

A Qualitative Study of Patients' Preferences for the Treatment of Relapsed or Refractory Multiple Myeloma in the United States, United Kingdom, France, and Germany

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Introduction

- Multiple myeloma (MM) is an incurable hematological cancer, and despite treatments improving survival rates, the majority of surviving patients with MM will eventually relapse.¹
- To date, there is limited research into patient preferences for treating relapsed/refractory multiple myeloma (RRMM). A targeted literature review identified 7 papers assessing patient preferences for MM treatment, but only 2 of these studies specifically looked at preferences in patients with RRMM.^{2,3}
- As the treatment landscape for RRMM evolves, it is becoming increasingly important to understand how treatments differ in terms of benefits, risks, and convenience, as perceived by patients, as these factors may influence their preferences for treatment.
- Understanding these preferences can aid in promoting shared treatment decision-making between patients and physicians.

Objective

To identify patient-relevant attributes among patients with RRMM who have been exposed to ≥2 prior-lines of therapy (LOT), and to understand patients' experiences with RRMM and their preferences related to treatment.

Methods

- This is the qualitative interview phase of a 2-part study designed to better understand the experiences and treatment preferences of patients with RRMM.
- Eligible patients included adults with RRMM who provided informed consent and were residents of the US, UK, France, or Germany, and had a self-reported treatment history meeting one of 2 criteria:
 - Exposed to ≥2 prior LOTs, including both lenalidomide and a proteasome inhibitor.
 - Exposed to ≥3 prior LOTs, including ≥1 of the following: a proteasome inhibitor, an immunomodulatory agent, or an anti-CD38 monoclonal antibody.
- Interview questions were informed by a literature review that extracted relevant attributes from prior studies and extracted clinical data of existing treatments for RRMM.
- Sixty-minute, semi-structured interviews were conducted and included:
 - Patients' experiences with MM and treatments.
 - Discussion and ranking of benefits desired from treatment.
 - Discussion and ranking of symptoms prior to treatment and symptoms/side effects after treatment that patients would like to avoid.
 - Discussion of non-clinical features, such as frequency and mode of administration.

Results

Table 1. Clinical and sociodemographic characteristics				
	N=19			
Average years of age at time of consent to interview (range)	56 (41–75)			
Sex, n (%)				
Female / Male	15 (79) / 4 (21)			
Remission status, n (%)				
Yes / No	8 (42) / 11 (58)			
Prior lines of therapy, n (%)				
2	3	4	5+	
	3 (16)	4 (21)	5 (26)	7 (37)
Most common treatments,* n (%)				
Lenalidomide	19 (100)			
Bortezomib	18 (95)			
Dexamethasone	17 (89)			
Daratumumab	13 (68)			
Average number of MM-related medical visits in the last 3 months	5			
Education level, n (%)				
Postgraduate degree†	6 (32)			
College degree	3 (16)			
Some college	1 (5)			
High school	9 (47)			
Employment status, n (%)				
Employed full-time	3 (16)			
Employed part-time	4 (21)			
Retired	5 (26)			
Unable to work due to disability	6 (32)			
On sick leave	1 (5)			

*Includes past and current treatments. †Includes masters, MD, PhD, PharmD, MM, multiple myeloma.

Results

Sociodemographics and clinical characteristics

- A total of 19 patients participated in this study (Table 1) between the dates of Jan 25, 2021, and May 5, 2021.
- Mean (standard deviation) age was 56 years (9.6), and 79% of patients (n=15) were female. Most (84%; n=16) of patients had ≥3 prior LOTs.

Symptoms before treatment and impact of RRMM

- Patients experienced a wide range of disease symptoms (Figure 1A) that impacted their lives in a number of ways; the highest frequency symptoms were bone pain (79%; n=15), fatigue (79%; n=15), and generalized weakness (58%; n=11).

- Based on ranking, bone pain was considered as most bothersome by 37% of patients (n=7; Figure 1B).

- Disease symptoms often impacted patients' abilities to perform daily activities (84%; n=16 [Figure 2A]) and this was also ranked by 32% of patients (n=6) as the most bothersome impact of the disease (Figure 2B).

Benefits desired from treatment

- Patients most frequently reported increased life expectancy as the most important treatment benefit (95%; n=18), followed by hope for the future (89%; n=17), and reduced bone pain (74%; n=14), reduced fatigue (74%; n=14), achieving complete/partial remission (74%; n=14), and extended remission (74%; n=14 [Figure 3A]).

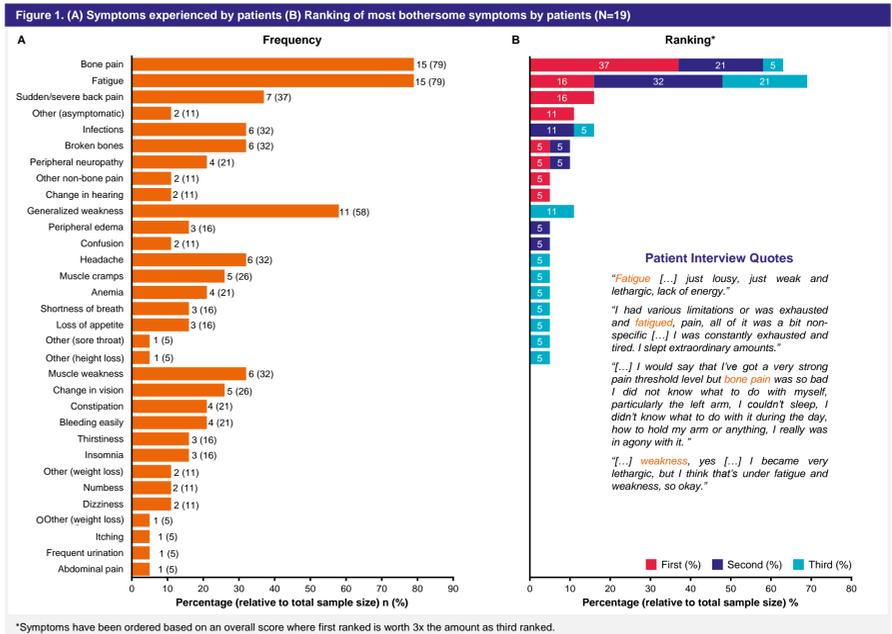
- However, some participants explained that this was also dependent on their quality of life, which was linked with remission.

- Seventy-nine percent of patients (n=15) ranked overall survival as the most important treatment benefit; 32% of patients (n=6) ranked achieving complete/partial remission as the second most important treatment benefit (Figure 3B).

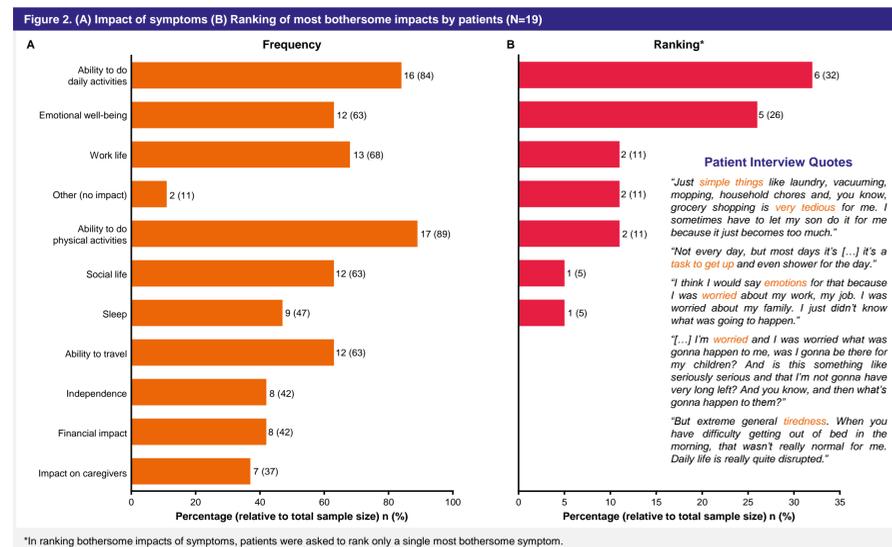
Symptoms / side effects after starting treatment

- Frequent side effects after starting treatment included blood-related side effects (89%; n=17), fatigue (89%; n=17), and bone pain (74%; n=14 [Figure 4A]).

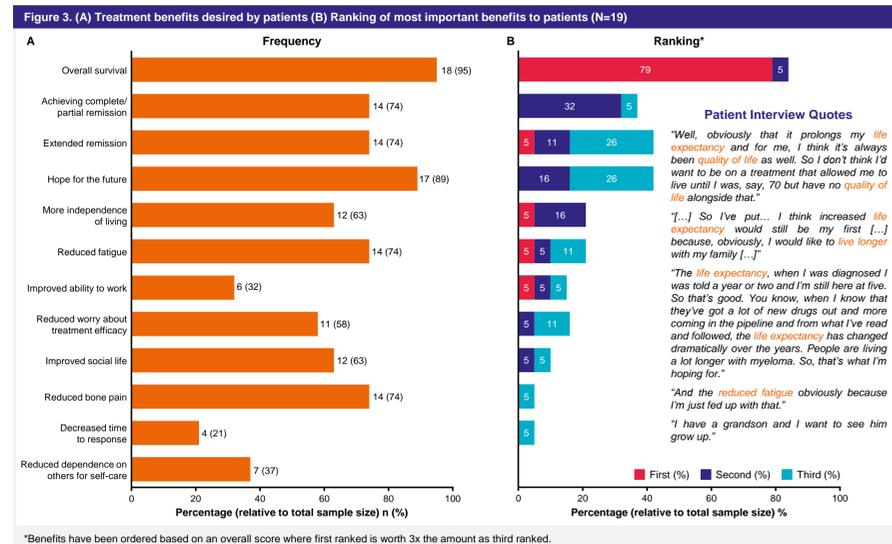
- The side effects that patients ranked as most important to avoid included fatigue (16%; n=3), peripheral neuropathy (16%; n=3), and blood-related side effects (11%; n=2 [Figure 4B]).



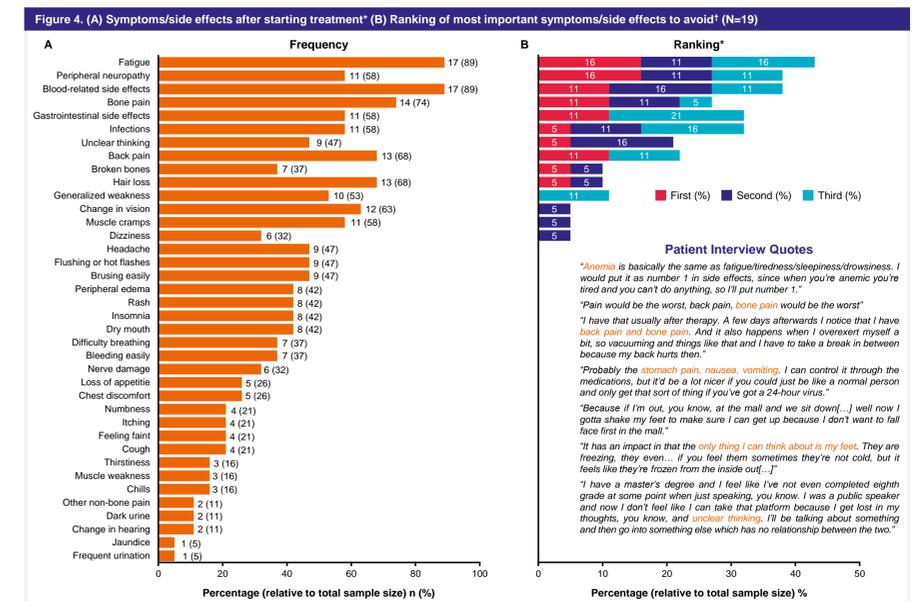
*Symptoms have been ordered based on an overall score where first ranked is worth 3x the amount as third ranked.



*In ranking bothersome impacts of symptoms, patients were asked to rank only a single most bothersome symptom.



*Benefits have been ordered based on an overall score where first ranked is worth 3x the amount as third ranked.



*Blood-related side effects include: anemia, neutropenia, and thrombocytopenia.

†Symptoms/side effects have been ordered based on an overall score where first ranked is worth 3x the amount as 3rd ranked.

Non-clinical attributes

- The way in which treatments were administered to patients (ie, intravenous infusion, orally, etc) was important to 74% of patients (n=14), and the frequency of treatment administration was important to 79% of patients (n=15).
- More than half (58%; n=11) of the patients interviewed indicated that they would prefer chimeric antigen receptor T-cell (CAR-T) therapy, given, it is a one-time treatment, over a therapy where medicine needed to be taken on a regular basis. However, patients also expressed concerns over long-term efficacy and side effects; some patients were worried about facing disappointment if they became ineligible during treatment due to their disease progression.

Conclusions

- This RRMM qualitative patient preference study is the first, to our knowledge, to include only patients with RRMM who had been exposed to ≥2 prior LOTs. It was also the first qualitative preference study among MM patients conducted across multiple countries.
- Patients in this study experienced a wide range of symptoms prior to treatment, and side effects since starting treatment, that have a significant impact on their quality of life, both physically and emotionally.
- Key symptoms and side effects of concern after starting treatment included fatigue, peripheral neuropathy, blood-related side effects, bone pain, gastrointestinal side effects, and infections.
- Patients in this study desired a treatment that prolonged overall survival; however, they expressed that improvement in quality of life and increased ability to plan for the future were also important.
- While treatment administration was important and patients preferred treatments that required infrequent administration, the preference was often dependent on overall efficacy and safety.
- This study identified relevant treatment attributes that will inform and influence a discrete choice experiment to further understand patients' preferences for RRMM treatments.

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Conflicts of interest

HG, CT, MR, and SM are employees of Evidera, a patient-centered outcome consultancy commissioned by GSK to conduct this research. RP has received consultancy fees from GSK and honoraria from Abbvie, Amgen, GSK, and Janssen. DK has received consultancy fees from GSK and Triphase Accelerator, owns stocks and shares in and advises, Calm Water Therapeutics. AO is an employee of GSK. EM, BG, LE, SS, LL, SP, and PP are employees of GSK and own stocks and shares in GSK.

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