Evaluation of Bendamustine in Patients with Relapsed/Refractory Multiple Myeloma

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Introduction

- Multiple myeloma (MM) is the second most common hematological malignancy in the United States[1]
- Despite advances in treatments, MM remains an incurable malignancy with most patients experiencing relapse and requiring salvage therapy
- Bendamustine is a nitrogen mustard-based alkylating agent used for treatment of various malignancies including relapsed/refractory (RR) MM[2]

Objective

To evaluate the efficacy and safety of bendamustine-containing regimens in patients with RRMM

Methods

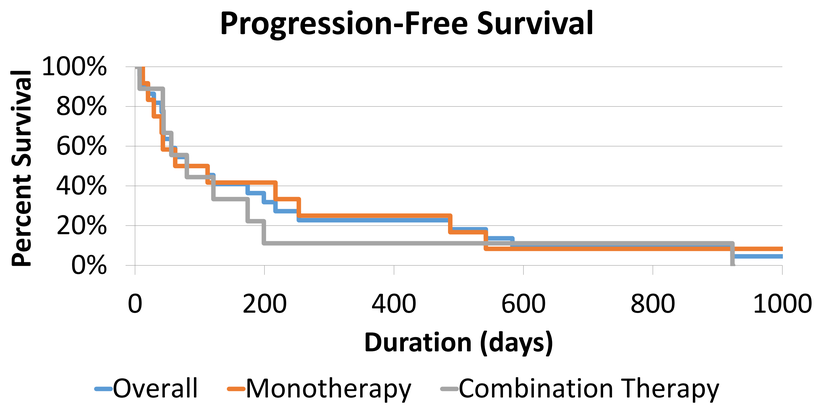
- Retrospective chart review
- Inclusion criteria
  - Adults ≥18 years old with RRMM
  - Treated with bendamustine within UNC Health between June 1, 2016 and June 30, 2019
- Primary endpoint: overall response rate (ORR)
- Secondary endpoints: overall survival (OS), progression-free survival (PFS), time-to-response (TTR), frequency of delays or dose reductions, rate of hospitalizations and discontinuations

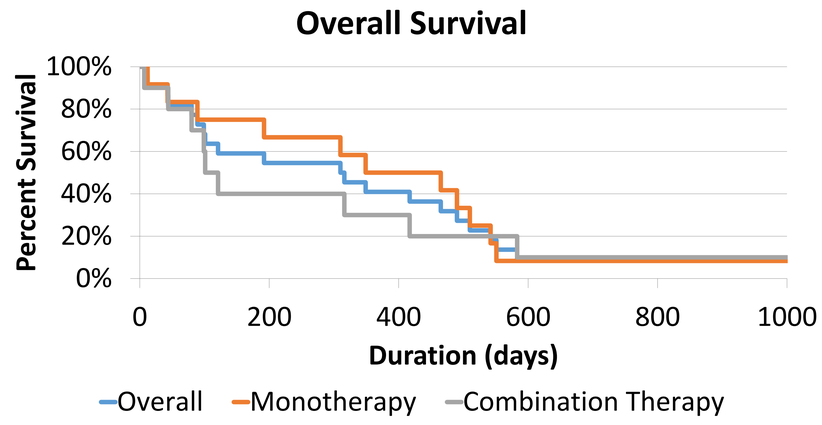
Results

Endpoints	Monotherapy (n=12)	Combination (n=10)	Overall (n=22)
ORR	25.0%	30.0%	27.3%
Median OS, days	349	101	310
Median PFS, days	62	80	80
Median TTR, days	28 (28-56)	42 (28-56)	28 (28-56)
Dose reduction	25.0%	10.0%	22.7%
Delayed treatment	41.7%	50.0%	45.5%

References:
1. Siegel RL, Miller KD, Fuchs HE, Jemal A. Cancer Statistics, 2021. CA: A Cancer Journal for Clinicians. 2021;71(1):7-33.
2. National Comprehensive Cancer Network. Multiple Myeloma (version 6.2021). https://www.nccn.org/professionals/physician_gls/pdf/myeloma.pdf. Accessed April 2021.

Results (continued)





Baseline characteristics	Monotherapy (n=12)	Combination (n=10)	Overall (n=22)
Median age (range)	73 (56-85)	73 (51-83)	73 (51-85)
Male, %	58.3%	70.0%	63.6%
White, %	66.7%	60.0%	63.6%
Hispanic, %	8.3%	0.0%	4.5%
Median number of prior regimens (range)	8 (4-11)	7 (2-10)	8 (2-11)
Drugs included in prior therapy regimens, %			
Lenalidomide	100%	90.0%	95.5%
Pomalidomide	91.7%	100%	95.5%
Bortezomib	100.0%	100%	100%
Ixazomib	16.7%	20.0%	18.2%
Carfilzomib	100%	80.0%	90.9%
Daratumumab	91.7%	90.0%	90.9%
Elotuzumab	8.3%	10.0%	9.1%
Bendamustine treatment regimens, %			
Monotherapy	100%	n/a	54.5%
BBD	n/a	40.0%	18.2%
BPD	n/a	50.0%	22.7%
BRD	n/a	10.0%	4.5%
GCSF use, %			
Primary prophylaxis	8.3%	10.0%	9.1%
Secondary prophylaxis	25.0%	40.0%	31.8%

Adverse events	Monotherapy (n=12)	Combination (n=10)	Overall (n=22)
Febrile neutropenia	8.3%	0.0%	4.5%
Neutropenia			
Grade 2	16.7%	10.0%	9.1%
Grade ≥3	16.7%	30.0%	22.7%
Thrombocytopenia			
Grade 2	16.7%	10.0%	13.6%
Grade ≥3	25.0%	20.0%	22.7%
Experienced unexpected hospitalization			
Overall	58.3%	40.0%	45.5%
Treatment-related	25.0%	20.0%	18.2%

Reasons for discontinuation	Monotherapy (n=12)	Combination (n=10)	Overall (n=22)
Disease progression	91.7%	90.0%	90.9%
Provider preference	8.3%	0.0%	4.5%
Patient preference	0.0%	10.0%	4.5%

BBD: bendamustine, bortezomib, dexamethasone; BPD: bendamustine, pomalidomide, dexamethasone; BRD: bendamustine, lenalidomide, dexamethasone; GCSF: granulocyte colony-stimulating factor , ORR: overall response rate; TTR: time-to-response

Conclusions

Bendamustine, administered either as monotherapy or as part of a combined regimen, is well-tolerated and induces rates similar to rates observed with other agents used in advanced RRMM.