

# High Self Efficacy after Hematopoietic Stem Cell Transplant

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## Background

### Self efficacy

A person's belief in their capacity to succeed; reflects confidence in the ability to exert control over one's own motivation, behavior, and environment.

- Having higher self-efficacy has been linked to lower symptom burden, higher physical function, and higher quality of life.<sup>1-5</sup>
- Goal: Characterize patient factors associated with self-efficacy in patients who have undergone hematopoietic stem cell transplant (HSCT), and to further elucidate the relationship between self-efficacy and outcomes after HSCT using a large bone marrow transplant (BMT) database.

## Methods

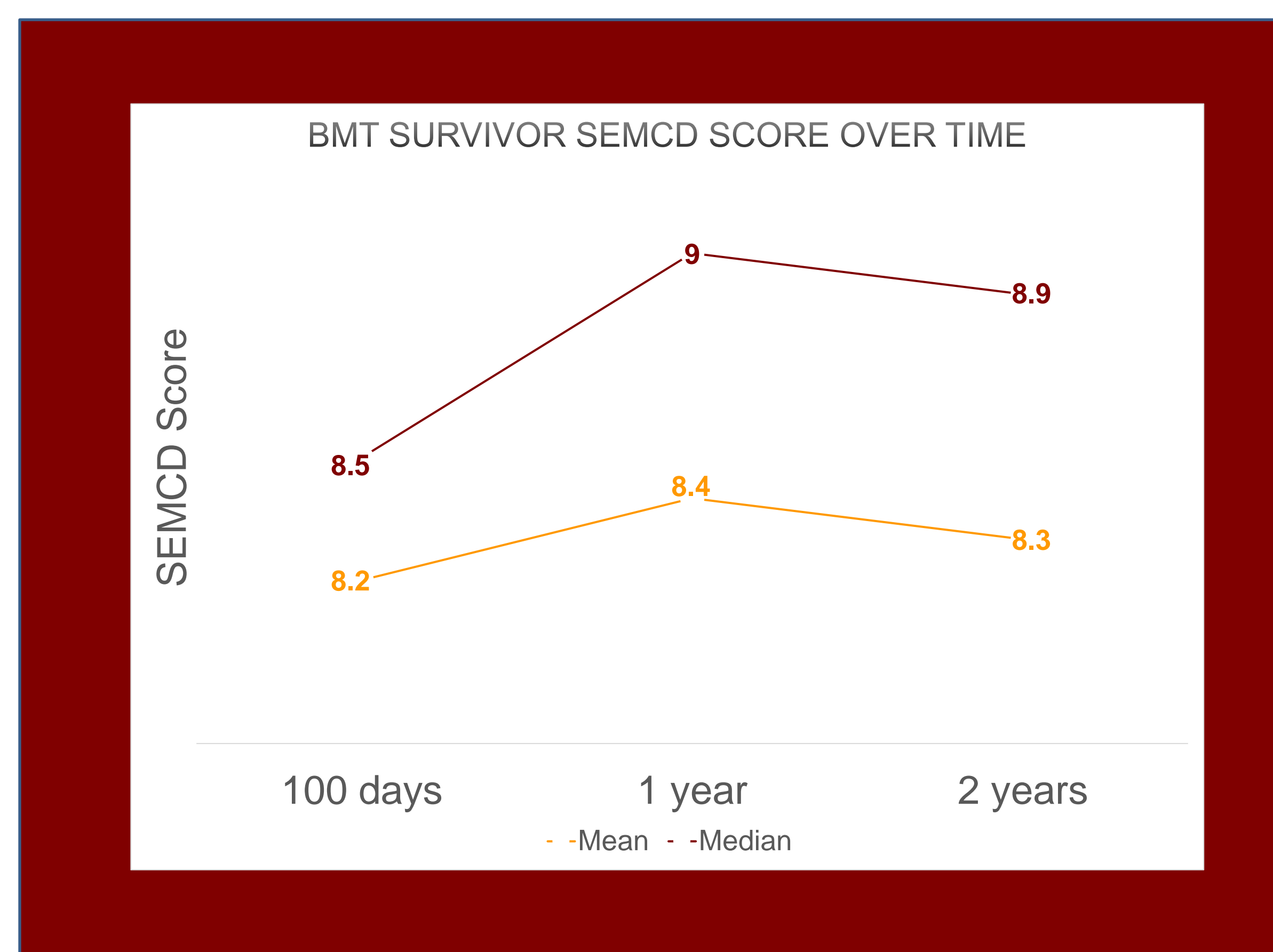
- Reviewed 344 patient records from the University of Minnesota (UMN) BMT database of those transplanted between 8/2017-8/2019.
- Records reviewed included results of completed Self-Efficacy for Managing Chronic Disease 6-item scale (SEMCD)<sup>6</sup> at three post-HSCT timepoints – 100 days, 1 year, and 2 years. Additional information collected included demographic and disease treatment information.
- Data were analyzed for median SEMCD scores, score trends over the three survivorship timepoints, correlates of high vs. low SEMCD scores, and whether SEMCD scores correlated with 2-year survival.

**SEMCD**

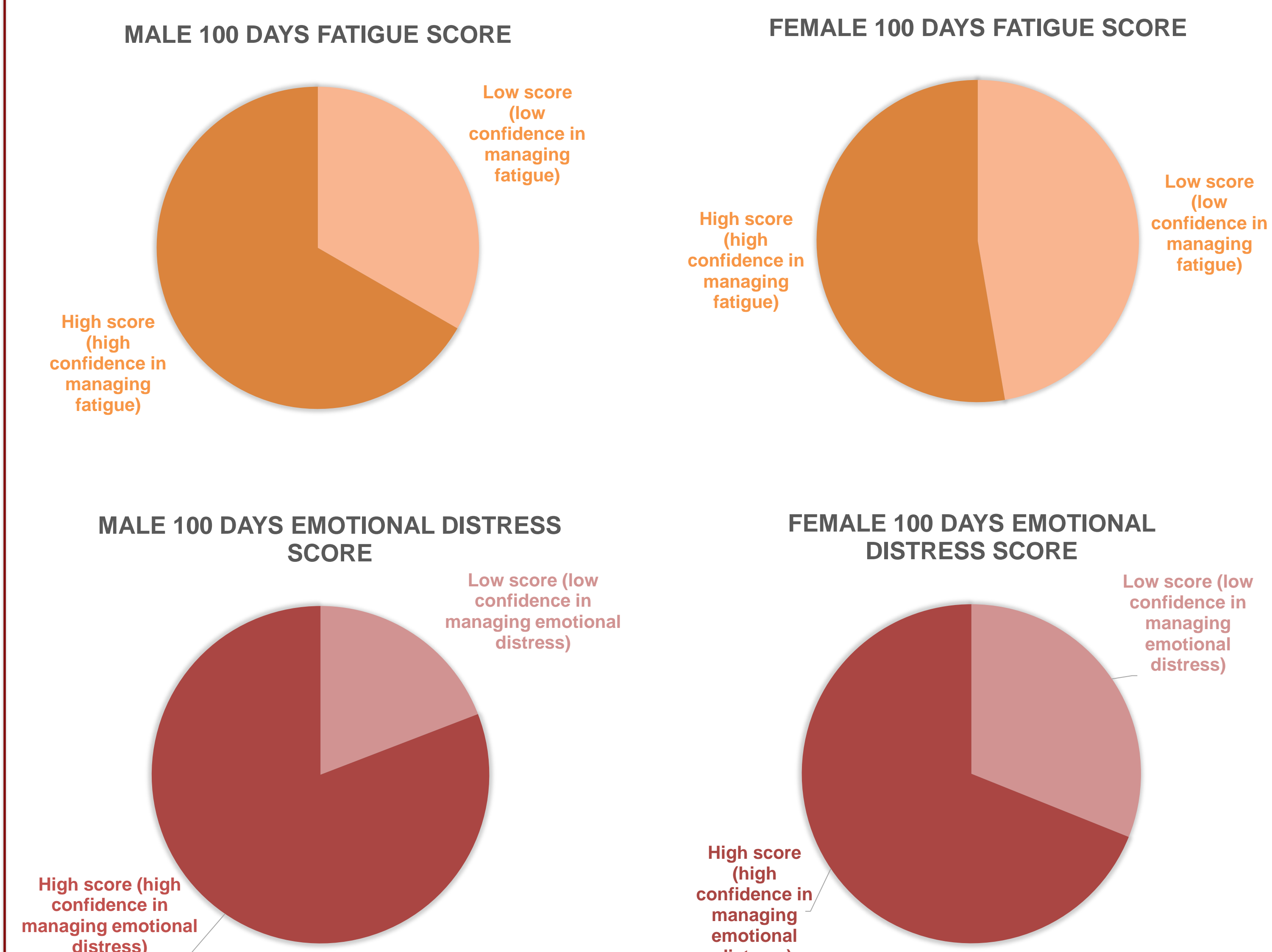
- How confident are you that you can keep the fatigue caused by your treatment from interfering with the things you want to do?  
 not at all confident | 1 2 3 4 5 6 7 8 9 10 | totally confident
- How confident are you that you can keep the physical discomfort or pain from your treatment from interfering with the things you want to do?  
 not at all confident | 1 2 3 4 5 6 7 8 9 10 | totally confident
- How confident are you that you can keep the emotional distress caused by your treatment from interfering with the things you want to do?  
 not at all confident | 1 2 3 4 5 6 7 8 9 10 | totally confident
- How confident are you that you can keep any other symptoms or health problems you have from interfering with the things you want to do?  
 not at all confident | 1 2 3 4 5 6 7 8 9 10 | totally confident
- How confident are you that you can do the different tasks and activities needed to manage your health condition so as to reduce your need to see a doctor?  
 not at all confident | 1 2 3 4 5 6 7 8 9 10 | totally confident
- How confident are you that you can do things other than just taking medication to reduce how much your condition affects your everyday life?  
 not at all confident | 1 2 3 4 5 6 7 8 9 10 | totally confident

## Results

255/344 patients had completed at least one timepoint of the SEMCD



### Correlates of self efficacy – patient factors with p value ≤ 0.05



## Discussion

- SEMCD scores were high compared to those reported in several other chronic conditions.<sup>7</sup> Similarly high scores were seen in patients who have received organ transplants.
- Male gender was a correlate of higher self efficacy scores in the realms of fatigue and emotional distress
- There was no association between SEMCD scores and 2-year survival

### Self efficacy among patients with various chronic diseases<sup>7</sup>

Condition	SEMCD mean (SD)
Heart failure	7.7 (1.6)
Scleroderma	6.4 (2.3)
End stage liver disease	7.3 (2.1)
Organ transplant recipient	9.0 (1.0)
COPD	5.3 (2.2)
General medical patients with at least 1 chronic condition	6.7 (2.3)
Cancer survivors who completed treatment in the last 12 months	6.5 (NR)

### Why is self efficacy so high in BMT survivors?

- 1) High self efficacy may be due to the high level of support provided after HSCT. Periods of transition back to primary care or a referring oncologist might be opportunities to explore this further.
- 2) High self efficacy may be mediated by factors that favor those with power and privilege, and HSCT might be preferentially offered to those with high self efficacy to begin with. This has important implications for equity and access to HSCT as a potentially life-saving treatment.

### Next steps

- Investigate referral patterns: Who is referred for HSCT and who is not? Are all eligible patients being referred equally?
- Examine systemic biases related to who is offered transplant by comparing self efficacy in a similarly burdened group such as a cross section of patients with acute leukemia
- Obtain context for these data through input from BMT survivors
- Explore opportunities to better support patients with lower self efficacy

### References

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