

Ochsner Clinical School

Patient-Reported Outcomes Measurement Information System (PROMIS)

Computer Adaptive Testing (CAT) in a

Hematopoietic Stem Cell Transplantation Program: A Prospective Feasibility Study





An To^{1,2}, Amanda Blackmon², Miguel Risco³, Paul Coluzzi^{2,4}, Edward Nelson^{2,4}, Chelsea McKinney⁵, Stefan Ciurea^{2,4}, Lari Wenzel^{4,6}

道Chao Family
Comprehensive Cancer Center

¹ University of Queensland-Ochsner Clinical School, Brisbane, QLD/ New Orleans, LA, ² Division of Hematology/Oncology, Department of Medicine, University of California, Irvine, Orange, CA, ³ Martin Luther King, Jr. Outpatient Center, Department of Hematology/Oncology, Los Angeles, CA, ⁴ Chao Family Comprehensive Cancer Center, University of California, Irvine, Orange, CA, orange

Introduction

Patient-Reported Outcome
Measurement Information System
(PROMIS) utilizes computer adaptive
testing (CAT) for a dynamic and
efficient tool to collect patientreported outcomes. Experience with
PROMIS-CAT in patients undergoing
hematopoietic stem cell
transplantation (HSCT) is limited.
The aim of this study was to evaluate
the feasibility of PROMIS-CAT in
HSCT.

Objective

To assess the efficacy and feasibility of PROMIS-CAT in patients actively undergoing HSCT to identify common symptoms surrounding transplant with the goal of earlier intervention and improved outcomes

Methods

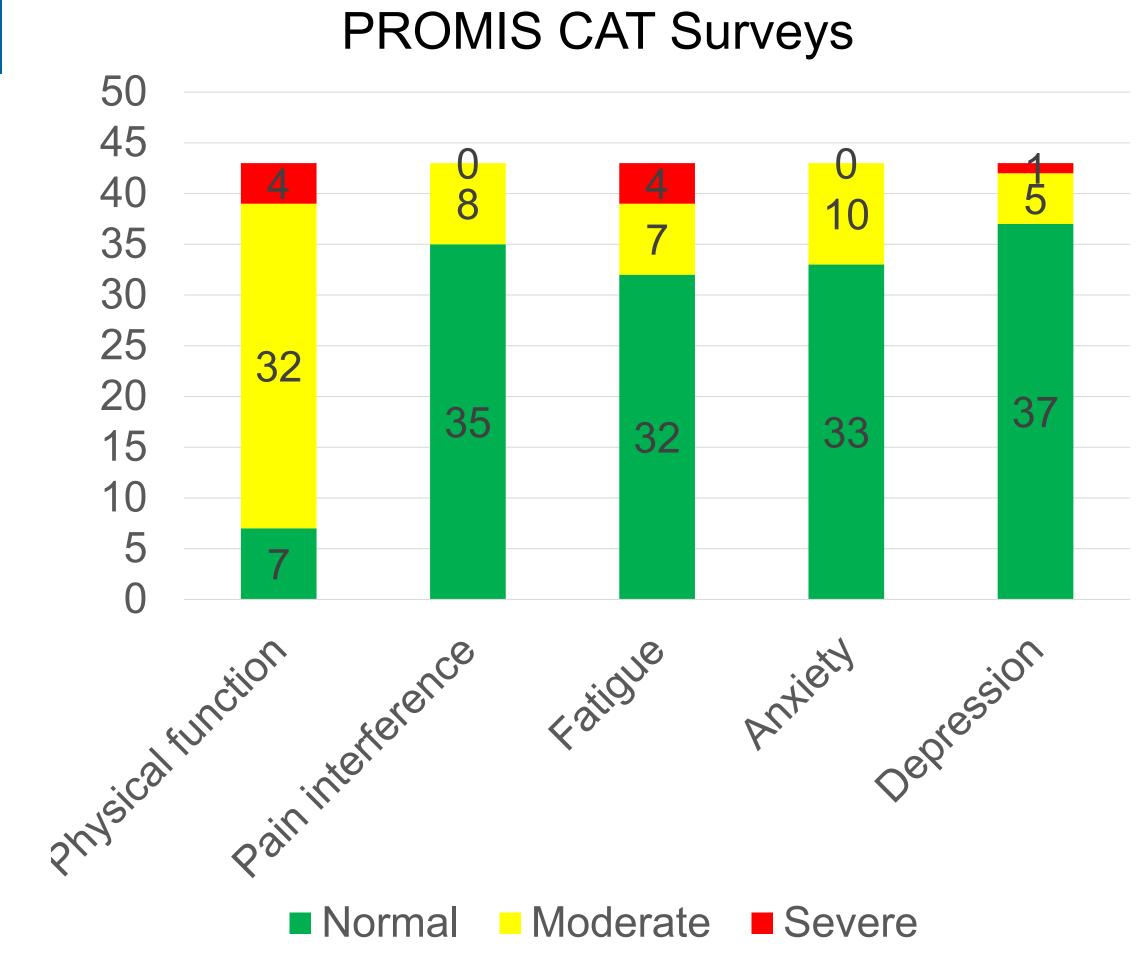
Design: Single-arm prospective study **Setting:** Single academic center in HSCT inpatient and outpatient setting

Patients: All patients consented for HSCT were eligible

Intervention: Patients were asked to complete PROMIS-CAT surveys on an iPad at protocol-defined timepoints during HSCT (pre-transplant, days 30, 60, 90, 180, and 360). In-person administration was the preferred method; however, administration by phone was acceptable due to COVID-19 restrictions.

Results

Between June 2020-August 2021, 17/20 (85%) patients consented, mean age was 54.9 years (age range 24-75), and 53% were female participants. During this period, there were 66 protocol-timepoints to collect PROMIS-CAT surveys.



43 (65.2%) were completed as planned. Reasons for missed surveys included patient declined to complete (2/66, 3.0%), unable to reach patient (15/66, 22.7%), and institutional error (6/66, 9.1%). The majority of completed surveys (41/43, 95.5%) were scored as "very easy" to complete by participants.

Moderate-to-severe symptoms scores in ≥ 1 categories were identified in 38 (88.4%) of 43 surveys. The number of moderate-to-severe scores in each category are: physical function (36), pain interference (8), fatigue (11), anxiety (10), and depression (6).

Discussion

Collection of PROMIS-CAT is feasible and acceptable in HSCT. Adherence for completing surveys was limited by phone administration and the COVID-19 pandemic. PROMIS-CAT can provide valuable insights into patient-centered symptoms during HSCT, which can give opportunities for appropriate symptom intervention.