Combination Treatment With Novel BCL2 Inhibitor Sonrotoclax (BGB-11417) + Zanubrutinib Induces High Rate of Complete Remission for Patients With Relapsed/Refractory Mantle Cell Lymphoma

Constantine S. Tam,¹ Masa Lasica,² Jacob D. Soumerai,³ **Stephen S. Opat**,⁴ Marc S. Hoffmann,⁵ Ramón García-Sanz,⁶ Johannes Schetelig,⁷ Talha Munir,⁸ Robert Weinkove,^{9,10} Peter Browett,¹¹ Eva González-Barca,¹² Laura Magnano Mayer,¹³ Andrea Bernardelli,¹⁴ Jing-Zhou Hou,¹⁵ Yiqian Fang,¹⁶ James Hilger,¹⁷ Sheel Patel,¹⁷ Raul Cordoba¹⁸

¹Alfred Hospital and Monash University, Melbourne, VIC, Australia; ²St Vincent's Hospital Melbourne, Melbourne, VIC, Australia;
³Massachusetts General Hospital Cancer Center and Harvard Medical School, Boston, MA, USA; ⁴Lymphoma Research Group, School of Clinical Sciences at Monash Health, Monash University, Clayton, VIC, Australia; ⁵University of Kansas Cancer Center, Kansas City, KS, USA;
⁶Gregorio Marañón University Hospital, CIBERONC, Madrid, Spain; ⁷Universitätsklinikum Carl Gustav Carus an der Technischen Universität Dresden, Dresden, Germany; ⁸Leeds Teaching Hospitals NHS Trust, Leeds, UK; ⁹Te Rerenga Ora Blood and Cancer Centre, Te Whatu Ora Health New Zealand Capital Coast & Hutt Valley, Wellington, New Zealand; ¹⁰Cancer Immunotherapy Programme, Malaghan Institute of Medical Research, Wellington, New Zealand; ¹¹Auckland City Hospital, Grafton, Auckland, New Zealand; ¹²Institut Català d'Oncologia Hospitalet, Universitat de Barcelona, IDIBELL, Barcelona, Spain; ¹³Hospital Clínic de Barcelona, Barcelona, Spain; ¹⁴Department of Engineering for Innovation Medicine, Section of Hematology, Azienda Ospedaliera Universitaria Integrata di Verona, Verona, Italy; ¹⁵University of Pittsburgh Medical Center, Pittsburgh, PA, USA;
¹⁶BeOne Medicines Ltd, Shanghai, China; ¹⁷BeOne Medicines Ltd, San Carlos, CA, USA; ¹⁸Hospital Universitario Fundación Jiménez Díaz, Madrid, Spain

Disclosures for Stephen S. Opat

- Honoraria: AbbVie, AstraZeneca, BeOne Medicines Ltd, Gilead, Janssen, Merck
- Consulting or advisory role: AbbVie, AstraZeneca, BeOne Medicines Ltd, Janssen, Novartis
- Research funding: AbbVie, AstraZeneca, BeOne Medicines Ltd, Gilead, Janssen, Novartis, Pharmacyclics, Roche, Takeda
- **Other relationship:** Member of Safety and Data Monitoring Committee (Merck)

Introduction

- MCL is an uncommon, incurable subtype of aggressive B-cell non-Hodgkin lymphoma¹
- Venetoclax has demonstrated efficacy in patients with R/R MCL; however, it is not currently approved to treat R/R MCL²
- Sonrotoclax (BGB-11417), a next-generation BCL2 inhibitor, is a more selective and pharmacologically potent inhibitor of BCL2 than venetoclax, with a shorter half-life resulting in no drug accumulation^{3,4}
- Zanubrutinib is a potent and highly specific next-generation BTK inhibitor associated with fewer off-target AEs compared with other BTK inhibitors, and is approved for R/R MCL^{5,6}
- Here, updated safety and efficacy data for patients with R/R MCL treated with sonrotoclax + zanubrutinib in the ongoing BGB-11417-101 study are presented

1. Jain P, Wang ML. Am J Hematol. 2022;97(5):638-656. 2. Wang M, et al. ASH 2023. Abstract LBA-2. 3. Guo Y, et al. J Med Chem. 2024;67(10):7836-7858. 4. Liu J, et al. Blood. 2024;143(18):603-608.

5. Guo Y, et al. J Med Chem. 2019;62(17):7923-7940. 6. Brukinsa. Prescribing information. BeiGene, Ltd; 2024.

AE, adverse event; BCL2, B-cell lymphoma 2; BTK, Bruton tyrosine kinase; MCL, mantle cell lymphoma; R/R, relapsed/refractory.

BGB-11417-101 (NCT04277637) Study Design

- BGB-11417-101 is a global phase 1/1b study evaluating sonrotoclax as monotherapy, or in combination ± zanubrutinib, and ± obinutuzumab, in patients with B-cell malignancies
 - Data from R/R MCL cohorts treated with sonrotoclax + zanubrutinib are the focus of this presentation
- The primary endpoints were safety per CTCAE v5.0, MTD, and RP2D
- Treatment consisted of 8-12 weeks of zanubrutinib lead-in (320 mg QD or 160 mg BID), followed by the addition of sonrotoclax, which was ramped up to the target dose level
- Treatment was continued until disease progression, intolerance, or elective discontinuation
- Patients who reached 96 weeks of combination treatment could elect to stop both study drugs but remain on study



^aThe safety monitoring committee reviewed dose-level cohort data before dose escalation.

BID, twice daily; CLL/SLL, chronic lymphocytic leukemia/small lymphocytic lymphoma; MCL, mantle cell lymphoma; MTD, maximum tolerated dose; QD, once daily; R/R, relapsed/refractory; RP2D, recommended phase 2 dose; TN, treatment naive.

Baseline Characteristics and Demographics

	Sonro 80 mg	Sonro 160 mg +	Sonro 320 mg +	Sonro 640 mg +	All
Characteristic	+ Zanu (n=6)	Zanu (n=13)	Zanu (n=27)	Zanu (n=5)	(N=51)
Study follow-up, median (range), months	40.4 (3.9-42.4)	16.4 (1.0-38.5)	13.2 (0.7-31.6)	15.8 (3.4-21.5)	16.4 (0.7-42.4)
Age, median (range), years	60.0 (46-84)	69.0 (45-81)	67.0 (45-85)	71.0 (68-80)	68.0 (45-85)
Male, n (%)	5 (83.3)	11 (84.6)	17 (63.0)	3 (60.0)	36 (70.6)
ECOG PS, n (%)					
0	4 (66.7)	8 (61.5)	6 (22.2)	3 (60.0)	21 (41.2)
1	2 (33.3)	5 (38.5)	20 (74.1)	2 (40.0)	29 (56.9)
Tumor bulk,ª n (%)					
High	1 (16.7)	2 (15.4)	4 (14.8)	0	7 (13.7)
Ki67 proliferation index, n (%)					
<30%	3 (50.0)	3 (23.1)	8 (29.6)	1 (20.0)	15 (29.4)
≥30%	2 (33.3)	2 (15.4)	4 (14.8)	2 (40.0)	10 (19.6)
Missing	1 (16.7)	8 (61.5)	15 (55.6)	2 (40.0)	26 (51.0)
TP53 mutation status, n (%)					
Mutated	2 (33.3)	1 (7.7)	1 (3.7)	2 (40.0)	6 (11.8)
Unmutated	0	3 (23.1)	3 (11.1)	1 (20.0)	7 (13.7)
Missing	4 (66.7)	9 (69.2)	23 (85.2)	2 (40.0)	38 (74.5)
Prior therapy					
No. of lines of prior therapy, median (range)	1 (1-1)	1 (1-4)	1 (1-3)	1 (1-1)	1 (1-4)
Prior BTK inhibitor, n (%)	0	0	4 (14.8)	0	4 (7.8)
Prior BTK inhibitor duration, median (range), months	NA	NA	8.4 (0.3-24.1)	NA	8.4 (0.3-24.1)

Data cutoff: March 1, 2025.

^aHigh tumor bulk: any lymph node ≥10 cm or lymph node ≥5cm and ALC ≥ 25×10^{9} /L.

ALC, absolute lymphocyte count; BTK, Bruton tyrosine kinase; ECOG PS, Eastern Cooperative Oncology Group performance status; NA, not applicable; sonro, sonrotoclax; TLS, tumor lysis syndrome; zanu, zanubrutinib. 5

Sonrotoclax in Combination With Zanubrutinib is Well Tolerated Across All Dose Levels

- Safety profile was generally similar across all doses tested and sonrotoclax 160-mg and 320-mg doses were chosen for expansion
- No DLTs occurred and MTD was not reached up to sonrotoclax 640 mg; 320 mg was chosen as RP2D

Patients, n (%)	Sonro 80 mg + Zanu (n=6)	Sonro 160 mg + Zanu (n=13)	Sonro 320 mg + Zanu (n=27)	Sonro 640 mg + Zanu (n=5)	All (N=51)
Any TEAEs	4 (66.7)	13 (100)	26 (96.3)	5 (100)	48 (94.1)
Grade ≥3	4 (66.7)	7 (53.8)	14 (51.9)	3 (60.0)	28 (54.9)
Serious TEAEs	3 (50.0)	4 (30.8)	7 (25.9)	1 (20.0)	15 (29.4)
Leading to death	1 (16.7)	1 (7.7)	1 (3.7)	0	3 (5.9)ª
Leading to zanu discontinuation	1 (16.7)	3 (23.1)	4 (14.8)	0	8 (15.7) ^b
Leading to zanu dose reduction	1 (16.7)	1 (7.7)	0	0	2 (3.9)
Treated with sonro	6 (100)	11 (84.6)	24 (88.9)	5 (100)	46 (90.2)
Leading to death	0	1 (7.7)	0	0	1 (2.0) ^c
Leading to sonro discontinuation	0	3 (23.1)	2 (7.4)	0	5 (9.8) ^d
Leading to sonro dose reduction	0	0	0	0	0

^aPleural effusion (80 mg; due to PD), abdominal sepsis (320 mg), pneumonia (160 mg). ^bLymph node pain (160 mg, due to PD), diarrhea (320 mg), MDS (160 mg), abdominal sepsis (320 mg), pneumonia (160 mg), diarrhea (80 mg), cryptococcal meningoencephalitis (320 mg), abdominal pain (320 mg). ^cPneumonia (160 mg). ^dDiarrhea (320 mg), MDS (160 mg), abdominal sepsis (320 mg), pneumonia (160 mg), lymph node pain (160 mg), diarrhea (320 mg), abdominal sepsis (320 mg), pneumonia (160 mg), lymph node pain (160 mg), due to PD).

DLT, dose-limiting toxicity; MDS, myelodysplastic syndrome; MTD, maximum tolerated dose; PD, progressive disease; RP2D, recommended phase 2 dose; sonro, sonrotoclax; TEAE, treatment-emergent adverse event; zanu, zanubrutinib.

6

Most TEAEs Observed With Sonrotoclax + Zanubrutinib Were Low Grade and Transient



TEAEs in ≥15% of patients at the sonrotoclax RP2D (320 mg) and in all patients

^aNeutropenia combines preferred terms *neutrophil count decreased* and *neutropenia*. ^bThrombocytopenia combines preferred terms *platelet count decreased* and *thrombocytopenia*. RP2D, recommended phase 2 dose; TEAE, treatment-emergent adverse event; TLS, tumor lysis syndrome.

•

•

•

Sonrotoclax + Zanubrutinib Demonstrated Deep Responses Across All Dose Levels

- At a median follow-up of 16.4 months, ORR^{a,b} was 79% with a CR rate of 66% across all doses in efficacy-evaluable patients
- At a median follow up of 13.2 months in the 320-mg cohort, ORR was 78% with a CR rate of 70%
- Seven patients (15%) progressed prior to receiving sonrotoclax, including four patients (17%) in the 320-mg dose group
- The median time to CR was 6.7 months (range, 1.5-28.2 months)
- Of four evaluable patients with prior BTK inhibitor therapy, one achieved PR and one achieved CR



aResponses were assessed per Lugano 2014 criteria and are shown as the percentages of responding patients who had ≥1 post-baseline tumor assessment after dosing with sonrotoclax unless treatment was discontinued due to clinical progression or death prior to tumor assessment. ^bORR was defined as PR or better. ^cFor all patients as treated (N=51).

BOR, best overall response; BTK, Bruton tyrosine kinase; CR, complete response; ORR, overall response rate; PD, progressive disease; PR, partial response; SD, stable disease.

Sonrotoclax + Zanubrutinib Demonstrated Durable Responses

- Median DOR in all patients was not reached at any dose level (95% CI, 34.8-NE)
 - DOR rate at 24 months for all patients was 84.0% (95% CI, 65.3%-93.1%; mFU, 17.7 months)
 - DOR rate at 24 months in the 320-mg dose group was 80.1% (95% CI, 49.4%-93.3%; mFU, 14.8 months)
- Of 18 patients in the 320-mg dose group who achieved CR, 16 remain in CR (mFU, 13 months)



5 5 5 5 80 ma 5 5 55 -5 5 5 5 5 160 ma 320 ma 2 640 mg 2 2 2 2 2 2 0 4 4 4 0 0 0

CR, complete response; DOR, duration of response; mFU, median follow-up; NE, not evaluable.

Sonrotoclax + Zanubrutinib Demonstrated Encouraging Safety and Antitumor Activity in Patients With R/R MCL

- Sonrotoclax + zanubrutinib combination treatment had a tolerable safety profile at all dose levels tested up to 640 mg; 320 mg was declared as the RP2D
 - Majority of TEAEs were low grade, and no new safety signals were identified
 - No laboratory or clinical TLS occurred, and no atrial fibrillation/flutter was observed
- Antitumor activity was promising, with high response rates and early, durable, and deep responses in patients with R/R MCL
 - Efficacy across all dose levels were similar, and at the RP2D of 320 mg, ORR was 78% with a CR rate of 70%, and the median DOR rate at 24 months was 80.1% (95% CI, 49.4%-93.3%)

Building on this promising dataset, sonrotoclax in combination with zanubrutinib is being evaluated in patients with R/R MCL in the phase 3 CELESTIAL-RRMCL study (NCT06742996); enrollment is currently ongoing

Acknowledgments

- The authors thank the patients and their families, investigators, co-investigators, and the study teams at each of the participating centers
- This study was sponsored by BeOne Medicines Ltd
- Medical writing support was provided by Shanen Perumal, PhD, of Nucleus Global, an Inizio company, and supported by BeOne Medicines

Corresponding Author: Stephen S. Opat, stephen.opat@monash.edu