

Aggressive Lymphoma Workshop

Bologna, Royal Hotel Carlton

May 8-9, 2023

President: **Pier Luigi Zinzani**

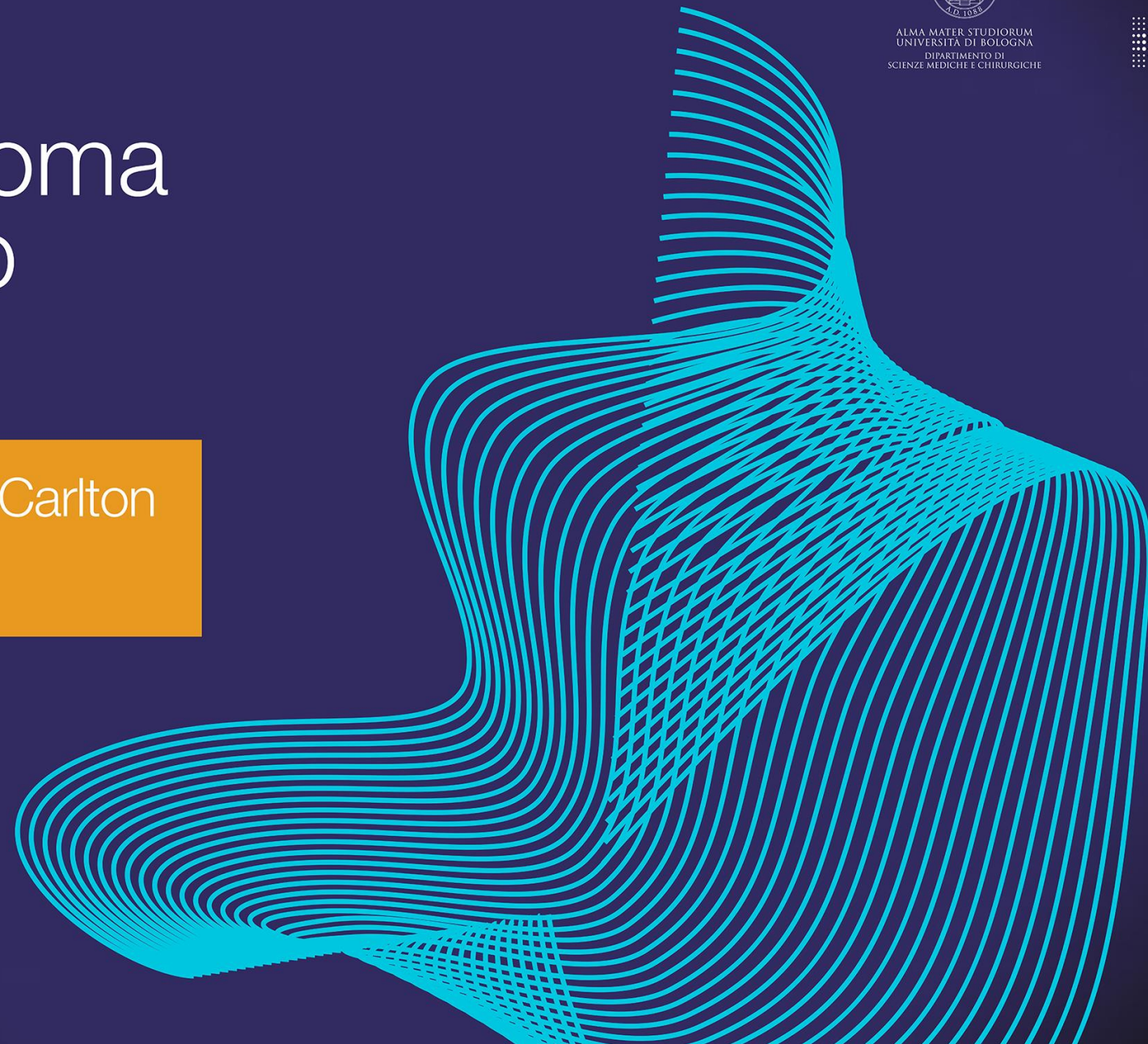


ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA
DIPARTIMENTO DI
SCIENZE MEDICHE E CHIRURGICHE

POLICLINICO DI
SANT'ORSOLA



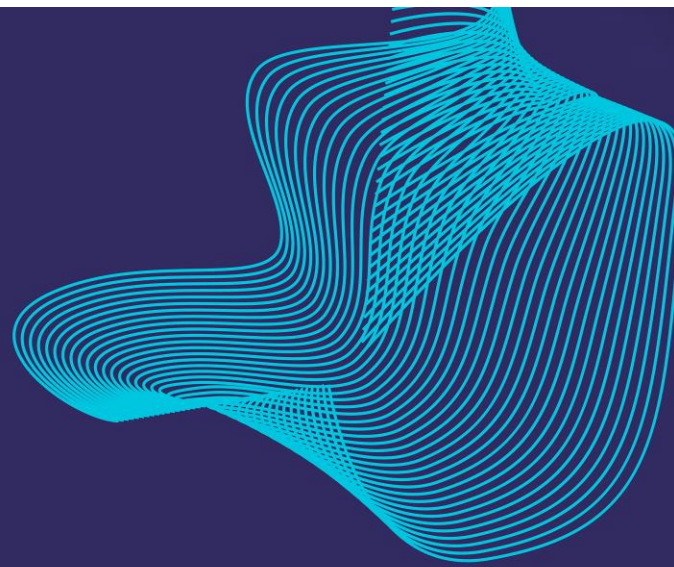
SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA
Azienda Ospedaliero - Universitaria di Bologna



Aggressive Lymphoma Workshop

Bologna, Royal Hotel Carlton
May 8-9, 2023

President: Pier Luigi Zinzani



Disclosures of Dr. Michael Wang

Research Support	Consultancy	Honoraria
<p>Acerta Pharma, AstraZeneca, BeiGene, BioInvent, Celgene, Genmab, Genentech, Innocare, Janssen, Juno Therapeutics, Kite Pharma, Lilly, Loxo Oncology, Molecular Templates, Oncternal, Pharmacyclics, VelosBio, Vincerx</p>	<p>AbbVie, Acerta Pharma, ADC Therapeutics America, Amphista Therapeutics Limited, AstraZeneca, Be Biopharma, BeiGene, BioInvent, Deciphera, DTRM Biopharma (Cayman) Limited, Genentech, InnoCare, Janssen, Kite Pharma, Leukemia & Lymphoma Society, Lilly, Merck, Miltenyi Biomedicine, Milken Institute, Oncternal, Parexel, Pepromene Bio, Pharmacyclics, VelosBio</p>	<p>AbbVie, Acerta Pharma, AstraZeneca, Bantam Pharmaceutical, BeiGene, BioInvent, Bristol Myers Squibb, CAHON, Dava Oncology, Eastern Virginia Medical School, Genmab, i3Health, IDEOlogy Health, Janssen, Kite Pharma, Leukemia & Lymphoma Society, Medscape, Meeting Minds Experts, MD Education, MJH Life Sciences, Merck, Moffit Cancer Center, Nurix, Oncology Specialty Group, OncLive, Pharmacyclics, Physicians Education Resources (PER), Practice Point Communications (PPC), Scripps, Studio ER Congressi, WebMD</p>



Zilovertamab Vedotin in Mantle Cell Lymphoma

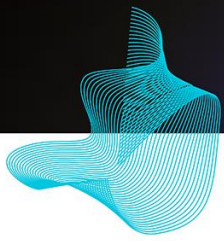
Michael Wang, MD
Puddin Clarke Endowed Professor
Department of Lymphoma and Myeloma
Division of Cancer Medicine
MD Anderson Cancer Center



Phase 1 Dose Escalation and Cohort Expansion Study of the Anti-ROR1 Antibody-Drug Conjugate Zilovertamab Vedotin (MK-2140) for the Treatment of Non-Hodgkin Lymphoma

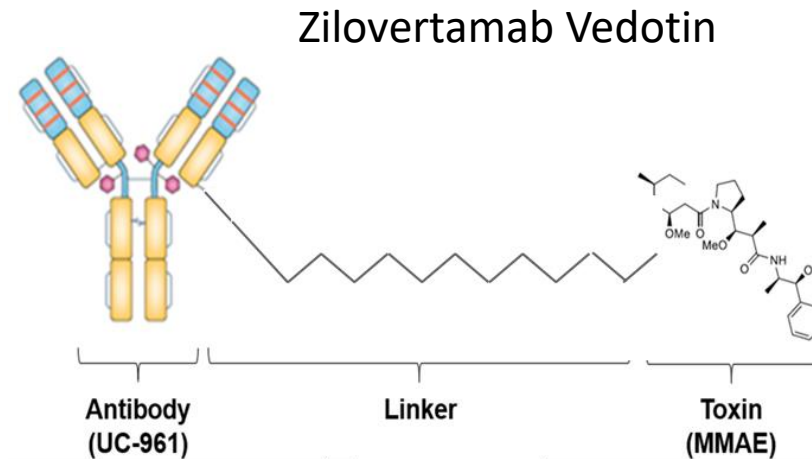
• M. Wang,¹ M. Mei,² P. M. Barr,³ J. Barrientos,⁴ S. de Vos,⁵ R. R. Furman,⁶ K. Patel,⁷ P. A. Thompson,¹ M. Choi,⁸ A. Kallam,⁹ Y. Zhu,¹⁰ S. Chakraborty,¹⁰ P. Marinello,¹⁰ S. E. Spurgeon¹¹

• ¹MD Anderson Cancer Center, Houston TX, USA; ²City of Hope Cancer Center, Duarte, CA, USA; ³University of Rochester Medical Center, Rochester, NY, USA; ⁴Northwell Health, Inc., New Hyde Park, NY, USA; ⁵UCLA Santa Monica Medical Center, Santa Monica, CA, USA; ⁶Weill Cornell Medical College, New York, NY, USA; ⁷Swedish Cancer Institute, Seattle, WA, USA; ⁸UC San Diego, San Diego, CA, USA; ⁹University of Nebraska Medical Center, Omaha, NE, USA; ¹⁰Merck & Co., Inc., Kenilworth, NJ, USA; ¹¹Oregon Health and Science University, Portland, OR, USA

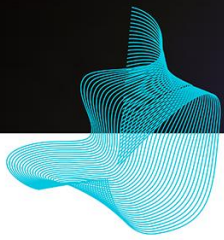


ROR1 and Zilovertamab Vedotin

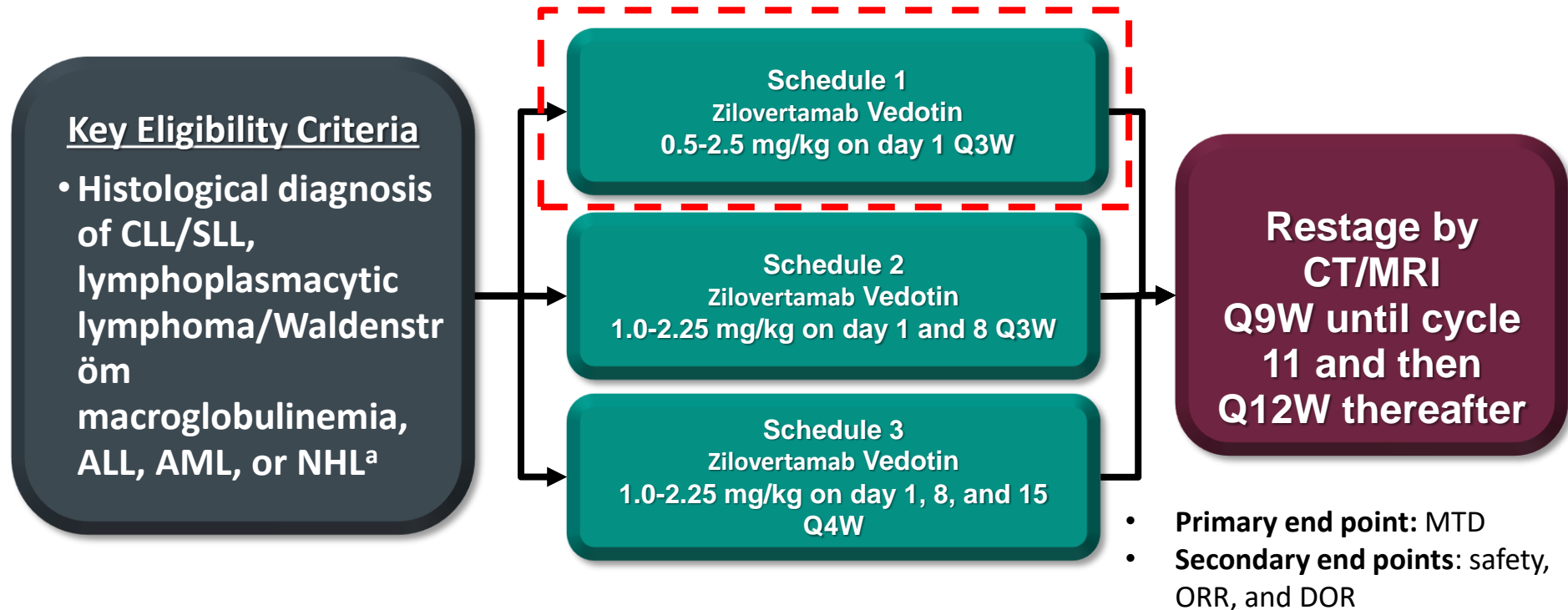
- ROR1 is an oncofetal protein important for embryonic development
 - Physiologic expression disappears before birth¹
 - Pathologic expression of ROR1 often reappears in aggressive hematologic and solid tumor cancers²
- ROR1 is present on the tumor cell surface and amenable to targeting with antibody-based therapeutics¹
- Zilovertamab vedotin (MK-2140) is an ADC of:
 - The humanized monoclonal antibody, UC-961, with no normal tissue cross-reactivity
 - A cleavable linker and the anti-microtubule toxin, MMAE³
- Binding to tumor cell ROR1 causes rapid internalization and lysosomal trafficking to deliver MMAE



• 1. Borcherdig N et al. *Protein Cell*. 2014;5:496-502; 2. Danesmanesh AH et al. *Leuk Lymphoma*. 2013;54:843-850.3. Vaisitti T et al. *Blood*. 2021;137:3365-3377.



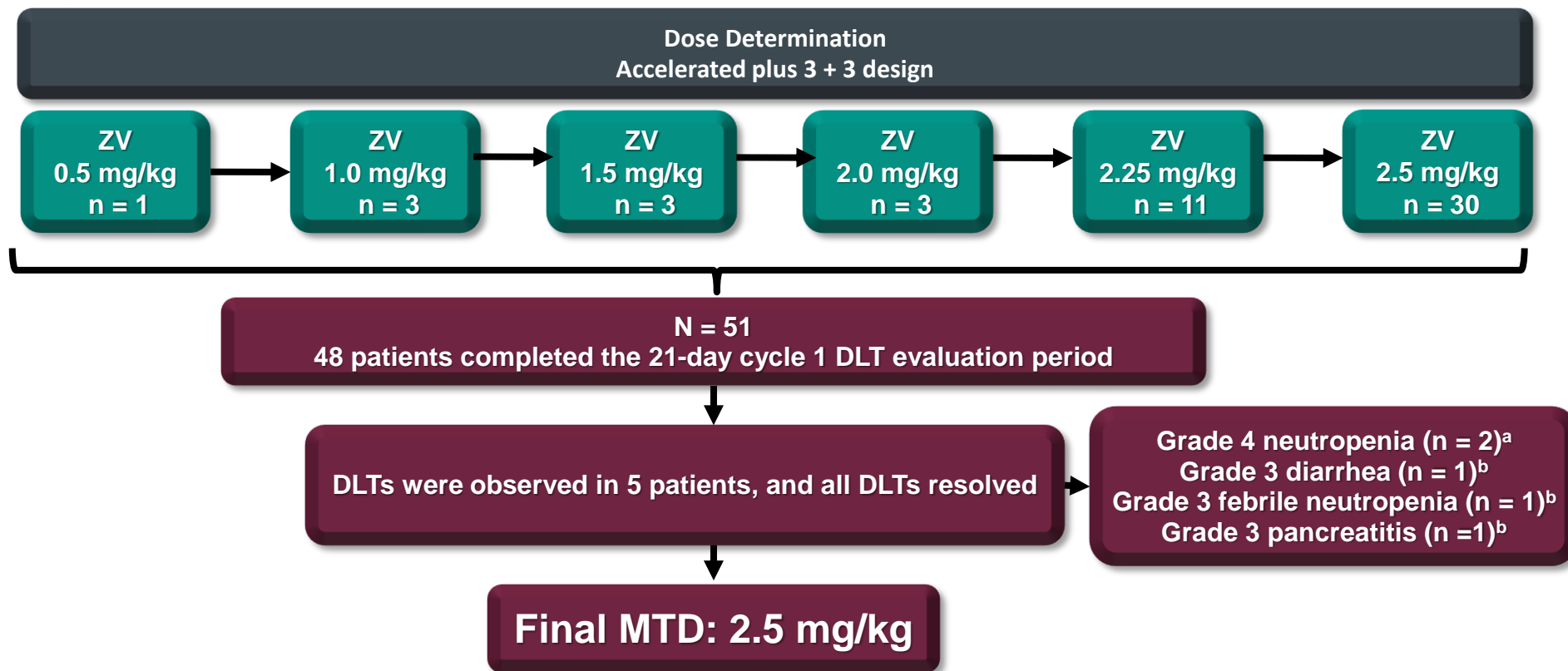
Phase 1 First In-Human Dose Escalation Study (NCT03833180)



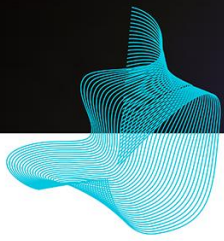
- ^aMantle cell lymphoma, follicular lymphoma, marginal zone lymphoma, diffuse large B-cell lymphoma, Richter transformation, Burkitt lymphoma, and T-cell NHL.



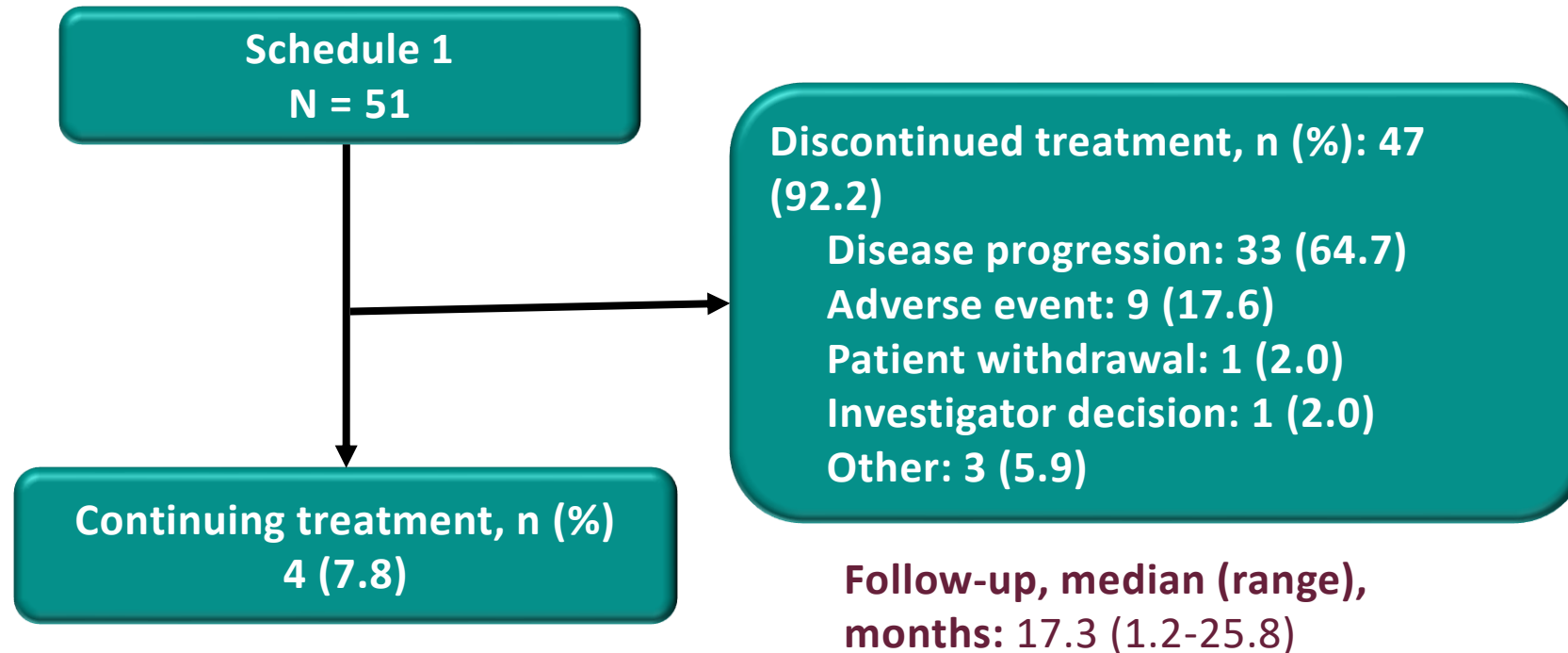
Schedule 1 Study Chronology



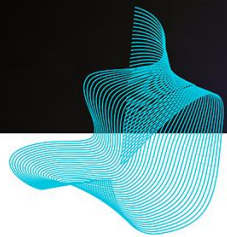
• ^a1 each for 2.25 mg/kg and 2.5 mg/kg; ^b2.5 mg/kg.



Disposition (Schedule 1)



- Data cutoff: May 18, 2021.

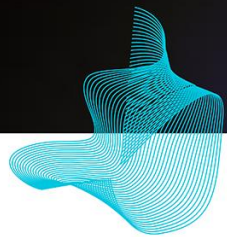


Baseline Demographics (Schedule 1)

n (%)	All Patients N = 51
Age, median (range), years	70 (44-91)
≥65 years	35 (68.6)
Male	28 (54.9)
Prior ASCT	4 (7.8)
Prior CAR-T or CAR-NK	15 (29.4)
DLBCL	7 (13.7)
MCL	6 (11.8)

n (%)	All Patients N = 51
Prior lines of therapy, median (range)	3 (1-19)
DLCBL	3 (1-7)
MCL	4 (1-9)
Patients with prior CAR-T/CAR-NK	4 (1-19)
Type of hematological malignancy	
NHL	41 (80.4)
DLBCL	13 (25.5)
MCL	17 (33.3)
RT	6 (11.8)
Other NHL ^a	5 (9.8)
Other diseases ^b	10 (19.6)

- ^aIncludes FL (n = 3), MZL (n = 1), and mixed histology (n = 1). ^bIncludes CLL/SLL (n = 7) and AML (n = 3).
- Data cutoff: May 18, 2021.



Any-Grade Adverse Events in $\geq 20\%$ of Patients

Any-Grade AEs, n (%)	All Patients N = 51	
	All-Cause	Treatment-Related
Peripheral neuropathy ^a	25 (49.0)	24 (47.0)
Fatigue	23 (45.1)	19 (37.3)
Nausea	23 (45.1)	14 (27.5)
Diarrhea	19 (37.3)	11 (21.6)
Dizziness	19 (37.3)	9 (17.6)
Decreased neutrophil count	18 (35.3)	16 (31.4)

Any Grade AEs, n (%)	All Patients N = 51	
	All-Cause	Treatment-Related
Constipation	15 (29.4)	5 (9.8)
Myalgia	15 (29.4)	10 (19.6)
Pyrexia	14 (27.5)	4 (7.8)
Vomiting	12 (23.5)	5 (9.8)
Decreased appetite	12 (23.5)	9 (17.6)
Dyspnea	11 (21.6)	8 (15.7)

- ^aIncludes the preferred terms peripheral sensory neuropathy, peripheral neuropathy, peripheral motor neuropathy, and peripheral sensorimotor neuropathy.
- Data cutoff: May 18, 2021.



AEs Leading to Permanent Study Discontinuation

AEs, n (%)	All Patients N = 51
	All-Cause
Peripheral neuropathy ^a	5 (9.8)
Presyncope	1 (2.0)
Sinus tachycardia	1 (2.0)
Fatigue	1 (2.0)
Pneumonia	1 (2.0)
Decreased neutrophil count	1 (2.0)
Myositis	1 (2.0)
Maculopapular rash	1 (2.0)

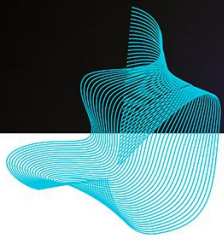
- ^aIncludes the preferred terms peripheral sensory neuropathy, peripheral neuropathy, peripheral motor neuropathy, and peripheral sensorimotor neuropathy.
- Data cutoff: May 18, 2021.



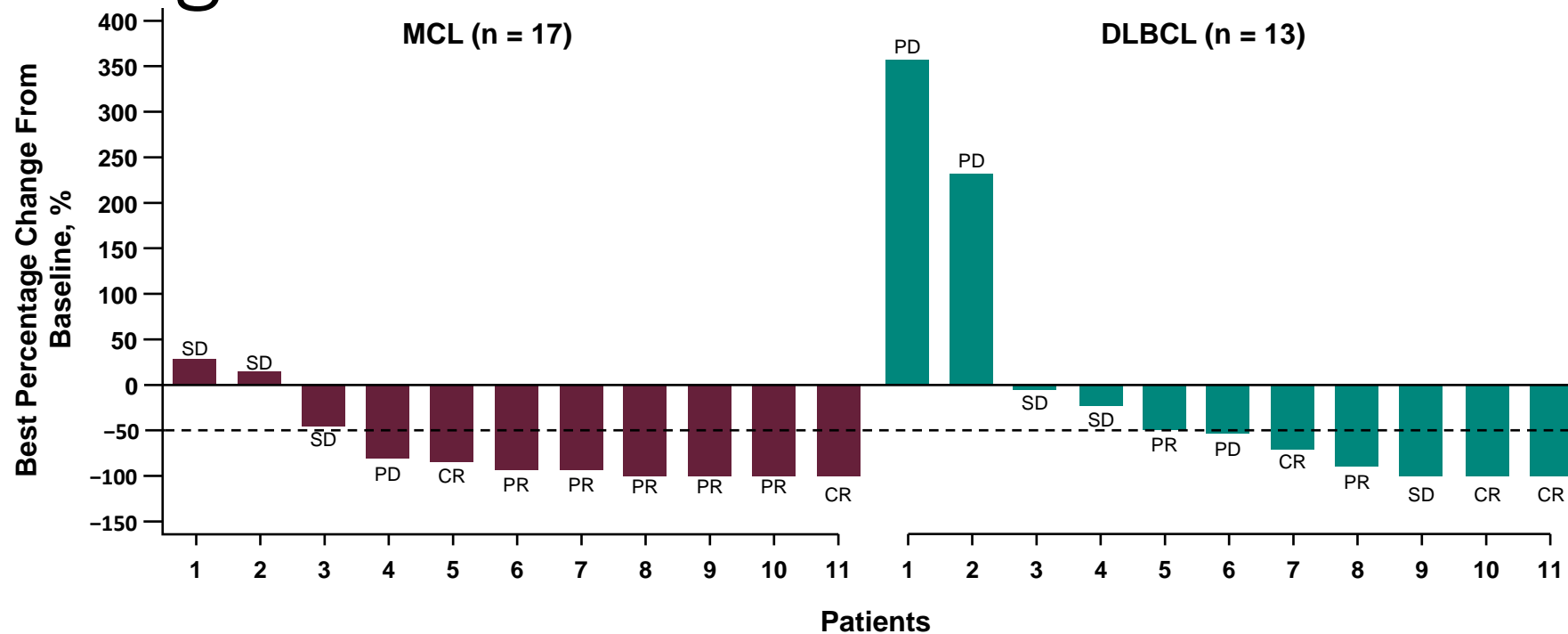
Objective Response Rate

	All Patients ^a N = 51	DLBCL n = 13	MCL n = 17	Prior CAR-T or CAR-NK n = 15
ORR, % (95% CI)	33.3 (20.8-47.9)	38.5 (13.9-68.4)	52.9 (27.8-77.0)	40.0 (16.3-67.7)
BOR, n (%)				
CR	5 (9.8)	3 (23.1)	2 (11.8)	2 (13.3)
PR	12 (23.5) ^b	2 (15.4)	7 (41.2)	4 (26.7)

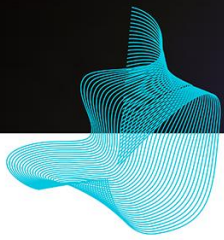
- ^aPatients with CLL/SLL and AML did not achieve a response. ^bAt the time of data cutoff, 3 patients with RT experienced a partial response but only had 1 post-baseline assessment.
- Data cutoff: May 18, 2021.



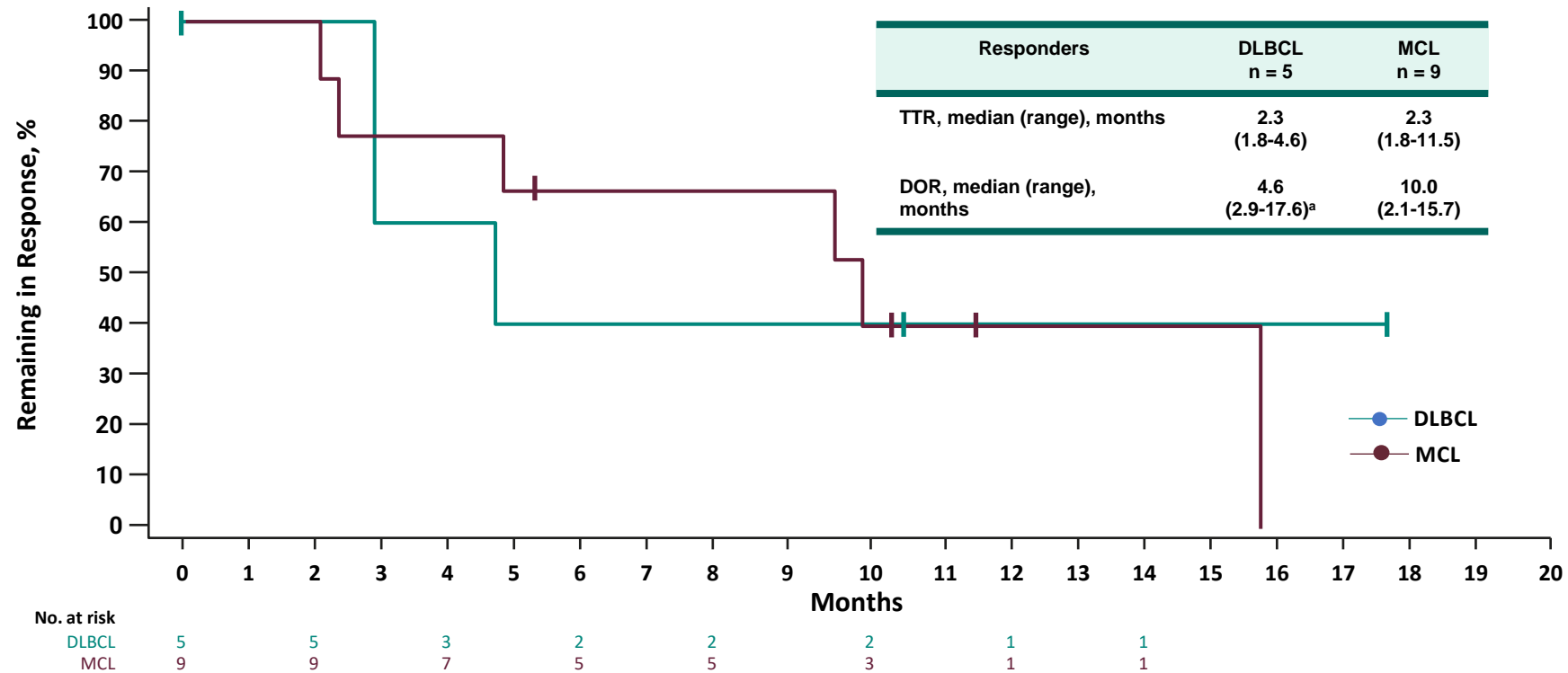
Percent Change From Baseline in Target Lesions^a



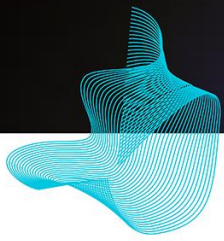
- ^aOnly patients with evaluable postbaseline scans prior to subsequent anticancer therapy were included.
- Data cutoff: May 18, 2021.



Duration of Response^a

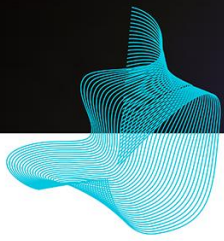


- ^aMaximum DOR represents a censored value.
- Data cutoff: May 18, 2021.



Summary and Conclusions

- The novel anti-ROR1 ADC zilovertamab vedotin was associated with a tolerable safety profile in schedule 1 of this study
 - Few dose-limiting toxicities observed up to the MTD of 2.5 mg/kg
 - The most common AEs were fatigue and neutropenia
 - GI AEs included nausea and diarrhea
 - The primary cumulative toxicity was peripheral neuropathy
 - No ROR-mediated toxicities (infusion reactions or tumor lysis syndrome) were observed
- Zilovertamab vedotin demonstrated clinical activity in patients with relapsed NHL
 - ORR was 38.5% for patients with DLBCL and 52.9% for patients with MCL
 - For patients who previously received CAR-T/CAR-NK, ORR was 40.0%
- Targeting the ROR1 pathway with zilovertamab vedotin is a promising therapeutic option for heavily pretreated patients with relapsed NHL



Acknowledgments

The authors thank the patients and their families and all site investigators and personnel

The authors thank Siruo Wang (employee of Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA) for contributions in the development of this presentations

Medical writing and/or editorial assistance was provided by Matthew Grzywacz, PhD, and Dominic Singson, MD, of ApotheCom (Yardley, PA, USA). This assistance was funded by Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA

A copy of this presentation is available at <https://bit.ly/3mO0vyL> and <https://bit.ly/3mS8NWF>

Copies of this presentation are for personal use only and may not be reproduced without permission from ASH and the presenting author. This presentation is intended as an educational resource and is for the exchange of scientific data to clinical investigators and health care professionals