

A Real-World Study of Bendamustine Therapy in a Very Heavily Pre-Treated Population of Multiple Myeloma Patients

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Background

Bendamustine is an alkylating agent with activity against multiple myeloma (MM). In UK clinical practice its use is predominately limited to patients who have no other therapeutic options. Here we assess the efficacy and toxicity of bendamustine in the real-world setting.

Methods

After local ethical approval we retrospectively assessed patients commenced on bendamustine at the Royal Marsden Hospital, London, between January 2016 and January 2021 (with follow-up until May 2021). Bendamustine was given at 60 mg/m² D1,2; dexamethasone/methylprednisolone weekly; thalidomide 50–200mg daily (28-day cycle).

Outcome measures included overall response rate (ORR, defined as ≥partial response [PR]), clinical benefit rate (CBR, defined as ≥minimal response [MR]), progression-free survival (PFS), overall survival (OS) and toxicity. PFS and OS were calculated from Cycle 1 Day 1 (C1D1) and medians compared using the Logrank test.

Response was assessed using International Myeloma Working Group criteria. Cytogenetic high-risk (HiR) was defined as the presence of t(4;14), t(14;16), t(14;20), del(17p) and/or gain(1q) on the most recent FISH sample prior to the patient commencing bendamustine.

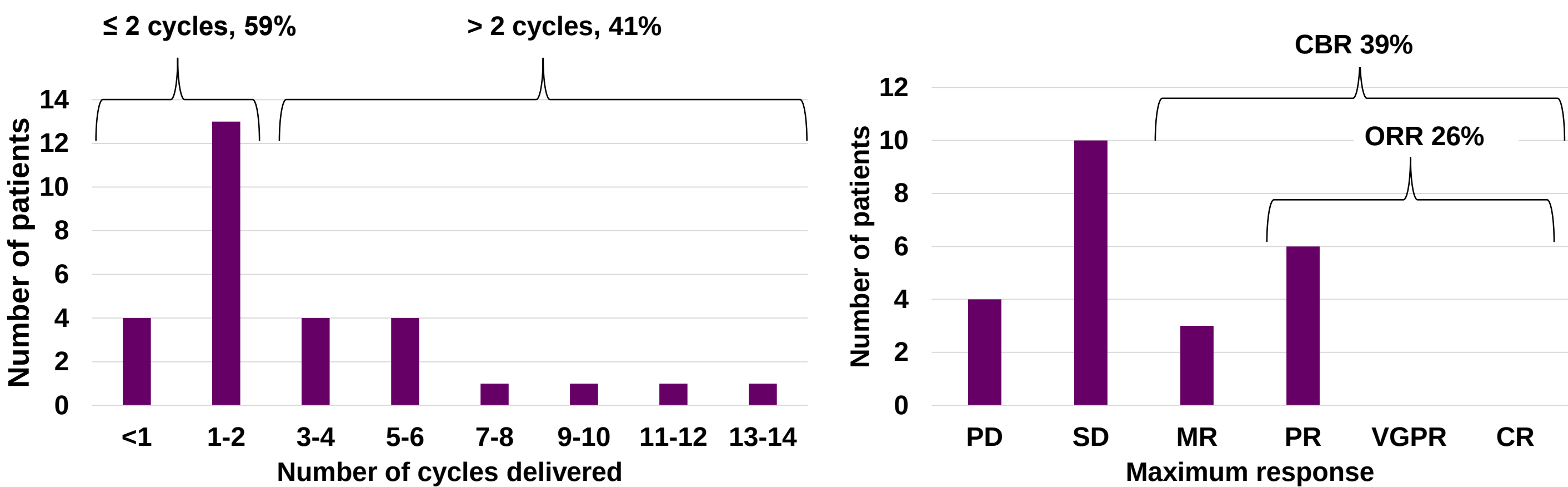
Patient demographics

Twenty-nine patients received bendamustine and corticosteroids. Fourteen patients also received thalidomide as part of their therapeutic regime.

Characteristic	n=29
Age (years)	
Median, (range)	66, (48-84)
Sex	
Male (n, (%))	19 (66)
Female (n, (%))	10 (34)
Previous lines of therapy (n)	
Median, (range)	5, (3-8)
ISS Stage at C1D1	
I (n, (%))	6 (21)
II (n, (%))	5 (17)
III (n, (%))	18 (62)
Cytogenetic risk at diagnosis	(n=19 available)
HiR (n, (%))	18 (95)

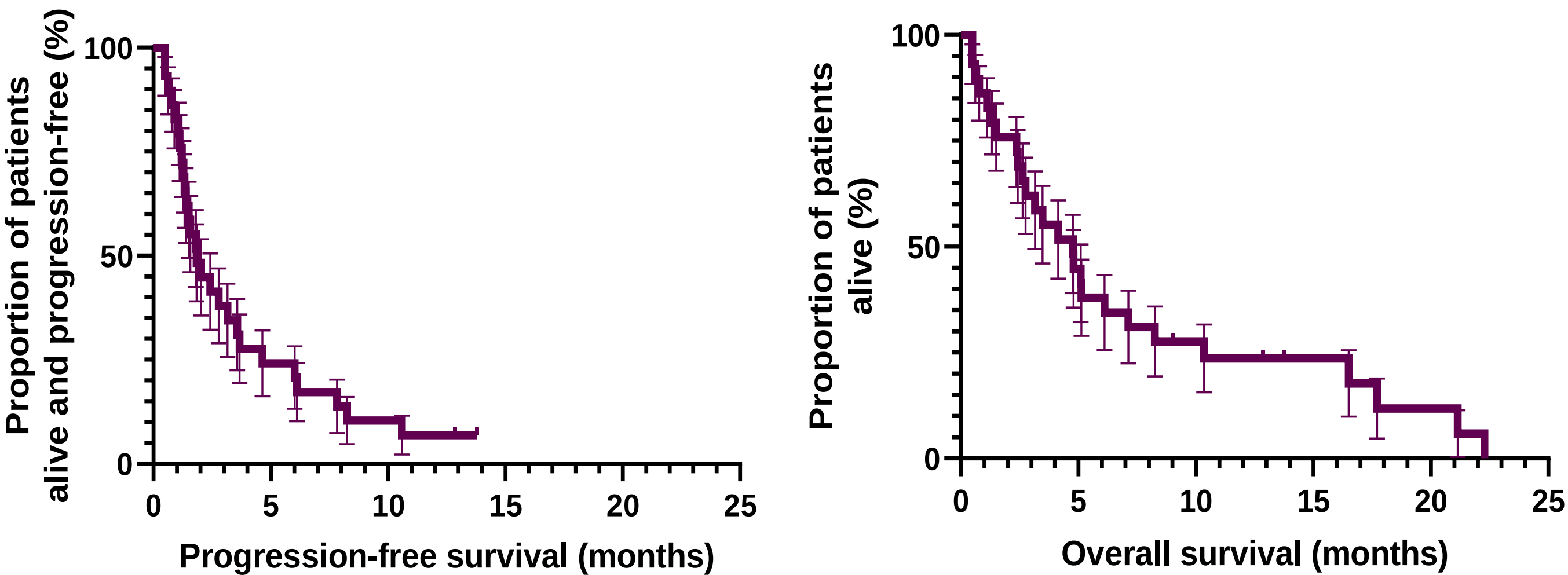
Treatment delivered and maximum response

Of the 29 patients, 23 were assessable for response (4 completed <1 cycle, 2 had asecretory disease). The ORR was 26% (6/23, all PR), and the CBR was 39% (9/23).



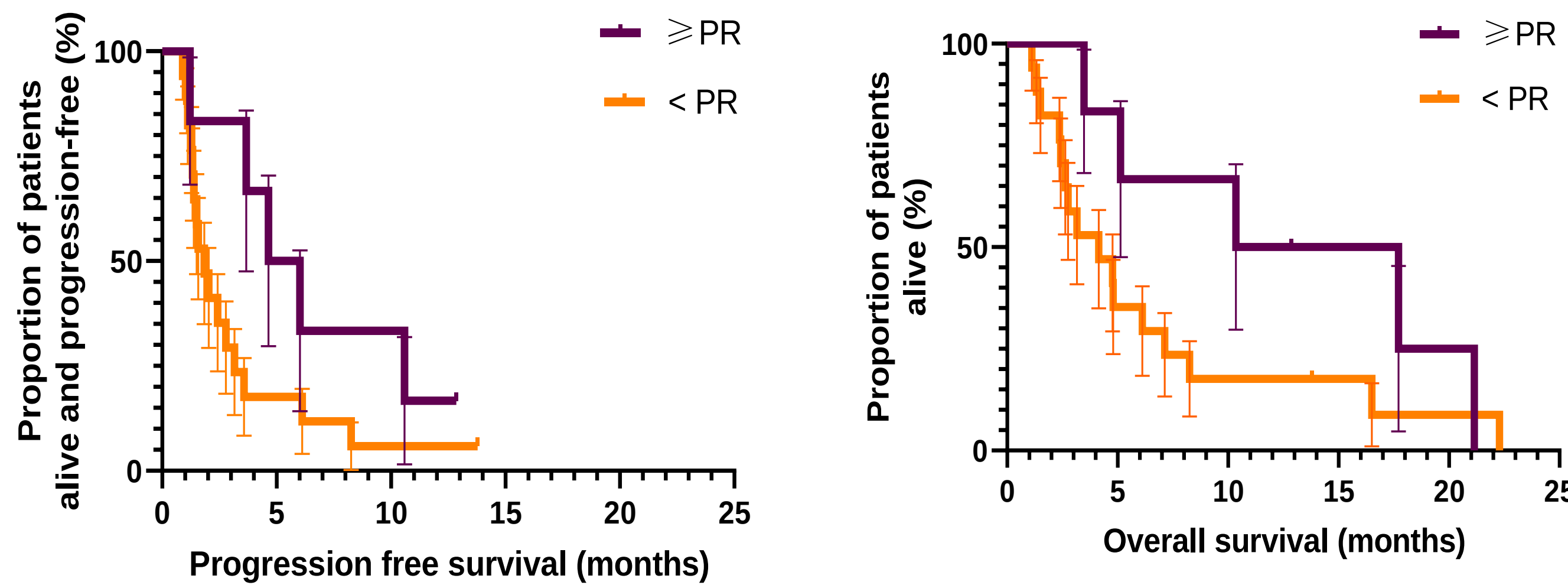
PFS and OS

The median PFS of the cohort was 1.8 months (median follow-up 13 months), and the OS was 4.8 months.



PFS and OS by response

Achievement of ≥PR was associated with longer PFS and OS (median PFS 5.3 months vs. 1.8 months, p=0.10; OS 14 months vs. 4.1 months, p=0.15).



Toxicity

Toxicity assessment was performed in the whole cohort. At the time of data cut-off 3 patients remained on treatment. The reason for stopping therapy was progression in 65% (17/26) and death in 23% (6/26). One patient stopped treatment due to significant cytopenias, 1 due to frailty, and 1 because bendamustine had been used as a bridge to alternative therapy.

Fifty-five percent (16/29) required transfusion of platelets and/or red blood cells during their treatment.

Conclusions

- In this very heavily pre-treated population, bendamustine was associated with an ORR of 26% and a CBR of 39%. The overall PFS and OS were short at 1.8 and 4.8 months, respectively.
- However, achieving ≥PR was associated with a longer PFS and OS (5.3 and 14 months, respectively), suggesting bendamustine may provide a therapeutic option for a subgroup of patients when no others are available.

Disclosures:
SB – none; KP – none; MK – Amgen^{2,3}, Abbvie², BMS², Celgene^{1,2,3}, Chugai², Janssen^{1,2,3}, Karyopharm², Takeda^{2,3}; KB - Amgen², Celgene², Janssen², Novartis², Takeda², CP – Amgen^{2,3}, Celgene^{2,3}, Janssen^{2,3}, Sanofi², Takeda^{2,3}. 1)Research support, 2) Honoraria/Consultancy, 3)Travel support.

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