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Health-Related Quality of Life Changes in Multiple Myeloma Patients: The EXPLORE Study

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INTRODUCTION

Multiple myeloma (MM) is a hematological malignancy significantly affecting patients' health-related quality of life (HRQoL)¹. Although recent therapeutic advances have prolonged the survival rates, it is essential to understand its impact on HRQoL^{2,3}.

This study aimed to describe the changes in HRQoL, treatment satisfaction, and clinical outcomes among transplant-ineligible newly diagnosed patients (NDMM) and relapsed/refractory multiple myeloma (RRMM) patients during 12 months after the initiation of treatment according to the Portuguese clinical practice.

METHODS

The EXPLORE study was a multicenter, prospective, non-interventional study conducted between 2021 and 2022, to describe changes in HRQoL scales (EQ-5D-5L, EORTC-QLQ-C30), 12 months after initiation of treatment for MM, according to the usual clinical practice, in two cohorts: NDMM population (n=24) and RRMM adult population (n=15). The treatment decision was taken prior to and independently of the patient's inclusion in the study. HRQoL was assessed at baseline, and at 3, 6, and 12 months. The study was conducted in 9 sites and had a total duration of 24 months.

RESULTS

Mean age was higher in NDMM patients than in those with RRMM (76 vs. 68 years). **ECOG ≤1** and **ISS stage II** were predominant in both cohorts (**Table 1**). Statistically significant improvements in **EQ-5D-5L Index Score** were observed at 3 months for NDMM (**p=0.04**) and in **EQ-5D-5L VAS Score** at 6 months for RRMM (**p=0.02**). Furthermore, functional improvements (EORTC-QLQ-C30) were significant at 12 months for NDMM patients (p=0.04), while RRMM patients experienced significant global health improvements, at all-time points (p=0.02). In both cohorts, most patients were treated with **daratumumab-based regimens** (12/20 NDMM; 7/12 RRMM); following treatment, a **Very Good Partial Response (VGPR)** was the most common response type in NDMM and **VGPR** and **Partial Response** were the most common response types in RRMM. Patient satisfaction remained consistently high across groups, with efficacy being the most valued factor, followed by **safety and convenience of administration**. Overall, patients expressed positive satisfaction with their treatment.

Table 1. Baseline Demographic and Clinical Characteristics of NDMM and RRMM Patients.

Variable	Parameter	NDMM	RRMM
Age (years)	n	20	12
	Mean	76.75	68.33
	SD	6.46	5.38
Sex, n (%)	n	20	12
	Female	9 (45.00)	5 (41.67)
	Male	11 (55.00)	7 (58.33)
Time since diagnosis (months)	n	20	11
	Mean	2.75	27.82
	SD	3.34	17.86
ECOG, n (%)	n	20	12
	0	4 (20.00)	3 (25.00)
	1	7 (35.00)	4 (33.33)
	2	4 (20.00)	2 (16.67)
	3	1 (5.00)	1 (8.33)
ISS Stage, n (%)	n	20	12
	Stage I	6 (30.00)	2 (16.67)
	Stage II	10 (50.00)	5 (41.67)
	Stage III	4 (20.00)	3 (25.00)
	NA	0 (0.00)	2 (16.67)
Cytogenetic Characteristics, n (%)	n	20	12
	Standard Risk	5 (25.00)	4 (33.33)
	High Risk	3 (15.00)	4 (33.33)
	Unknown	12	4
Evidence of Lytic Disease, n (%)	N	20	12
	Yes	7 (35.00)	8 (66.67)
	No	8 (40.00)	2 (16.67)
	Unknown	5 (25.00)	1 (8.33)
Evidence of Extramedullary Plasmacytoma, n (%)	n	20	12
	Yes	0 (0.00)	1 (8.33)
	No	15 (75.00)	8 (66.67)
	Unknown	5 (25.00)	2 (16.67)

Table 2. Mean EQ-5D-5L Index and VAS Scores Over Time in NDMM and RRMM Patients.

Dimension	Mean 3 Months - Baseline	n	p-value	Mean 6 Months - Baseline	n	p-value	Mean 12 Months - Baseline	n	p-value
NDMM									
Index Score	0.14	12	0.04 *	0.02	12	0.20	0.02	6	0.79
VAS Score	3.08	13	0.83	-0.83	12	0.61	6.67	6	0.58
RRMM									
Index Score	0.16	7	0.15	0.13	9	0.18	0.26	5	0.06
VAS Score	10.50	8	0.18	17.20	10	0.02 *	17.50	6	0.20

Questionnaire Index Score ranges from -0.603: "Worst Possible Health State" to 1: "Best Possible Health State". Questionnaire Dimension Scores range from 1: "No Problems" to 5: "Extreme Problems". Questionnaire VAS Score ranges from 0: "Worst Health Imaginable" to 100: "Best Health Imaginable". * p < 0.05

Figure 1. Change from Baseline to 3, 6, and 12 Months in EQ-5D-5L Index Score in NDMM Cohort & Change in EQ-5D-5L VAS Score RRMM Cohort.

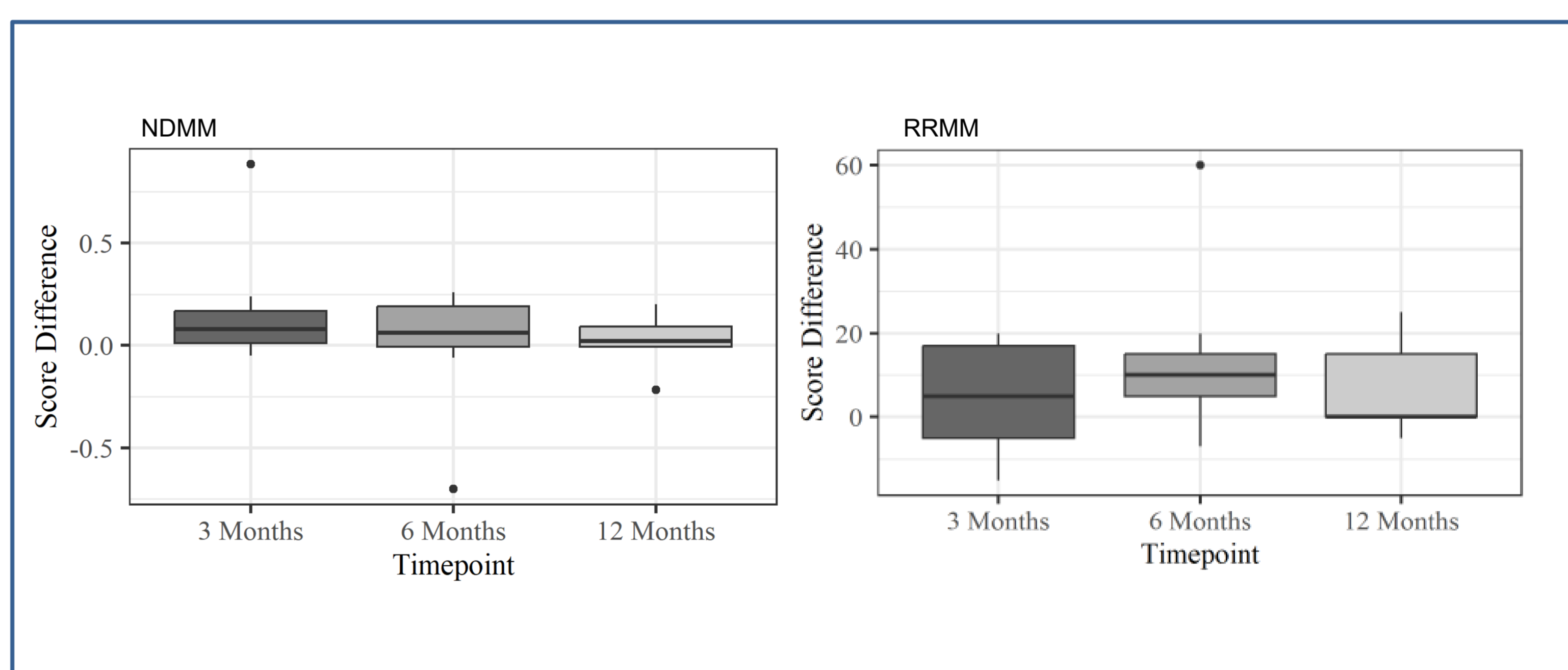
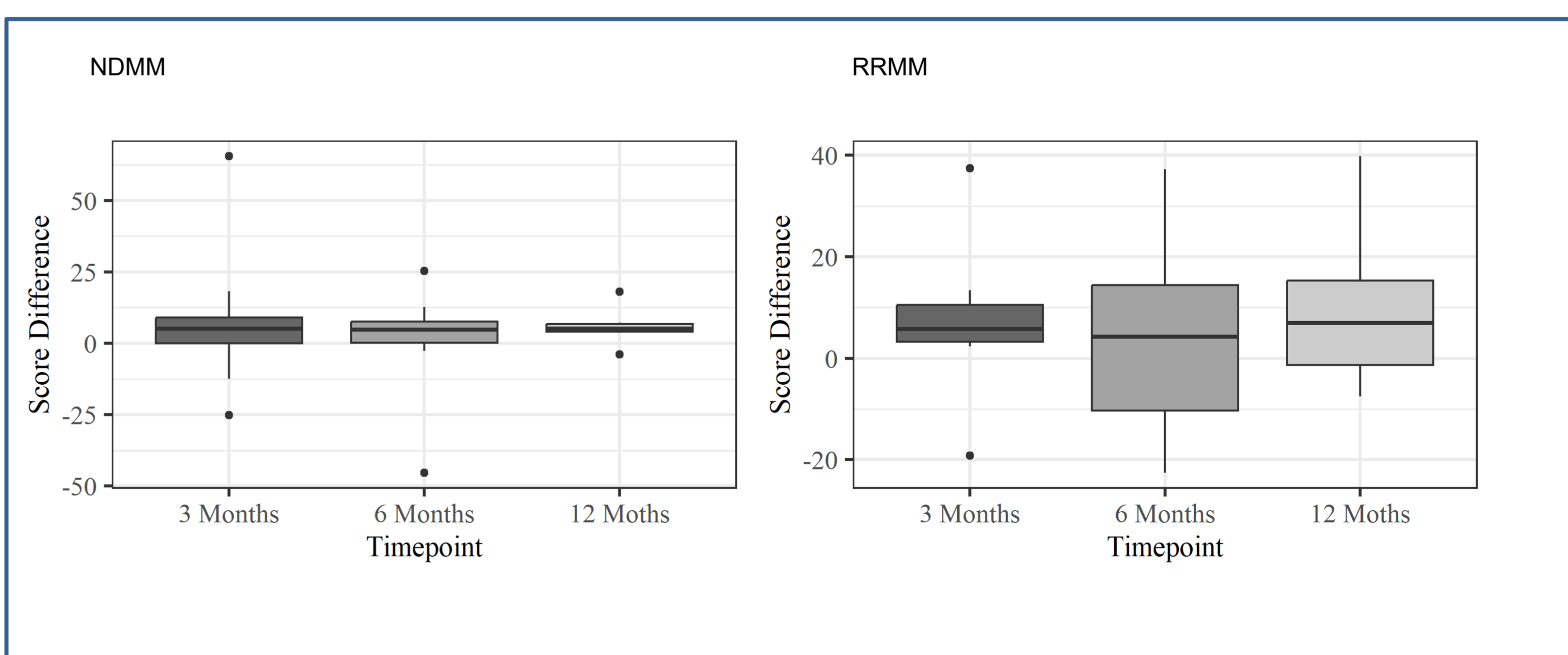


Figure 2. Change in EORTC-QLQ-C30 Index Score from Baseline to 3, 6, and 12 Months in NDMM and RRMM Cohorts.



CONCLUSION

This real-world data, in which most MM patients received daratumumab-based regimens, underscores the potential for substantial improvements in HRQoL among patients. Integrating HRQoL assessments into routine clinical practice is essential to guide patient-centered treatment strategies. Further research will be crucial to validate and expand these findings.

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