Analysis of time to next treatment (TTNT) in melflufen and dexamethasone (dex)-treated patients (pts) with relapsed/refractory multiple myeloma (RRMM).

Sara Bringhen, Paul G. Richardson, Peter Michael Voorhees, Torben Plesner, Ulf-Henrik Mellqvist, Jeffrey A. Zonder, Brandi Nikcole Reeves, Stojan Zavisic, Johan Harmenberg, Jakob Obermüller, Pieter Sonneveld; Division of Hematology University of Torino, Torino, Italy; Dana-Farber Cancer Institute, Harvard Medical School, Boston, MA; Levine Cancer Institute, Carolinas HealthCare System, Charlotte, NC; Dept. of Hematology, Vejle Hospital, Vejle, Denmark; Borås Hospital, Borås, Sweden; Karmanos Cancer Institute, Wayne State University, Detroit, MI; Lineberger Comprehensive Cancer Center, University of North Carolina, Chapel Hill, NC; Oncopeptides AB, Stockholm, Sweden; Erasmus Medical Center Rotterdam, Rotterdam, Netherlands

**Background:** Melflufen is a novel peptide-conjugated alkylator potentiated by intracellular aminopeptidases, which are markedly overexpressed in MM. Melflufen + dex had encouraging activity in pts with RRMM and ≥2 prior lines of therapy in the phase 1/2 O-12-M1 study (overall response rate 31%; median overall survival of 20.7 mo; Richardson et al. ASH 2017. Abs. 3150). TTNT is used in Real World Evidence (RWE) to assist treatment decisions and support economic reimbursement modeling. We report TTNT after melflufen + dex in O-12-M1. **Methods:** Pts with RRMM and ≥2 prior lines of therapy, including bortezomib and lenalidomide (len) received 40 mg IV melflufen on d 1 of each 28-d cycle + 40 mg weekly dex until progressive disease (PD)/unacceptable toxicity. Pts were followed up for 2 y after PD, and TTNT was retrospectively reviewed for subsequent therapy. **Results:** As of 9 Nov 2017, 45 pts were treated: median age, 66 y (47-78); ISS stage II/III, 60%; high-risk cytogenetics, 44%. Pts had 4 median prior lines of therapy; 87% were refractory to last line of therapy including alkylators (24%), proteasome inhibitors (PIs; 27%), IMiDs (56%), and monoclonal antibodies (mAbs, 9%); 11% were last-line double refractory. At data cutoff, 44 pts (98%) discontinued melflufen + dex, mainly due to adverse events (40%) and PD (29%). 26 pts received subsequent therapy. Median time from start of melflufen + dex to first subsequent therapy or death, whichever occurred first, (TTNT) was 7.9 mo (95% CI: 5.7-11.0); next therapy included alkylators (27%), PIs (38%), IMiDs (58%), and mAbs (8%). **Conclusions:** Types of subsequent salvage therapy used after melflufen + dex were similar to studies of approved agents in RRMM; TTNT was also similar (Table). Further trials are ongoing, including melflufen + dex vs pomalidomide (pom) + dex in pts with RRMM refractory to len (Phase 3 OCEAN study; NCT03151811).

<table>
<thead>
<tr>
<th>Drug/study</th>
<th>Median TTNT (mo)</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pom + dex</td>
<td>6.2</td>
<td>Rabin et al. IMW 2015</td>
</tr>
<tr>
<td>Carfilzomib-len-dex 2-4th line</td>
<td>8.9</td>
<td>Chari et al. Blood. 2017; 130: 1818</td>
</tr>
<tr>
<td>Austrian RWE 3-4th line</td>
<td>7.3</td>
<td>Willenbacher et al. PLoS. 2016;11: (e)0147381</td>
</tr>
<tr>
<td>Melflufen + dex</td>
<td>7.9</td>
<td></td>
</tr>
</tbody>
</table>

**Title:**
Analysis of time to next treatment (TTNT) in melflufen and dexamethasone (dex)-treated patients (pts) with relapsed/refractory multiple myeloma (RRMM).

**Submitter's E-mail Address:**
megann@team9science.com

**Is this a late-breaking data submission?**
No

**Is this abstract a clinical trial?**
Yes

**Is this clinical trial registered?**
Yes
First Author
Sara Bringhen, MD, PhD
Division of Hematology University of Torino
Torino, Italy
Phone Number: +390116635814
Fax Number: +390116963737
Email: sarabringhen@yahoo.com
Alternate Email: gismm2001@yahoo.com
Click to view Conflict of Interest Disclosure

Second Author
Paul G. Richardson, MD
Dana-Farber Cancer Institute, Harvard Medical School
Boston, MA
Phone Number: (617) 632-2104
Fax Number: 617-632-6624
Email: paul_richardson@dfci.harvard.edu
Click to view Conflict of Interest Disclosure

Third Author
Peter Michael Voorhees, MD
Levine Cancer Institute, Carolinas HealthCare System
Charlotte, NC
Phone Number: 919-966-1671
Email: peter.voorhees@carolinashc.org
Click to view Conflict of Interest Disclosure

Fourth Author
Registry Name:
Clinicaltrials.gov
Registration Number:
NCT01897714
Research Funding Source:
Pharmaceutical/Biotech Company
Research Funding Source Name:
Oncopeptides
Are there additional sources of funding for your study?
No
Are patients still being accrued to the trial reported in this abstract?
Yes
Would like to be considered for a Merit Award:
No
Have the data in this abstract been presented at another major medical meeting?
No
Has this research been submitted for publication in a medical journal?
No
Type of Research:
Prospective
Research Category:
Clinical
Continued Trial Accrual:
Yes
Received Grant funding:
No
Sponsor:
Elizabeth A. Faust, PhD

Click to view Conflict of Interest Disclosure
If necessary, you can make changes to your abstract between now and the deadline of **Tuesday, February 12, 2019**

- To access your submission in the future, use the direct link to your abstract submission from one of the automatic confirmation emails that were sent to you during the submission.
- Or point your browser to [asco/reminder.cgi](http://asco.reminder.cgi) to have that URL mailed to you again. Your username/password are 265167/318067.

Any changes that you make will be reflected instantly in what is seen by the reviewers. You DO NOT need to go through all of the submission steps in order to change one thing. If you want to change the title, for example, just click "Title" in the abstract control panel and submit the new title.

When you have completed your submission, you may close this browser window.

*Tell us what you think of the abstract submission process*