P1690

Patient-Reported Outcomes Among Patients With Triple-Class Refractory Multiple Myeloma Initiating a New Line of Therapy in Real-World Clinical Practice: A Prospective, Multi-Site Observational Study

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Objectives

To describe the longitudinal changes in PROs in real-world clinical practice among patients with TCR MM who initiate a new line of therapy

Conclusions

- HRQOL and symptom measures generally worsened over the first few months for patients who initiated CAR-T therapy in the real world, although these measures improved to baseline levels and beyond at later time points
- Patients who did not initiate CAR-T therapy generally showed a plateau in HRQOL, with some modest improvement in disease symptoms
- Changes in a patient's self-reported impression of disease over time was dependent on the type of therapy they received and were reflective of changes in PRO measures

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Background

- Multiple myeloma (MM) is associated with severe symptoms that have been strongly correlated with reductions in health-related quality of life (HRQOL); these symptoms further deteriorate with each subsequent line of therapy[1]
- Patients with relapsed or refractory MM, particularly those with triple-class refractory (TCR) MM have particularly poor outcomes[1]
  - TCR MM is disease refractory to ≥1 proteasome inhibitor, ≥1 immunomodulatory drug, and ≥1 anti-CD38 monoclonal antibody

Methods

- A prospective, multisite, observational study of patients with TCR MM in the US was conducted through the Mayo Clinic system
- Patients initiating a new post-TCR therapy (defined as the index date) were followed for 12 months with patient-reported outcome (PRO) surveys administered for the first 6 months
  - For patients initiating a chimeric antigen receptor T cell (CAR-T) therapy, a survey was distributed at apheresis, lymphodepletion chemotherapy, and every month after T-cell infusion until month 6
  - All other patients received a survey before the index date and then every month thereafter until month 6
- PRO measures included the European Organisation for Research and Treatment of Cancer (EORTC) QLQ-C30 (including the global health status [GHS] score), the EORTC QLQ-MY20 (including the disease symptoms domain score), EORTC QLQ-CIPN20, EQ-5D-5L, Patient Global Impression of Severity, and Patient Global Impression of Change (PGI-C)
  - EORTC QLQ-CIPN20 results are reported in poster P1983
- Descriptive data were reported at each time point separately for patients who received CAR-T and non–CAR-T index therapies

Results

PATIENT DEMOGRAPHICS AND CHARACTERISTICS

- 55 patients were included in this analysis (**Table 1)**
  - 24 patients initiated a CAR-T therapy at index (12 patients each with idecabtagene vicleucel and ciltacabtagene vicleucel)
  - However, none of the 10 patients with arthritis initiated a CAR-T therapy
  - Of the remaining 31 patients, the most commonly initiated treatments at index were elotuzumab + pomalidomide (7 patients [23%]), carfilzomib + pomalidomide (6 patients [19%]), or carfilzomib + cyclophosphamide (6 patients [19%]), all with corticosteroids
  - Patient demographics and characteristics were similar between CAR-T and non–CAR-T therapy subgroups

Table 1. Baseline demographics and disease characteristics

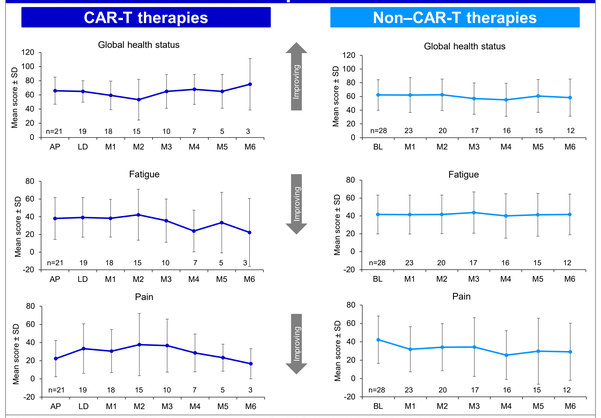
	Total patients N=55	CAR-T therapy n=24	Non–CAR-T therapy n=31	*P* value[a]
Age, median (IQR), years	67.1 (61.9-73.5)	65.5 (60.8-73.5)	69.0 (62.2-73.5)	
Male, n (%)	33 (60.0)	16 (66.7)	17 (54.8)	
Race, n (%)				
Black or African American	2 (3.6)	2 (8.3)	0	.19
White or Caucasian	53 (96.4)	22 (91.7)	31 (100)	.19
Ethnicity, n (%)				
Hispanic	1 (1.8)	1 (4.2)	0	.44
Non-Hispanic	53 (96.4)	23 (95.8)	30 (96.8)	1.00
Unknown/not sure	1 (1.8)	0	1 (3.2)	1.00
ECOG PS, n (%)				.57
0	29 (52.7)	13 (54.2)	16 (51.6)	
1	21 (38.2)	10 (41.7)	11 (35.5)	
2	5 (9.1)	1 (4.2)	4 (12.9)	
Cytogenetic abnormalities, n (%)[b]				
High risk	29 (52.7)	11 (45.8)	18 (58.1)	.53
Standard risk	5 (9.1)	5 (20.8)	0	<.05
Other abnormalities	2 (3.6)	1 (4.2)	1 (3.2)	1.00
No abnormalities	14 (25.5)	6 (25.0)	8 (25.8)	1.00
Unknown/not sure	5 (9.1)	1 (4.2)	4 (12.9)	.37
R-ISS stage, n (%)				1.00
I	18 (32.7)	8 (33.3)	10 (32.3)	
II	27 (49.1)	12 (50.0)	15 (48.4)	
III	5 (9.1)	2 (8.3)	3 (9.7)	
Unknown[c]	5 (9.1)	2 (8.3)	3 (9.7)	
Extramedullary disease, n (%)				
Yes	11 (20.0)	6 (25.0)	5 (16.1)	.63
No	43 (78.2)	18 (75.0)	25 (80.6)	.86
Unknown	1 (1.8)	0	1 (3.2)	1.00
Frailty index, n (%)[d]				
Arthritis	10 (18.2)	0	10 (32.3)	<.01
Musculoskeletal problems	28 (50.9)	11 (45.8)	17 (54.8)	.70
Hospital admission	17 (30.9)	6 (25.0)	11 (35.5)	.59
None	14 (25.5)	9 (37.5)	5 (16.1)	.14
Comorbid conditions, n (%)[e]				
Hypertension	22 (40.0)	10 (41.7)	12 (38.7)	1.00
Lymphopenia and/or leukopenia	37 (67.3)	19 (79.2)	18 (58.1)	.17
Monoclonal gammopathy	52 (94.5)	22 (91.7)	30 (96.8)	.57
Thrombocytopenia	30 (54.5)	10 (41.7)	20 (64.5)	.16

[a] *P* values were generated using a Wilcoxon rank-sum test for continuous variables and X^2 tests for categorical variables. For categorical variables with an expected cell count of ≤5, a Fisher exact test was performed; [b] High-risk cytogenetic abnormalities included t(4;14), t(14;16), t(14;20), del(17p) and gain(1q); standard-risk abnormalities included trisomies, t(11;14), and t(6;14); other abnormalities included del(1p), tetrasomy 8, and monosomy 4, 8, 13, 16, and 17. A hierarchy for these categories (high risk → standard risk → other abnormalities → no abnormalities → unknown) was implemented for patients who have multiple abnormalities; [c] Patients who have neither ISS nor R-ISS stage information; [d] ≥10% of enrolled patients; [e] ≥40% of enrolled patients
CAR-T=chimeric antigen receptor T cell; ECOG PS=Eastern Cooperative Oncology Group performance status; IQR=interquartile range; R-ISS=revised International Staging System

PATIENT-REPORTED OUTCOMES: HRQOL

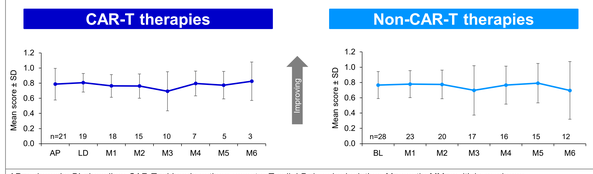
- QLQ-C30 (**Figure 1**)
  - CAR-T therapy: mean QOL scores (GHS, fatigue, and pain) worsened from baseline (BL) through months 2 to 3, and then improved to BL levels or beyond by months 4 and 5
  - Non–CAR-T therapy: mean GHS and fatigue scores largely plateaued over time, whereas mean pain scores improved from BL to month 6
- EQ-5D-5L (**Figure 2**)
  - There was little change in the mean EQ-5D-5L index scores from BL to month 6 for patients receiving CAR-T or non–CAR-T therapies
- QLQ-MY20 (**Figure 3**)
  - CAR-T therapy: mean disease symptom scores worsened from BL through months 2 to 3 and then improved back to BL levels or beyond by month 4
  - Non–CAR-T therapy: mean disease symptom scores improved from month 3
- PGI-C
  - CAR-T therapy: 78% were "a little better" or "much better" at month 1, although this number declined over time (**Figure 4A**)
  - Non–CAR-Ts: 35% of patients were "a little better" or "much better" at month 1, which improved to 50% by month 6 (**Figure 4B**)

Figure 1. QLQ-C30 in patients with TCR MM initiating CAR-T or non–CAR-T therapies



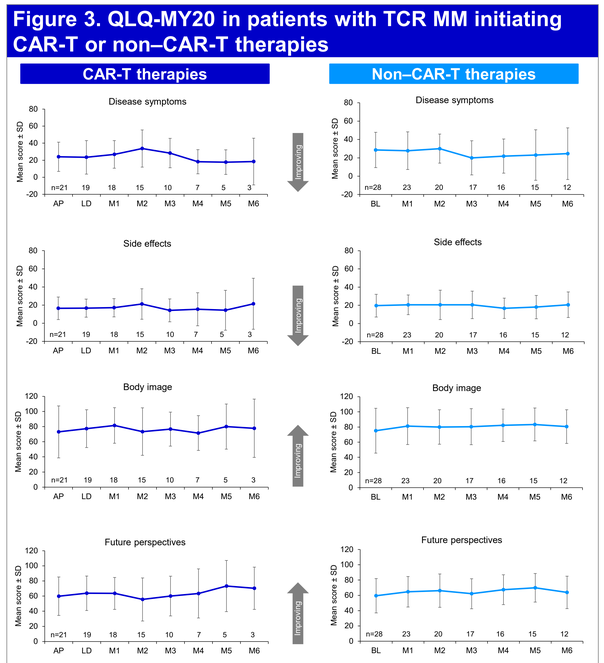
AP=apheresis; BL=baseline; CAR-T=chimeric antigen receptor T cell; LD=lymphodepletion; M=month; MM=multiple myeloma; TCR=triple-class refractory

Figure 2. EQ-5D-5L in patients with TCR MM initiating CAR-T or non-CAR-T therapies



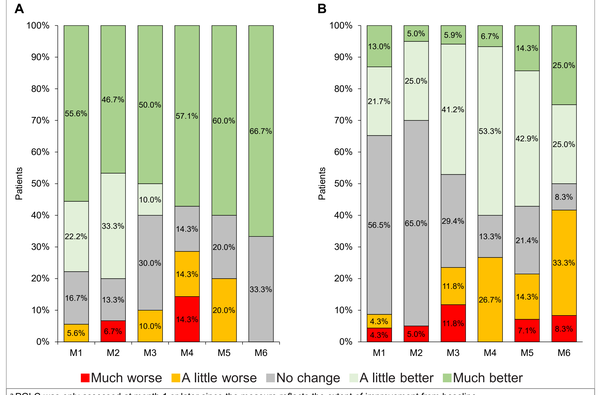
AP=apheresis; BL=baseline; CAR-T=chimeric antigen receptor T cell; LD=lymphodepletion; M=month; MM=multiple myeloma; TCR=triple-class refractory

Figure 3. QLQ-MY20 in patients with TCR MM initiating CAR-T or non–CAR-T therapies



AP=apheresis; BL=baseline; CAR-T=chimeric antigen receptor T cell; LD=lymphodepletion; M=month; MM=multiple myeloma; TCR=triple-class refractory

Figure 4. PGI-C in patients with TCR MM initiating CAR-T (A) or non–CAR-T (B) therapies[a]



[a] PGI-C was only assessed at month 1 or later since the measure reflects the extent of improvement from baseline
CAR-T=chimeric antigen receptor T cell; M=month; MM=multiple myeloma; PGI-C=Patient Global Impression of Change; TCR=triple-class refractory