

Quality of life and caregiver burden in multiple myeloma and lymphoma patients and their caregivers undergoing outpatient autologous stem cell transplantation compared to inpatient transplantation

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INTRODUCTION

- Chronic bed shortages and financial constraints have led programs to standardize outpatient autologous stem cell transplantation (ASCT) as an alternative to the traditional inpatient approach for lymphoma and multiple myeloma (MM)
- Outpatient ASCT requires family/friends assuming caregiving responsibilities
- This approach is generally perceived as providing superior quality of life (QOL)¹, but there is little supporting evidence²
- In addition, little is known about QOL for caregivers and their lost opportunity costs (wages/travel time)

OBJECTIVES

- To determine changes in QOL of patients receiving an outpatient versus inpatient ASCT
- To determine changes in QOL of caregivers between outpatient versus inpatient ASCT
- To determine the magnitude of lost opportunity costs for caregivers

METHODS

Eligibility criteria

- Age ≥18 undergoing ASCT for MM or lymphoma
- Followed at centre for the 100-day ASCT period

Questionnaire timepoints: D0 (baseline), D+7, D+14, D+28, and D+100.

Patient questionnaires

- Functional Assessment of Cancer Therapy – Fatigue (FACT-F)
- Functional Assessment of Cancer Therapy – Bone Marrow Transplant (FACT-BMT)
- EQ-5D Health Questionnaire
- Distress/Impact Thermometer

Caregiver questionnaires

- Caregiver QOL Index-Cancer (CQOLC)
- Distress/Impact Thermometer
- Caregiver Self-Administered Financial Expenditure (C-SAFE) questionnaire

RESULTS

Patient population

Description	Full sample (N=52) (%)	Inpatient (N=21) (%)	Outpatient (N=31) (%)	p-value
Age (years)	Mean: 57 Range: [18-70]	60 [18-70]	55 [28-69]	0.0082
Female	17 (33)	7 (33)	10 (32)	1
Male	35 (67)	14 (67)	21 (68)	
Lymphoma	15 (29)	9 (43)	6 (19)	0.12
MM	37 (71)	12 (57)	25 (81)	
HCT-CI	2.2 ± 1.6	2.1 ± 1.7	2.3 ± 1.6	0.64
KPS	84.7 ± 9.2	85.0 ± 7.9	84.5 ± 9.9	1
Caregiver				0.39
Spouse/partner	32 (73)	10 (77)	22 (71)	
Son/daughter	3 (7)	0 (0)	3 (10)	
Parent	3 (7)	2 (15)	1 (3)	
Sibling	3 (7)	0 (0)	3 (10)	
Other	3 (7)	1 (8)	2 (6)	

HCT-CI: Hematopoietic cell transplantation-specific comorbidity index
KPS: Karnofsky Performance Scale

Changes in QOL scores from D0: overall sample

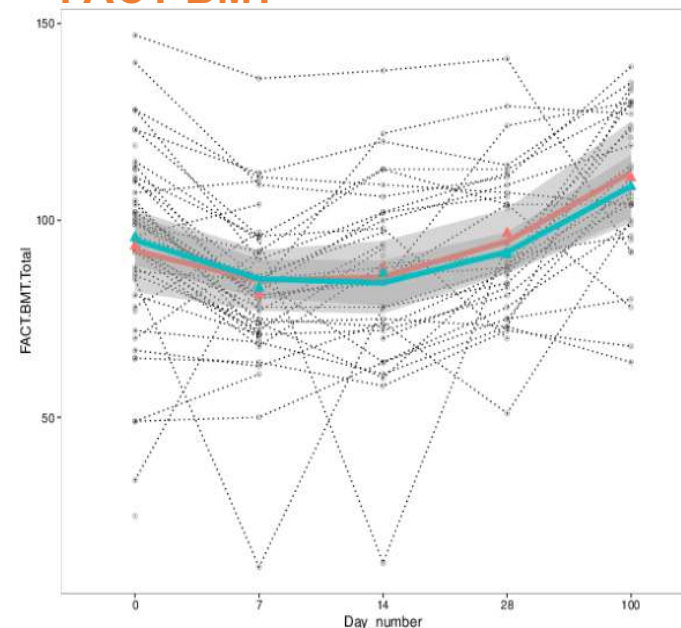
Timepoint	FACT-BMT	FACT-F	EQ5D	C-QOLC
D+7	-13.21 (5.29) p=0.014	-9.46 (2.66) p=0.00053	-21.99 (5.53) p=0.00012	11.17 (6.02) p=0.067
D+14	-7.76 (6.09) p=0.20	-5.98 (3.07) p=0.053	-13.84 (6.23) p=0.028	12.09 (8.68) p=0.17
D+28	3.16 (5.77) p=0.58	-5.43 (2.91) p=0.064	-5.2 (5.91) p=0.38	12.44 (6.3) p=0.051
D+100	16.36 (5.92) p=0.0065	6.75 (2.98) p=0.025	1.56 (6.05) p=0.08	21.26 (6.64) p=0.0019

Changes in QOL scores from D0: outpatient vs. inpatient

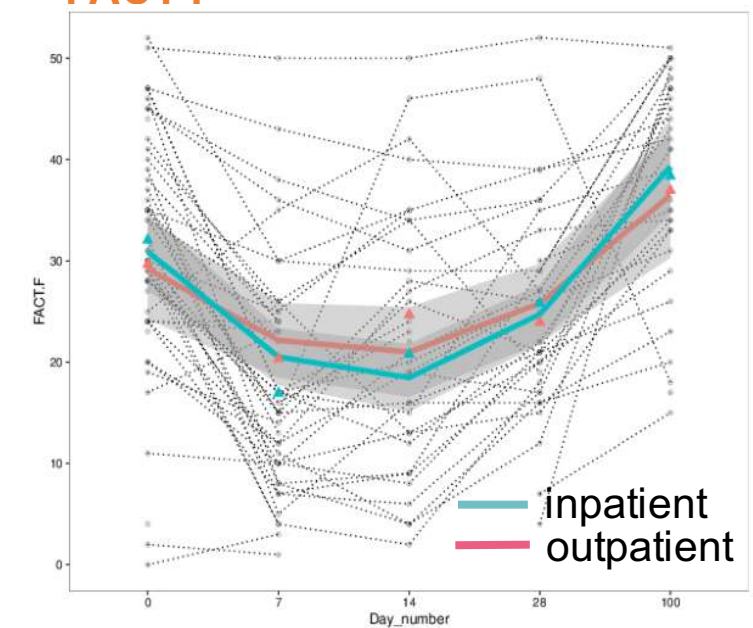
Only FACT-BMT was significant at D+28 and C-QOLC at D+14.

Serial trends in QOL scores

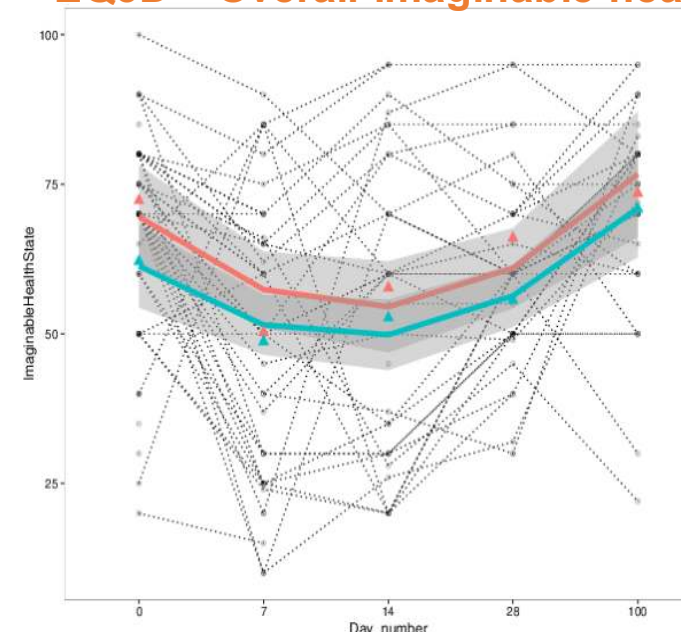
FACT-BMT



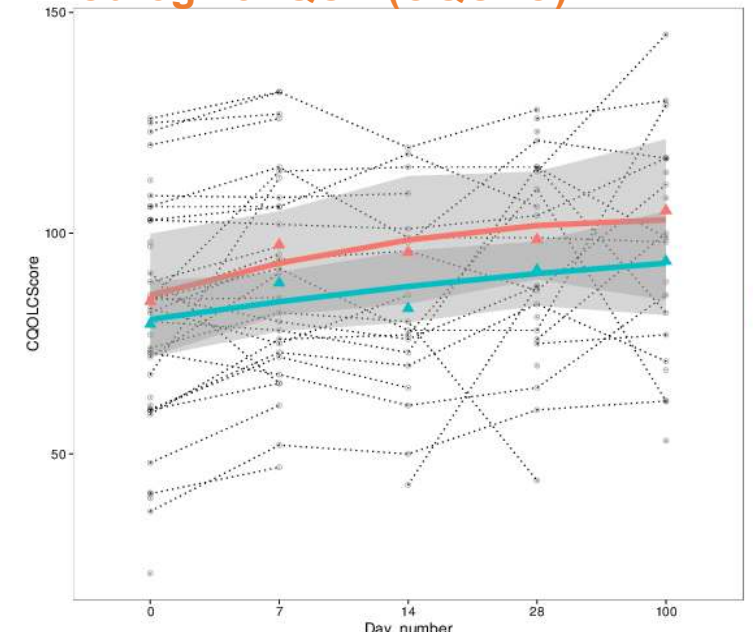
FACT-F



EQ5D – Overall imaginable health



Caregiver QOL (CQOLC)



Average lost opportunity costs for caregiver:

- D0: \$1,247 (range: \$117 – 3,928)
- D+7: \$1,244 (range: \$98 – 3,928)
- D+14: \$1,100 (range: \$188 – 1,542)
- D+28: \$260 (range: \$188 – 426)
- D+100: \$345 (range: \$86 – 1,405)

CONCLUSION

- There was significant decline in several QOL domains for all patients at D+7, which seem to improve by D+100
- Caregiver QOL at D+100 seems to be higher than baseline
- Ongoing recruitment will delineate inpatient versus outpatient lost opportunity costs

¹ Frey P, Stinson T, Stinson A, et al: Lack of caregivers limits use of outpatient hematopoietic stem cell transplant program. Bone Marrow Transplant 30:741-8, 2002
² Dix SP, Geller RB: High dose-chemotherapy with autologous stem cell rescue in the outpatient setting. Oncology (Williston Park): 14: 171-85; discussion 185-6, 191-2, 2000