Real-Life Outcomes in Patients With BCMA-Exposed Relapsed/Refractory Multiple Myeloma Treated With Standard of Care in the LocoMMotion and MoMMent Studies

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Disclosures of Conflicts of Interest

KW has held a consulting/advisory role for Adaptive Biotechnologies, Amgen, BMS, Celgene, GSK, Janssen-Cilag, Karyopharm Therapeutics, Oncopeptides, Roche, Sanofi, and Takeda; has received travel, accommodations, and/or expenses from Amgen, BMS, Celgene, GSK, Janssen-Cilag, and Takeda; has received honoraria from AbbVie, Adaptive Biotechnologies, Amgen, BMS, Celgene, GSK, Janssen-Cilag, Karyopharm Therapeutics, Novartis, Oncopeptides, Pfizer, Roche/Genentech, Sanofi, and Takeda; and has received research funding from Amgen, BMS/Celgene, Celgene, GSK, Janssen-Cilag, and Sanofi. **BB** has received travel, accommodations, and/or expenses from Janssen-Cilag; and has received honoraria from Amgen, Janssen-Cilag, and GSK. **SM** has held a consulting/advisory role for Adaptive Biotechnologies, Amgen, Celgene/BMS, Janssen, Pfizer, Regeneron, Roche/Genentech, and Sanofi. **HG** has held a consulting/advisory role for Amgen, Novartis, and Takeda; has received honoraria from Amgen, BMS, Celgene, Chugai, Janssen, and Sanofi; has received research funding from Amgen, BMS, Celgene, Chugai, Janssen, Sanofi, Incyte, Molecular Partners, MSD, Mundipharma, and Novartis; and has received other grants from the Dietmer Hopp Foundation. **NWCJvdD** has served in a consulting/advisory role for AbbVie, Adaptive Biotechnologies, Amgen, Bayer, BMS, Celgene, Janssen, Kite Pharma, Merck, Novartis, Pfizer, Roche, Servier, and Takeda; and has received research funding from Amgen, BMS, Celgene, Cellectis, Janssen, and Novartis. **HE** has served in a consulting/advisory role for Amgen, BMS/Celgene, GSK, Janssen, and Sanofi; has received honoraria from Amgen, BMS/Celgene, GSK, Janssen, and Sanofi; and has received research funding from Amgen, BMS/Celgene, GSK, Janssen, and Sanofi. **AP** has received honoraria or consultancy from AbbVie, Amgen, BMS, Janssen, Pfizer, Sanofi, and Takeda. **RT** has no conflicts to disclose. **LK** has served in a consulting/advisory role for Amgen, Celgene, GSK, Janssen, and Takeda; and has received honoraria from AbbVie, Amgen, Celgene, Janssen, Sanofi, and Takeda. **CS** has served in a consulting/advisory role for Amgen, BMS, Janssen, Novartis, Roche, and Takeda; has received honoriaria from AbbVie, Amgen, BMS, Jansen, Novartis, and Takeda; and has received research funding from BMS and Takeda. **CP** has received honoraria from AbbVie, Amgen, Celgene/BMS, Janssen, Pfizer, Sanofi, and Takeda. **JM-L** has served in a consulting/advisory role for BMS, Janssen, and Novartis; has received research funding from Astellas and BMS; and has participatied in speakers' bureau for BMS, Janssen-Cilag, and Roche. **MC** has received honoraria from AbbVie, Adaptive Biotechnologies, Amgen, GSK, Janssen, Sanofi, and Takeda; and has participated in speakers' bureaus for Celgene/BMS and Janssen. **CA**, **LA**, **IH**, **VS**, **KG**, and **MD** are employed by and may own stock in Janssen. **PM** has served in a consulting or advisory role for AbbVie, Amgen, Celgene, GSK, Janssen, Oncopeptides, and Sanofi; and has received honoraria from AbbVie, Amgen, Celgene, GSK, Janssen-Cilag, Oncopeptides, and Sanofi. **M-VM** has served in a consulting or advisory role for AbbVie, Amgen, Celgene, GSK, Janssen-Cilag, Pfizer, Regeneron, Roche/Genentech, and Takeda; and has received honoraria from AbbVie/Genentech, Amgen, Celgene, GSK, Janssen-Cilag, Sanofi, and Takeda.

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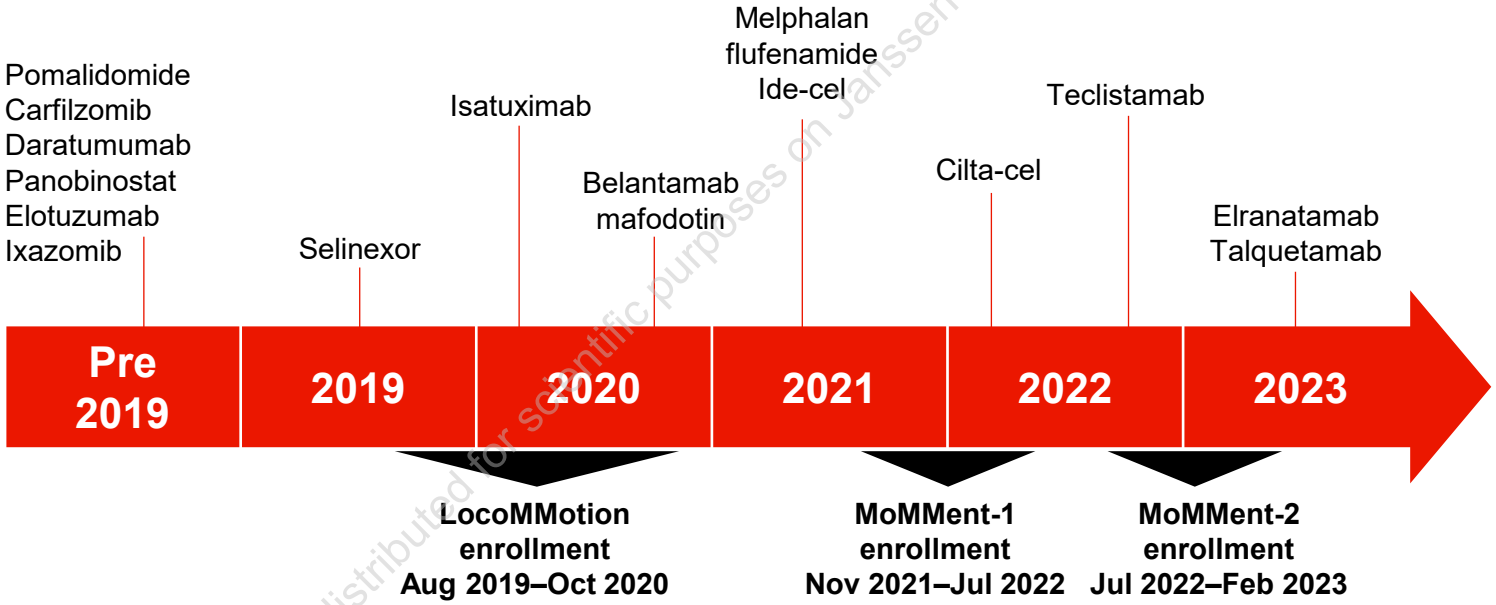
Evolving Treatment Landscape in MM

- Previously, prospective real-world studies LocoMMotion and MoMMent have reported outcomes of SOC in patients with TCE RRMM, serving as the benchmark for comparison for all novel treatments in RRMM[1]
  - ORR: 31.8%; PFS and OS: 4.6 and 14.5 months, respectively
- As the treatment landscape for RRMM is rapidly evolving,[a] patients are exposed to BCMA-targeted treatments in later LOT,[1,2] including ADCs,[3] bispecific antibodies,[4-11] and CAR-T cell treatments[12-17]



[a]Figure representative of initial regulatory approval across the US and EU. ADC, antibody-drug conjugate; BCMA, B-cell maturation antigen; CAR, chimeric antigen receptor; cilta-cel, ciltacabtagene autoleucel; ide-cel, idecabtagene vicleucel; LOT, line of therapy; MM, multiple myeloma; ORR, overall response rate; OS, overall survival; PFS, progression-free survival; RRMM, relapsed/refractory multiple myeloma; SOC, standard of care; TCE, triple-class exposed.

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LocoMMotion and MoMMent: BCMA-Exposed Analysis

- There are currently no prospective data assessing real-life treatments in clinical practice for BCMA-exposed patients[1]
- LocoMMotion is a completed, prospective, noninterventional, multinational study of real-life SOC treatments in patients with TCE RRMM who received ≥3 prior LOT
- MoMMent is an ongoing, prospective, noninterventional study of real-life SOC treatments in patients with RRMM that includes 2 consecutive periods of enrollment (MoMMent-1 and MoMMent-2)
- Here, we report real-life treatments used for BCMA-exposed patients and their outcomes from LocoMMotion and MoMMent

BCMA, B-cell maturation antigen; LOT, line of therapy; RRMM, relapsed/refractory multiple myeloma; SOC, standard of care; TCE, triple-class exposed.

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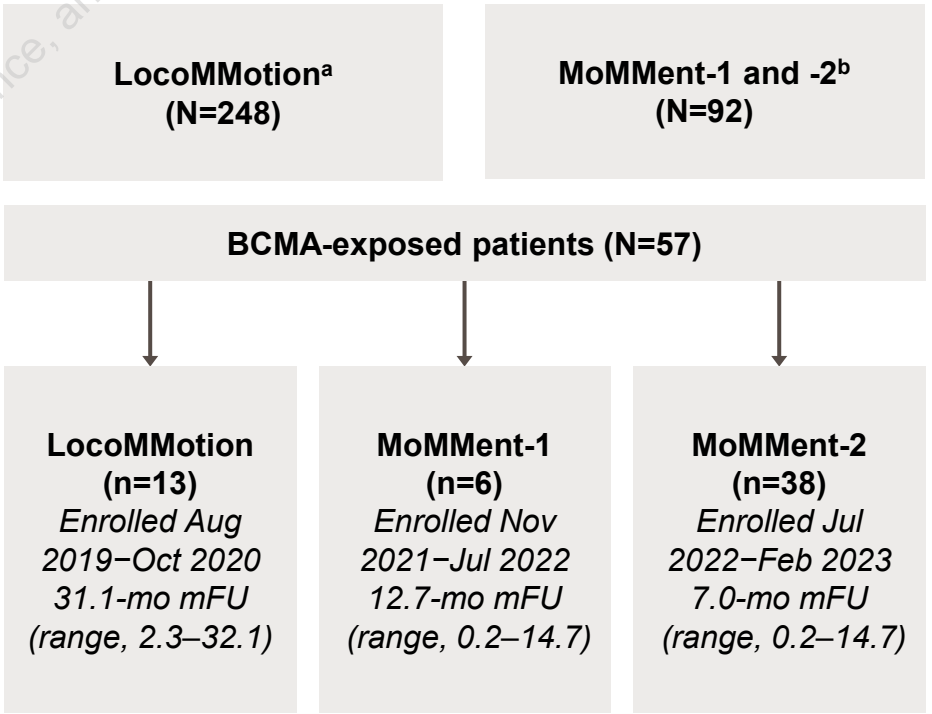
LocoMMotion and MoMMent: Methods

- LocoMMotion and MoMMent have the same study design and data collection methods, with most patients enrolled from the same sites
  - MoMMent-2 was specifically planned to enroll additional BCMA-exposed patients
- Both studies included:
  - Patients with ≥3 prior LOT (LocoMMotion allowed <3 prior LOT if patients were double-refractory to a PI and an IMiD)
  - TCE
  - Measurable disease since last LOT
  - ECOG PS of 0 or 1 at screening

Figure 2: Summary of analysis populations



Patients in LocoMMotion and MoMMent received SOC at the discretion of the treating physician. Patients could not participate in both studies.
[a]LocoMMotion: final data. [b]MoMMent: cut-off Aug 18, 2023.
BCMA, B-cell maturation antigen; ECOG PS, Eastern Cooperative Oncology Group performance status; IMiD, immunomodulatory drug; LOT, line of therapy; mFU, median follow-up; mo, month; PI, proteasome inhibitor; SOC, standard of care; TCE, triple-class exposed.

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LocoMMotion and MoMMent: BCMA-Exposed Patients

- At median follow-up of 10.0 months, 57 patients from the LocoMMotion and MoMMent studies were BCMA-exposed
  - Baseline characteristics were similar between both studies

Characteristic	Pooled (N=57)
Male, n (%)	40 (70.2)
Median age, years (range)	66.0 (42–86)
ECOG PS at baseline,[a] n (%)	
0	13 (22.8)
1	43 (75.4)
2	1 (1.8)
Years since MM diagnosis, median (range)	7.3 (2.1–22.8)
ISS stage at study entry, n (%)	
I	9 (22.0)
II	15 (36.6)
III	17 (41.5)
Missing	16 (39.0)
Presence of EMP, n (%)	7 (12.3)
Number of prior LOT, median (range)	7 (3–12)
Prior exposure, n (%)	
Triple-class[b]	57 (100.0)
Penta-drug[c]	50 (87.7)
GPRC5D-targeted BsAb	6 (10.5)
BCMA-targeted therapy[d]	57 (100.0)
Only ADC	22 (38.6)
Only CAR-T	10 (17.5)
Only BsAb	19 (33.3)
ADC and CAR-T	4 (7.0)
BsAb and CAR-T	1 (1.8)
ADC and BsAb	1 (1.8)
ADC, CAR-T, and BsAb	0
Refractory status, n (%)	
Triple-class	47 (82.5)
Penta-drug	20 (35.1)
BCMA-BsAb	21 (36.8)
BCMA-ADC	22 (38.6)
Pomalidomide and carfilzomib	36 (63.2)

[a]1 patient had ECOG PS 2 at baseline. All patients had ECOG PS 0–1 at screening. [b]≥1 each of PI + IMiD + anti-CD38 antibody. [c]≥2 PIs + IMiDs + ≥1 anti-CD38 monoclonal antibody. [d]Includes 10 patients treated with teclistamab, 4 patients treated with ide-cel, and 2 patients treated with belantamab mafodotin.
ADC, antibody-drug conjugate; BCMA, B-cell maturation antigen; BsAb, bispecific antibody; CAR, chimeric antigen receptor; ECOG PS, Eastern Cooperative Oncology Group performance status; EMP, extramedullary plasmacytoma; GPRC5D, G protein–coupled receptor class C group 5 member D; ide-cel, idecabtagene vicleucel; IMiD, immunomodulatory drug; ISS, International Staging System; LOT, line of therapy; MM, multiple myeloma; PI, proteasome inhibitor.

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LocoMMotion and MoMMent: SOC Treatment Regimens in BCMA-Exposed Patients

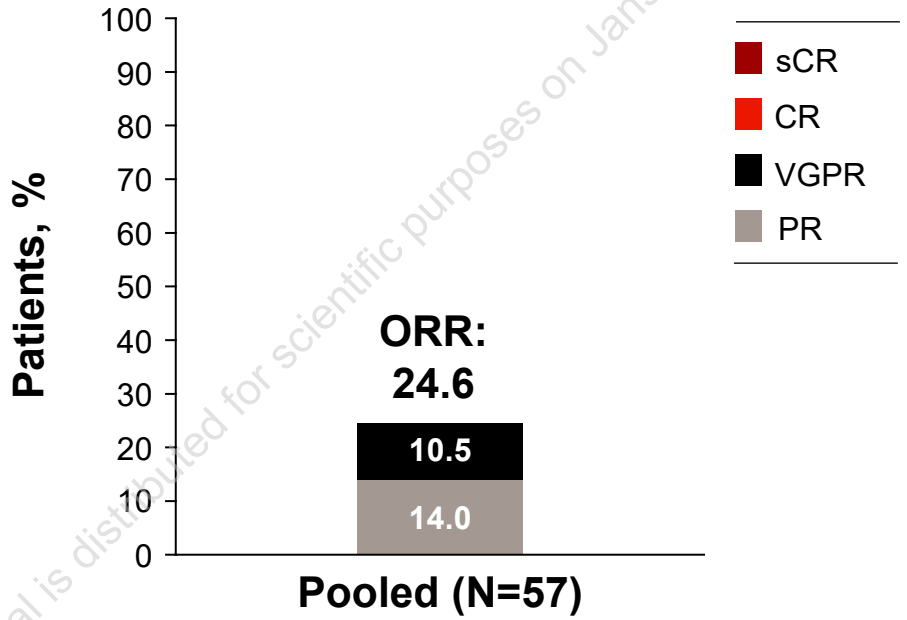
- Overall, 45 unique antimyeloma regimens were used
  - BCMA-targeted treatment, 28.1%
  - Combinations of ≥3 drugs, 64.9%

Drug class/drug included in SOC antimyeloma regimen, n (%)	Pooled (N=57)
Alkylating agents	25 (43.9)
PI	22 (38.6)
IMiD	21 (36.8)
Anti-CD38 mAb	10 (17.5)
BCMA-targeted therapy	16 (28.1)
Teclistamab	10 (17.5)
Idecabtagene vicleucel	4 (7.0)
Belantamab mafodotin	2 (3.5)
Venetoclax	5 (8.8)
Panobinostat	2 (3.5)
Elotuzumab	1 (1.8)

BCMA, B-cell maturation antigen; IMiD, immunomodulatory drug; mAb, monoclonal antibody; PI, proteasome inhibitor; SOC, standard of care.

LocoMMotion and MoMMent: ORR in BCMA-Exposed Patients

- ORR was 24.6% in BCMA-exposed patients who received SOC therapy
  - 4/10 (40.0%) patients responded to teclistamab
  - 1/4 (25.0%) patients responded to ide-cel



Responses and PD were assessed by an external review committee.
BCMA, B-cell maturation antigen; CR, complete response; ide-cel, idecabtagene vicleucel; ORR, overall response rate; PD, progressive disease; PR, partial response; sCR, stringent complete response; SOC, standard of care; VGPR, very good partial response.

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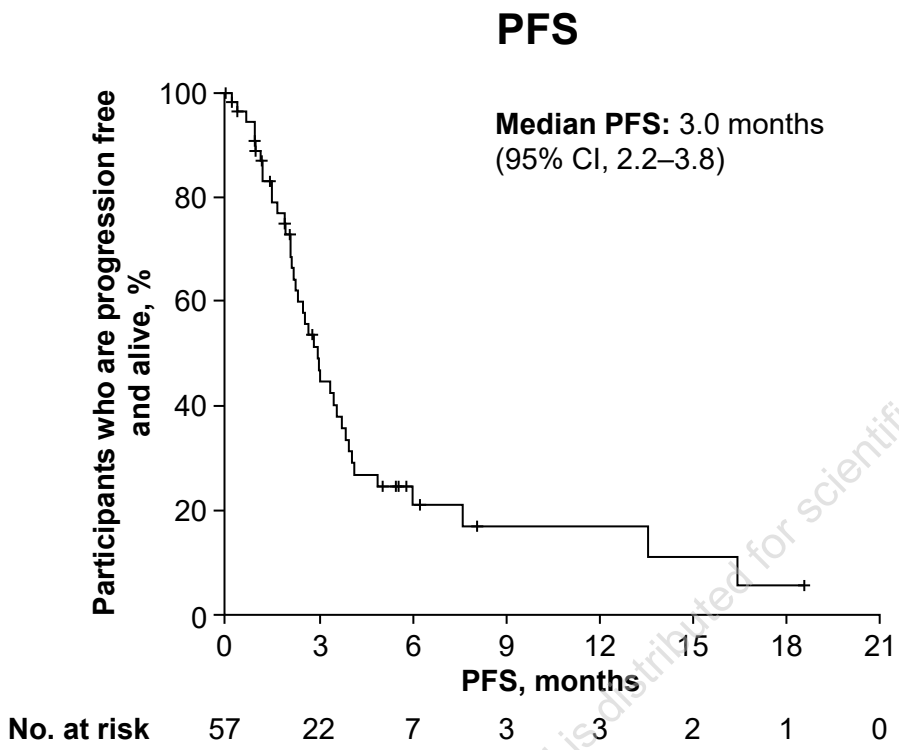
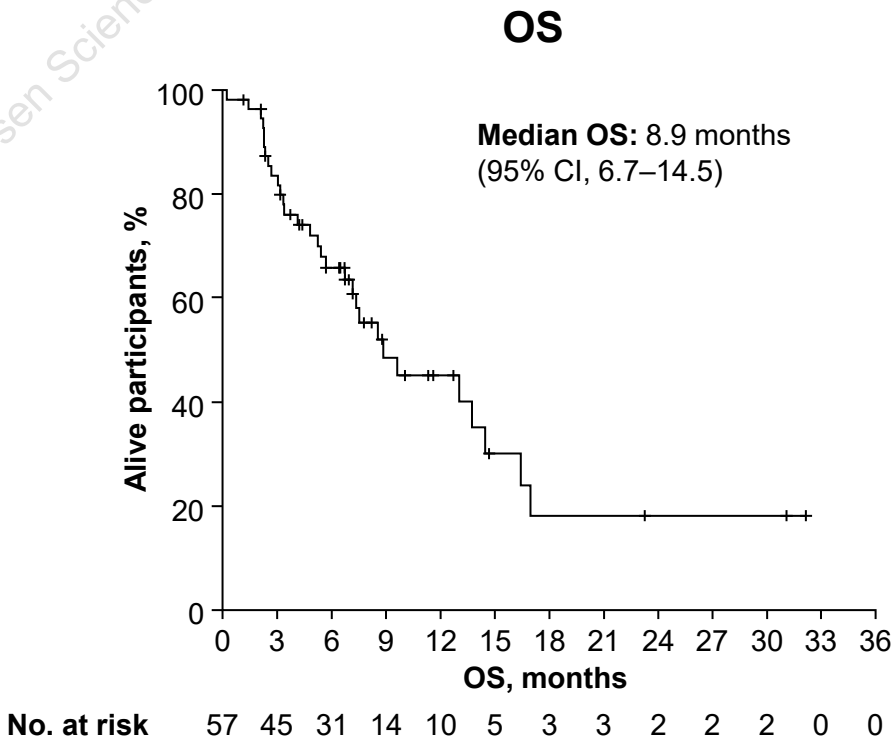
LocoMMotion and MoMMent: Survival Outcomes in BCMA-Exposed Patients

- PFS and OS were 3.0 months and 8.9 months, respectively





Responses and PD were assessed by an external review committee.
BCMA, B-cell maturation antigen; OS, overall survival; PFS, progression-free survival.

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LocoMMotion and MoMMent: Safety in BCMA-Exposed Patients

Safety

- Treatment-emergent AEs occurred in 54 patients (94.7%)
  - Grade 3/4, 36 patients (63.2%)
- Treatment-emergent AEs resulting in death occurred in 6 patients (10.5%)

AE, adverse event; BCMA, B-cell maturation antigen.

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LocoMMotion and MoMMent in BCMA-Exposed Patients: Conclusions

- Prospective data from LocoMMotion and MoMMent offer valuable insights into real-world treatments and outcomes in BCMA-exposed patients
- There was no uniform SOC, and the observed real-life treatments consisting of the same drug classes in heavily pretreated and refractory patient populations resulted in poor response rates
- These poor outcomes in BCMA-exposed/refractory patients highlight the need for new agents, including those targeting GPRC5D

These real-world data provide the benchmark for new treatments in patients with TCE RRMM with prior exposure to BCMA-targeted therapy, complementing clinical trials; more homogeneous data from a larger sample size are needed to inform sequencing

BCMA, B-cell maturation antigen; GPRC5D, G protein–coupled receptor class C group 5 member D; RRMM, relapsed/refractory multiple myeloma; SOC, standard of care; TCE, triple-class exposed.

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