than 2 billion CAR+ T cells produced with over 60% CAR+ expression
  - Majority of CAR T cells with juvenile phenotypes (CD4 and CD8 stem central memory T cells)
4. Harvard/Dana Farber CMCF (Cell Manipulation Core Facility) agreed for clinical manufacturing





LBCL: Large B-Cell Lymphoma (Diffuse LBCL NOS, Primary mediastinal LBCL, High-grade BCL, DLBCL arising from indolent lymphoma or CLL, Follicular lymphoma grade 3B, Richter's syndrome); MCL: Mantle Cell Lymphoma; CMCF: Cell Manipulation Core Facility; MTD: Maximum Tolerated Dose; MAD: Maximum Administered Dose; RP2D: Recommended Phase 2 Dose; ORR: Objective Response Rate; CRR: Complete Response Rate; DOR: Duration of Response

# Collaboration with Celularity will Explore Synergies between ROR1 Targeting and Novel Placental-Derived Allogeneic Cell Therapy Platform



*First-in-class, clinically proven,  
ROR1-targeting monoclonal  
antibody and CAR construct*



*Off-the-shelf placental-derived  
allogeneic CAR-NK and CAR-T  
cell therapy platform*

- 
- Research collaboration to develop and evaluate stem cell-derived cellular therapies targeting ROR1
  - Will explore use of Oncternal's ROR1-targeting mAb and chimeric antigen receptor (CAR) constructs in combination with Celularity's natural killer (NK) and T cell therapies
  - Will leverage advantages of placental-derived cellular therapies and specificity of ROR1 targeting to address significant unmet need in a wide range of cancers

# Table of Contents

**ZILOVERTAMAB: MONOCLONAL ANTIBODY TARGETING ROR1**

**ROR1 TARGETED CELL THERAPY PROGRAM**

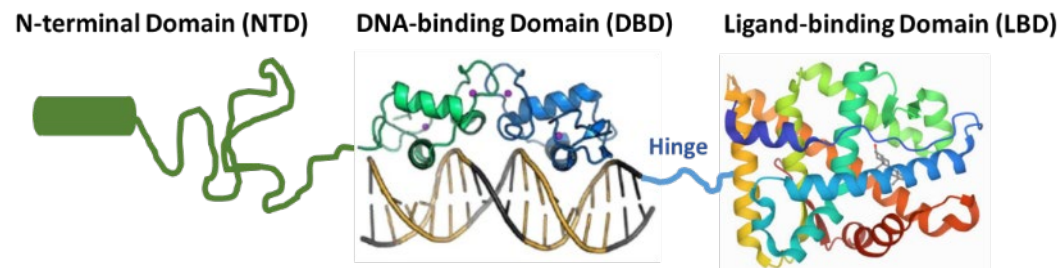
**ONCT-534: DUAL-ACTION ANDROGEN RECEPTOR INHIBITOR (DAARI)**

**FINANCIAL INFO AND UPCOMING MILESTONES**



## Differentiated Mechanism of Action

- ONCT-534 binds to both N-terminal Domain (NTD) and Ligand-Binding Domain (LBD) of the androgen receptor (AR) and induces AR degradation
- NTD binding potentially relevant to activity against splice-variants
- Current standard of care treatment options, such as enzalutamide or apalutamide, bind to LBD only



## Potential to address unmet needs in prostate cancer

- Potential next-generation treatment option for patients with advanced prostate cancer
  - Focus on addressing emerging unmet medical need related to resistant androgen receptor splice variant (AR-SV)-expressing tumors<sup>(1)</sup>
- Strong preclinical efficacy in vitro and in vivo
  - Activity against enzalutamide-sensitive and enzalutamide-resistant models, including AR-SV-expressing tumors
- Potential in other AR-driven disease, including luminal AR-triple negative breast cancer (LAR-TNBC) and non-oncology indications

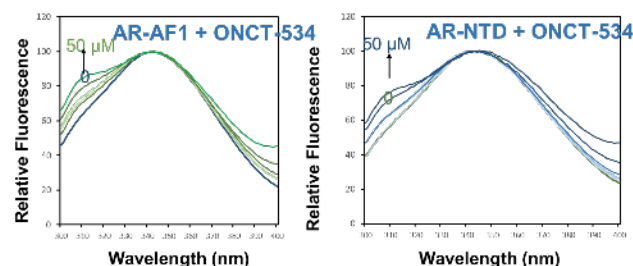
(1) Antonarakis NEJM 2014



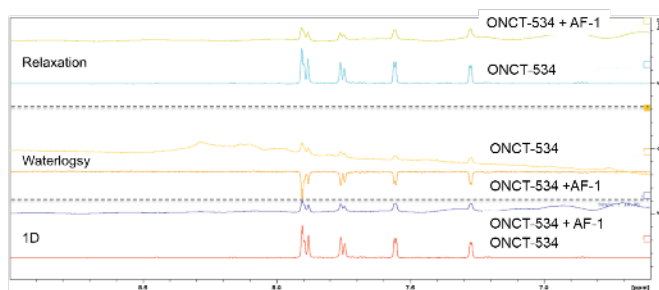
# ONCT-534 In-Vivo Data Show Potential as Treatment Option for Enzalutamide Resistant Cancers

## Biophysical studies suggest ONCT-534 interacts with AR N-terminus (AF-1)

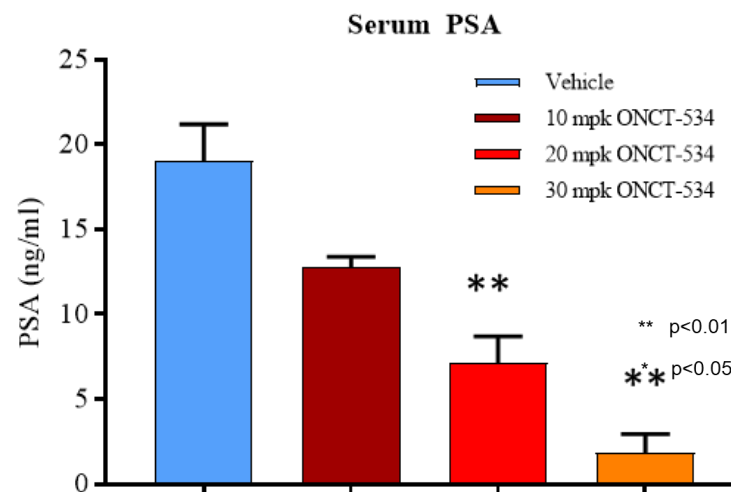
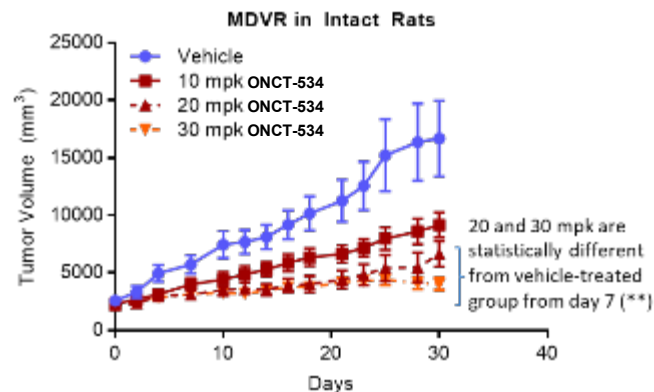
Fluorescence polarization studies with purified AR AF-1



NMR with purified AR AF-1 protein in the presence or absence of ONCT-534

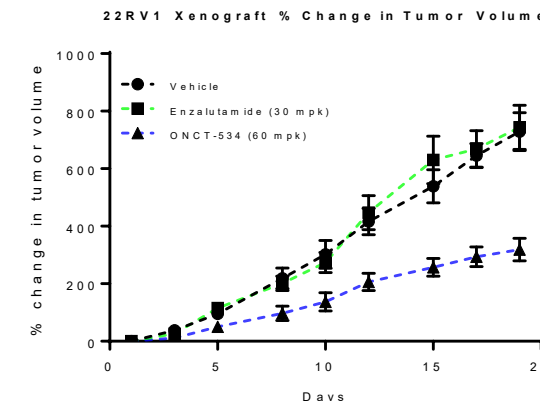


## Inhibition of enzalutamide-resistant PCa xenograft in non-castrated animals

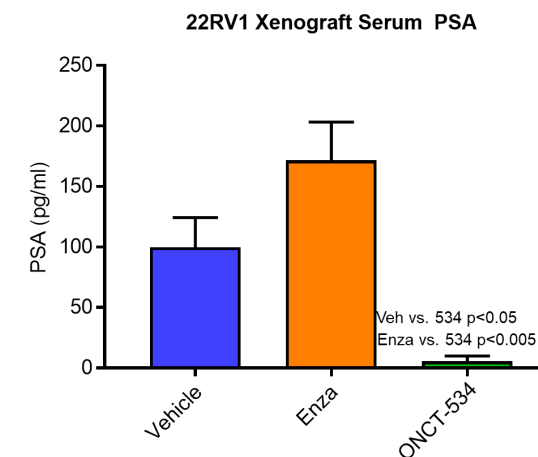


## Activity against AR-Splice Variant 7 (AR-V7) xenografts in castrated animals

Inhibition of AR-V7-positive 22RV1 CRPC xenograft



Lowering of serum PSA levels in 22Rv1 tumors



# Table of Contents

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**FINANCIAL INFORMATION AND UPCOMING MILESTONES**

Cash & Cash Investments @ September 30, 2022	\$70.6M
Cash Runway into 1H 2024	
Debt	\$0M
<b>Capitalization:</b>	
Common Shares Outstanding	55.5M
Options / Warrants in the Money @ September 30, 2022 <sup>(1)</sup>	1.4M
Fully Diluted in the Money	56.9M
<b>Non-Dilutive Support</b>	
• CIRM Grant for CIRM-0001 Study thru March 2022	\$14.6M
• NIH Grants MOA, indication expansion	\$2M
• Ibrutinib donation for Phase 3 ZILO-301 Study	Supply Agreement

(1) Excludes out-of-the-money stock options and warrants totaling ~11.5M

## Zilovertamab

- **MCL** global registrational Phase 3 Study ZILO-301  
— Planned opening of ex-US sites for Study ZILO-301
  - **MCL & CLL** clinical data update for ongoing Phase 2
- Initiated**  
**1Q 2023**  
**ASH 2022**

## ONCT-808 ROR1 CAR T cell therapy

- **Aggressive B-cell NHL** U.S. IND
  - **Aggressive B-cell NHL** study initiation  
— Initial clinical data
- Open**  
**1Q 2023**  
**2023**

## ONCT-534

- **Prostate cancer** FDA pre-IND feedback
- December 2022**

## **ZILOVERTAMAB: POTENTIALLY FIRST-IN-CLASS MONOCLONAL ANTIBODY TARGETING ROR1**

- Initiated Phase 3 global registrational study for the treatment of patients with R/R MCL
- Safety and efficacy results for zilovetamab + ibrutinib in MCL/CLL compare favorably to historical single-agent ibrutinib
- Encouraging efficacy results in patients with p53 mutated CLL, with PFS of 100% at 24 and 30 months

## **ONCT-808: AUTOLOGOUS CAR T CELL THERAPY TARGETING ROR1**

- US IND cleared by FDA for the treatment of aggressive B-cell NHL, including CD19 CAR T treatment failures
- Clinical manufacturing agreement with the Dana-Farber Cancer Institute for first-in-human studies
- Research collaborations for next-gen allogeneic CAR T and CAR NK cell therapies with Karolinska Institutet & Celularity

## **ONCT-534: DUAL-ACTION ANDROGEN RECEPTOR INHIBITOR (DAARI)**

- Activity in preclinical prostate cancer models of androgen receptor inhibitor resistance, including AR mutations, AR overexpression and AR splice variants, such as AR-V7

## **MULTIPLE CATALYSTS**

- Zilovetamab clinical data updates in MCL and CLL at ASH 2022
- Planned opening of ex-US sites for global registrational Phase 3 Study ZILO-301 in 1Q 2023
- ONCT-808 clinical data update in aggressive B-cell NHL in 2023