



IMPACT Updates



Duke Cancer Institute

Teen and Young Adult
Oncology Program



DukeHealth

Department of Rehabilitation

IMPACT Volumes



95 interested patients

61 patients enrolled

10 started program but did not complete

47 completed

3 in progress

1 Enrolled pending start

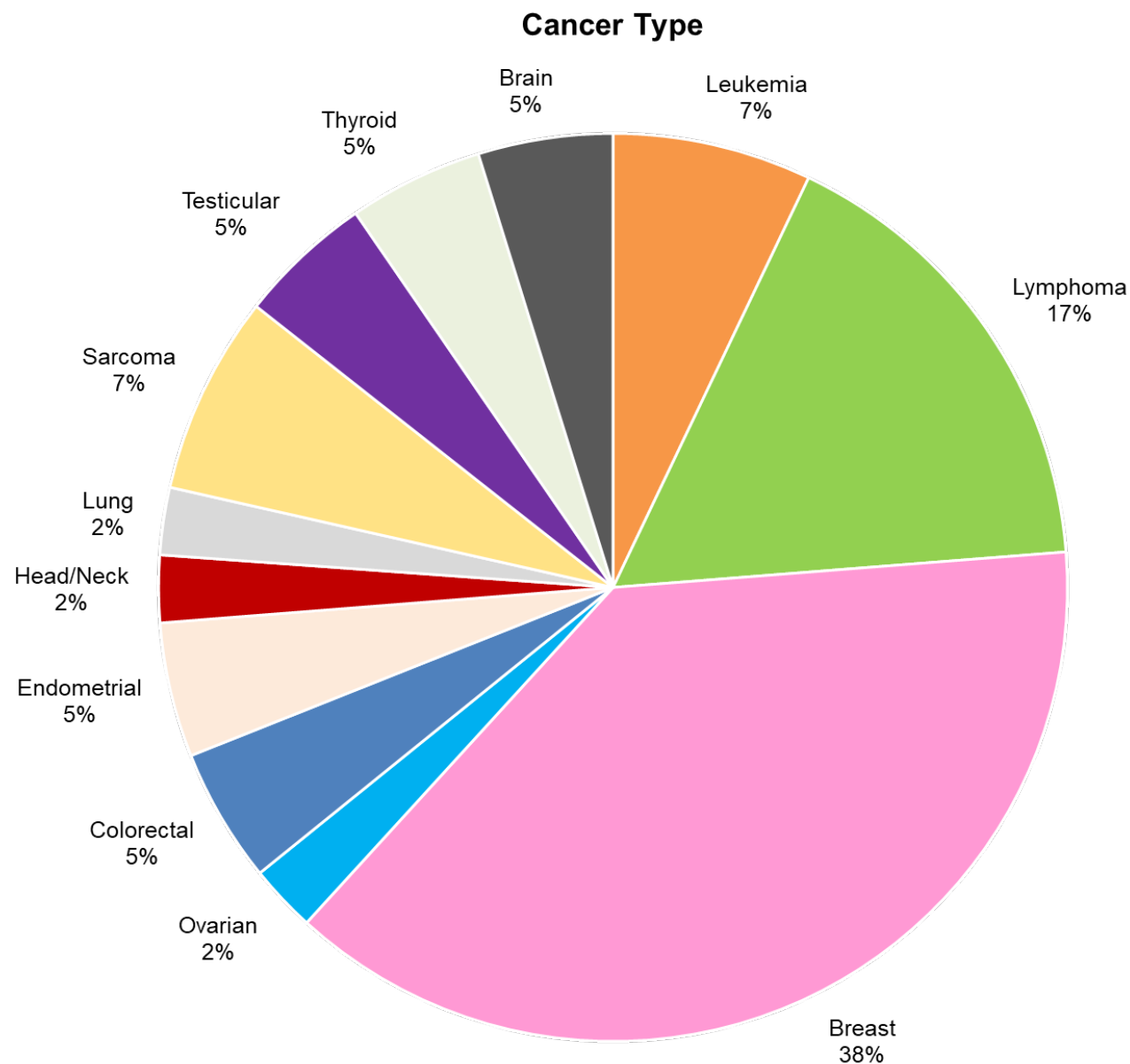
Reason	Number
Withdrawn due to health	4
Lost	3
Unknown	1
No longer needed	1
Personal Reasons	1

34 patients did not start

Reason	Number
Lost to follow-up	14
Not appropriate due to health	6
Ineligible (outside age range)	4
No notes on why	2
Pt. died before starting	2
Could not commit to in-person visits	2
Other (pt. Misunderstanding of the program, deferred due to work)	2

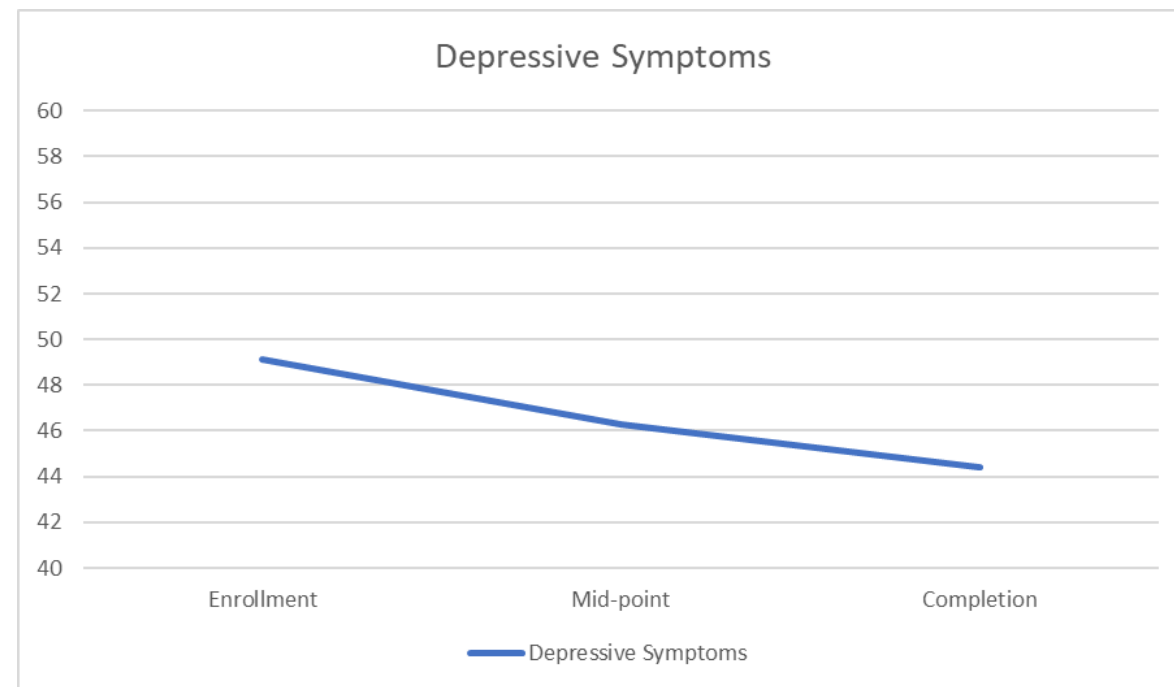
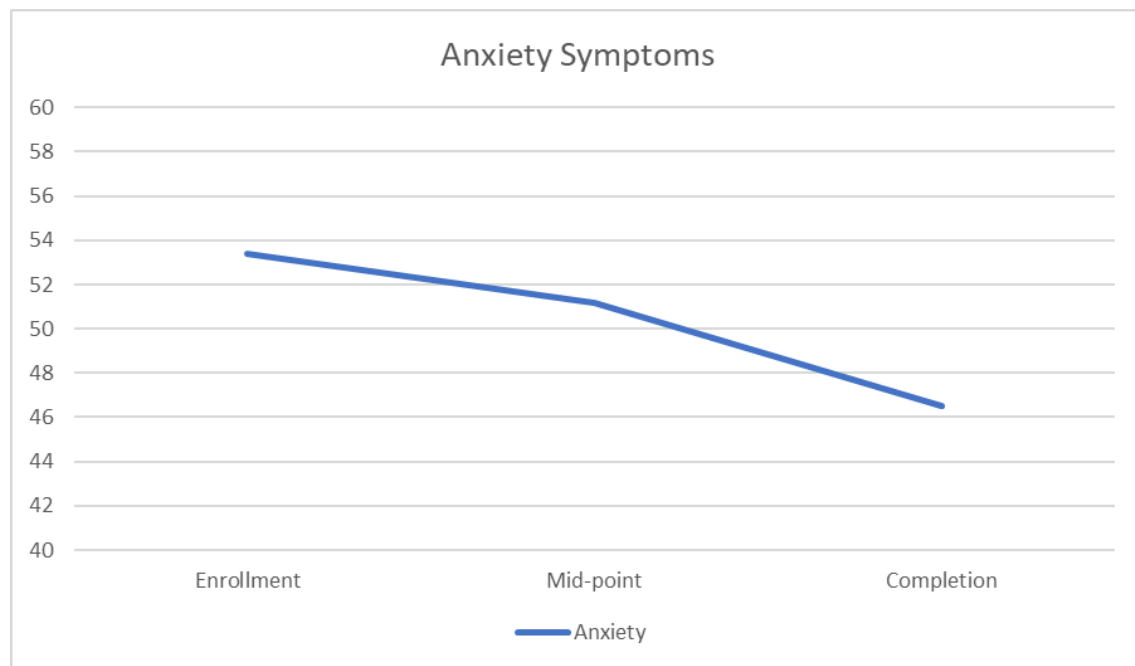


Distribution of Cancer Diagnoses (n=42)





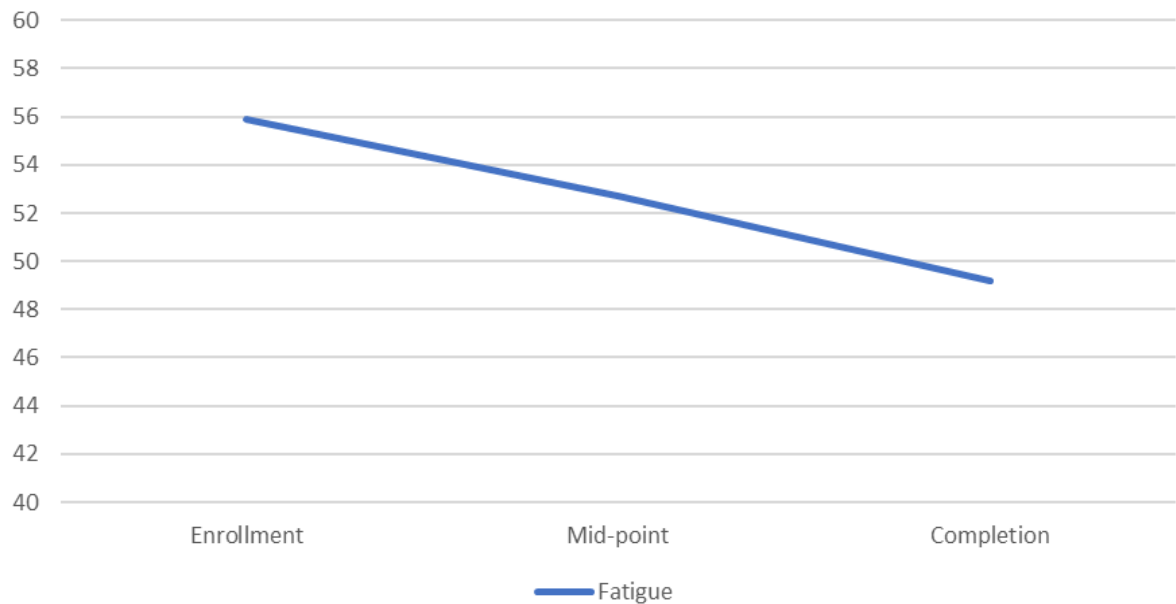
Symptom Burden: PROMIS Measures



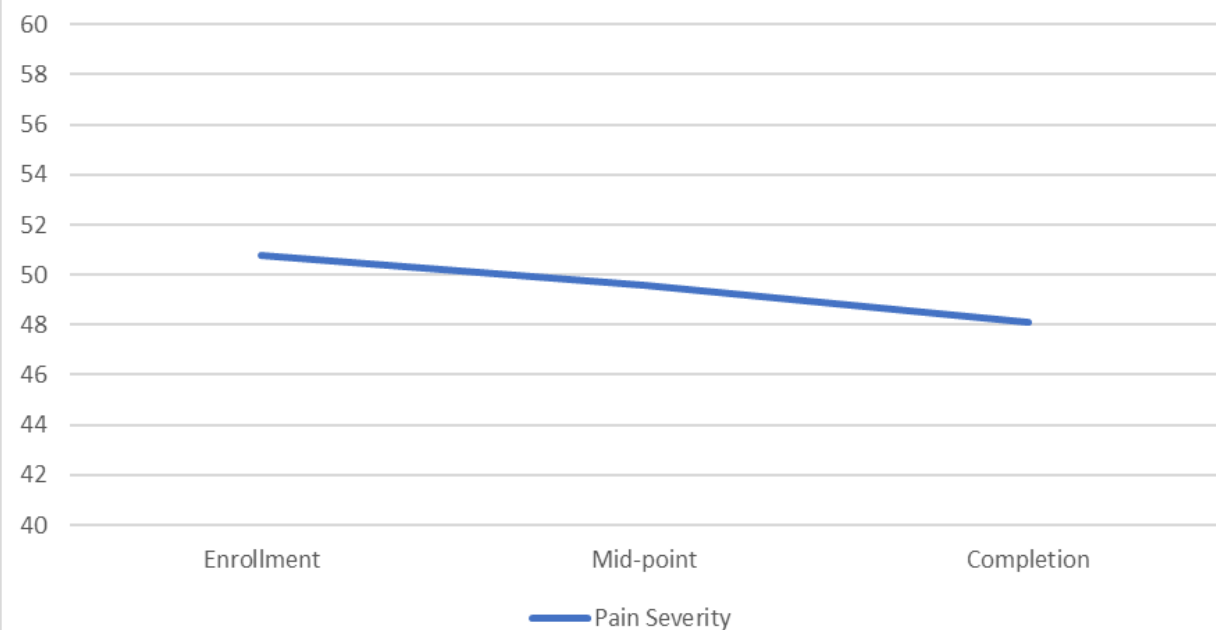


Symptom Burden: PROMIS Measures

Fatigue

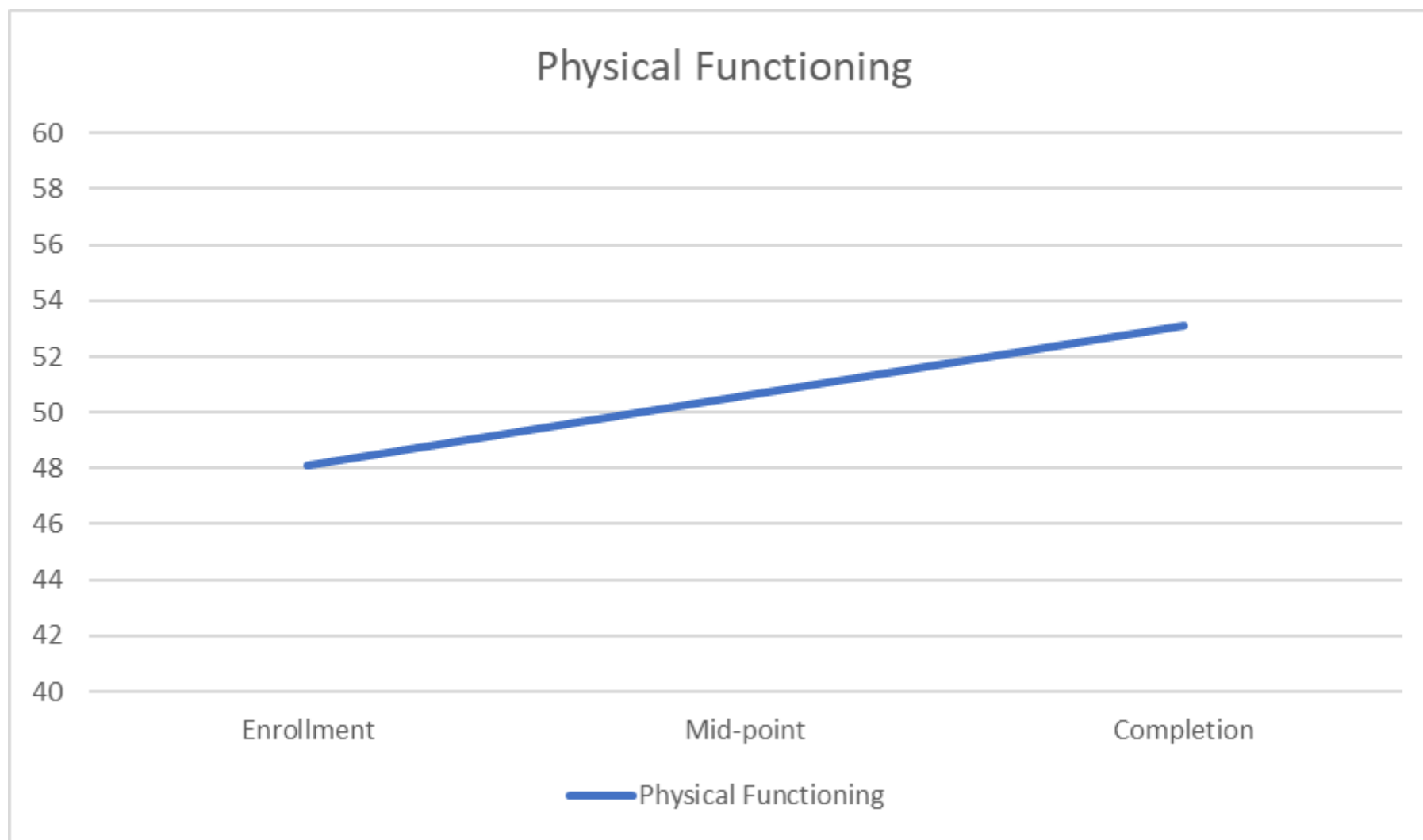


Pain Severity



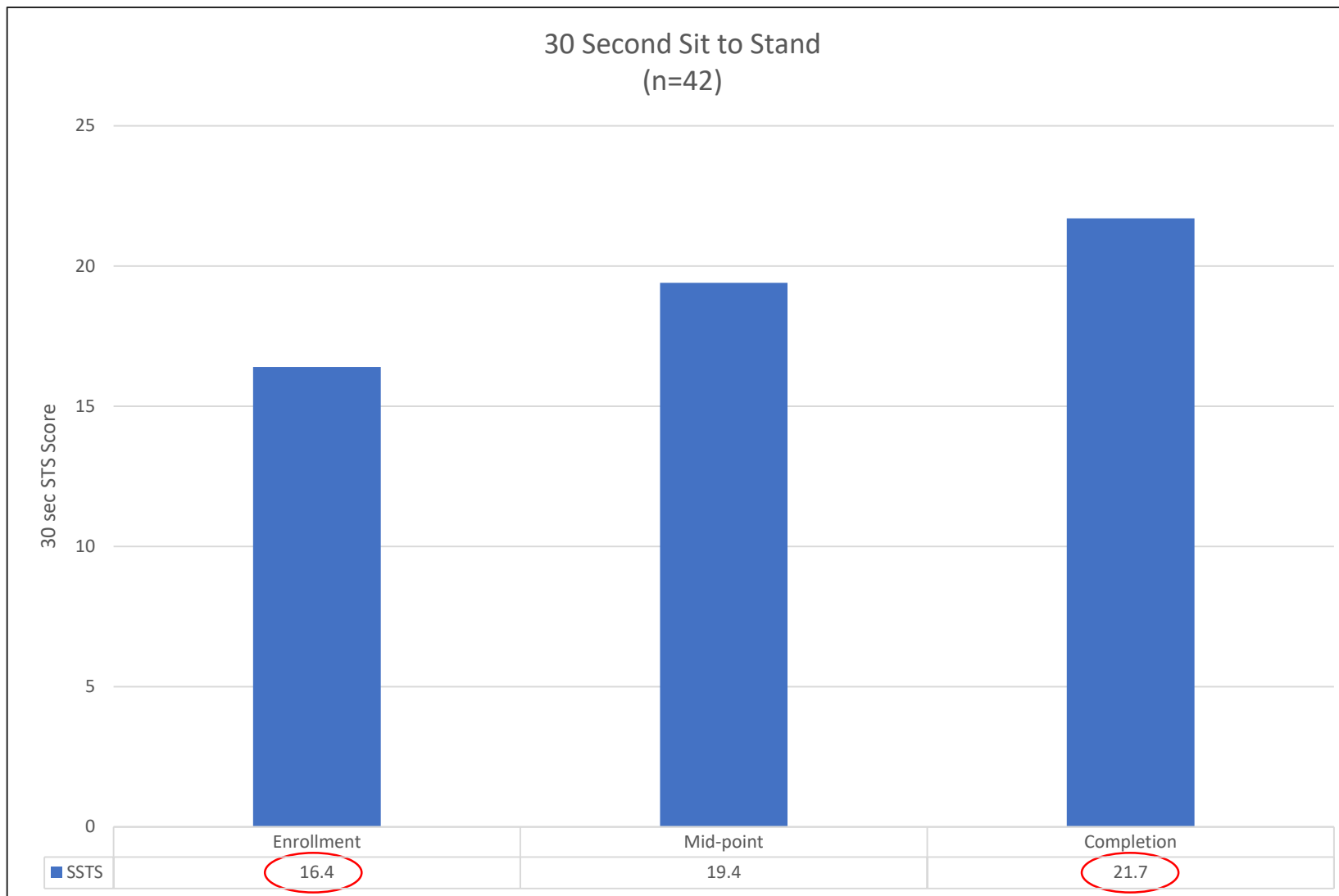


Symptom Burden: PROMIS Measures





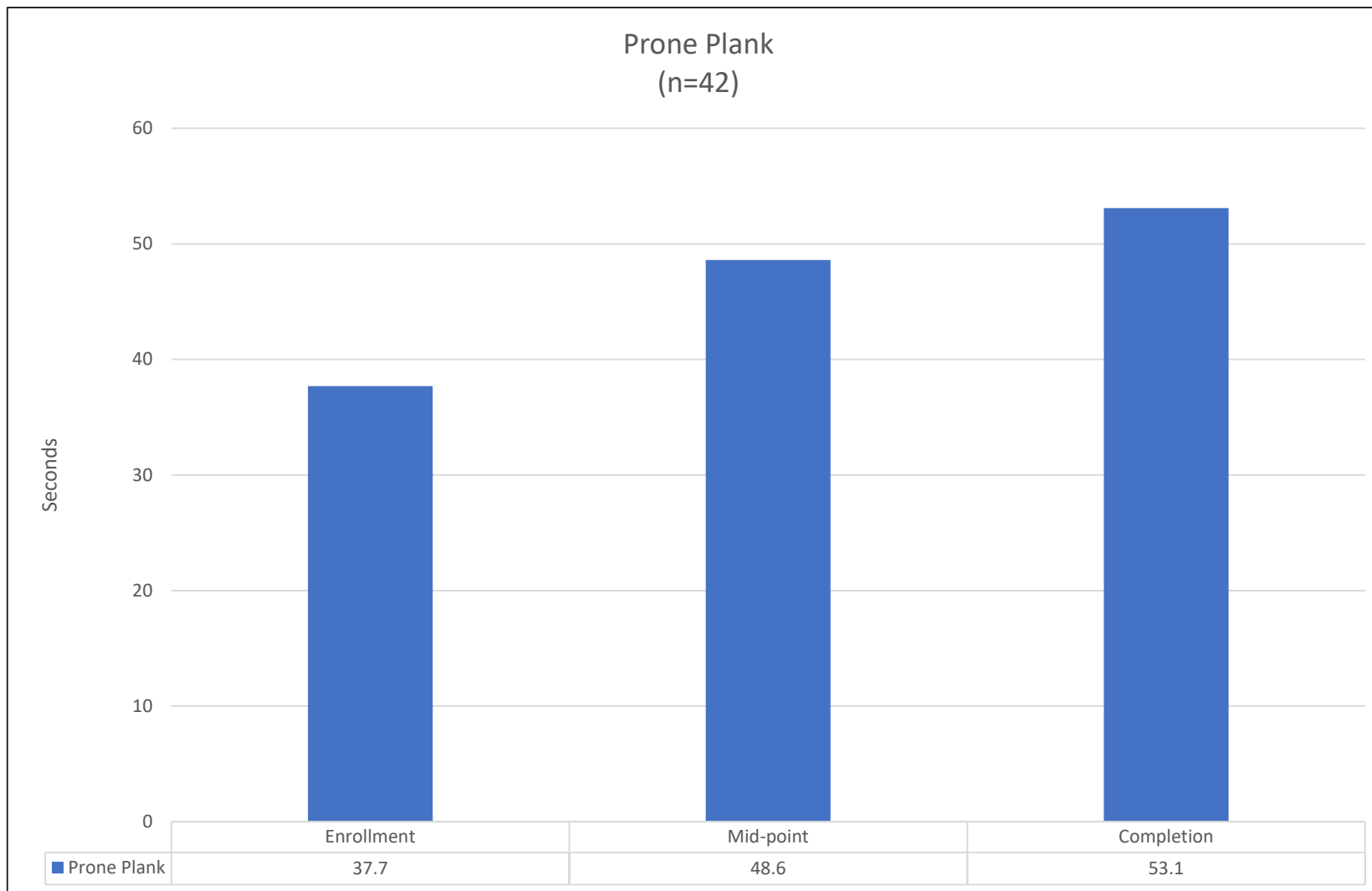
Lower Extremity Strength



30 sec STS: $p < 0.001^*$



Core Strength

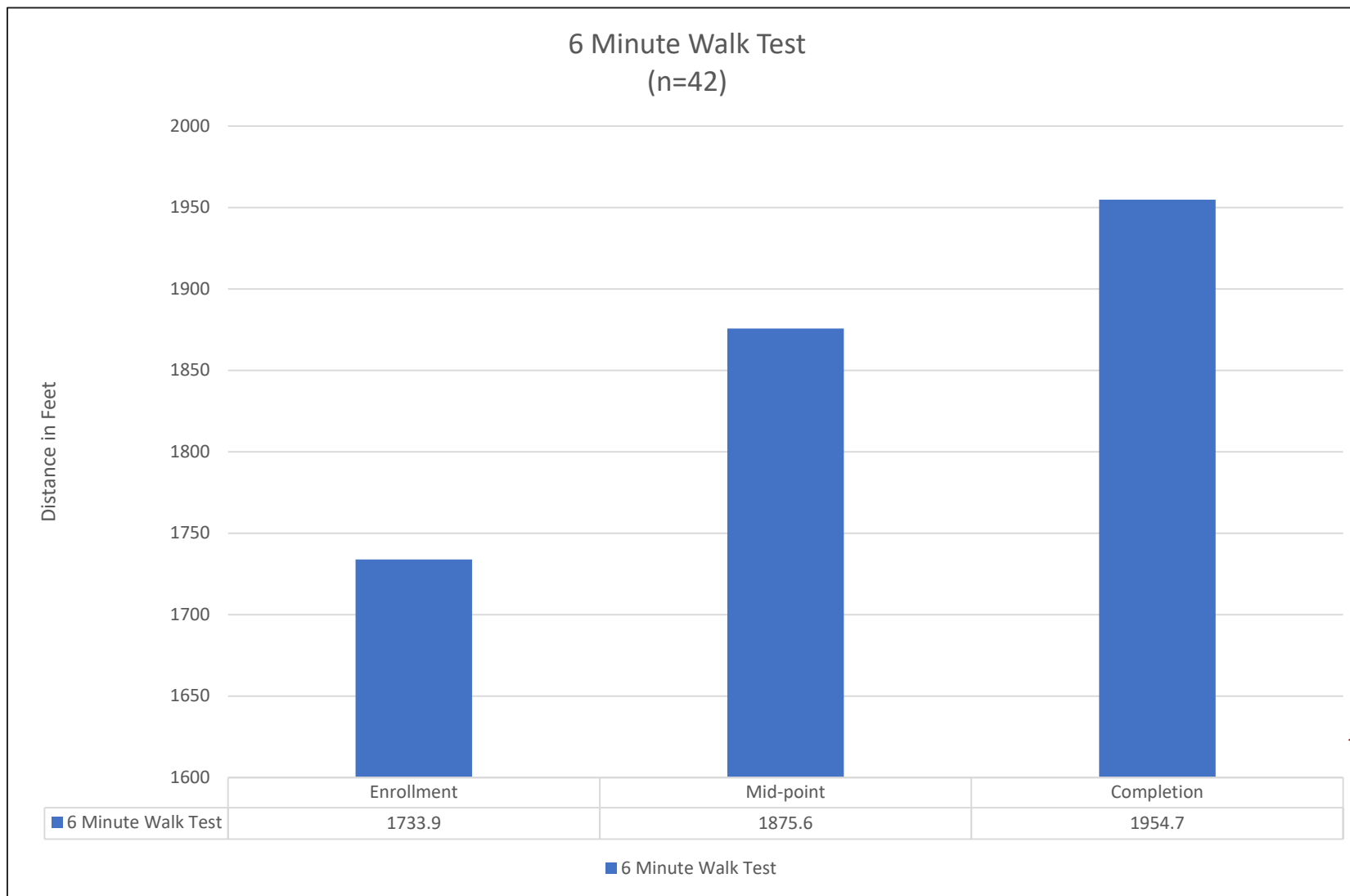


On average,
timed plank
increased by
40.9%

P-value: <0.001*



Submaximal Aerobic Endurance



On average,
distance in
feet walked
increased by
12.7%

P-value: 0.0273



Program Satisfaction

IMPACT Rating:

Excellent = 95.2 %

Good = 4.8%

Recommend the
program to other
AYA's with Cancer:

Strongly Agree = 90.5%

Agree = 9.5%



4th International Conference on Physiotherapy in Oncology (ICPTO) – Ireland 2026



DukeHealth

DEVELOPMENT AND IMPLEMENTATION OF A HYBRID FITNESS PROGRAM FOR ADOLESCENT AND YOUNG ADULT CANCER SURVIVORS

Improving Mobility and Physical Activity After Cancer Treatment (IMPACT) Program

Stefanie Stoller, DPT, Coleman Mills, MS, Lisa Massa, PT, Zachary Tally, DPT, Lindsey Siska, DPT, Michael Willis, BA, Steven Wolf, MS, Caroline Dorfman, PhD

INTRODUCTION

Adolescent and young adult (AYA) cancer survivors have significant unmet physical activity needs. Exercise is essential for mitigating late effects of cancer treatment, including cardiovascular disease, diabetes, and obesity. As adolescence and young adulthood are critical periods for establishing lifelong health behaviors, low adherence to physical activity guidelines in this population is particularly concerning. Many AYA survivors also report difficulty initiating and maintaining regular activity.

Seventy AYA patients at Duke Cancer Institute responded to a survey assessing their perceptions of mobility and ability to be active. More than 80% reported having difficulty doing sports and exercise that others their age could do, and over 70% reported difficulty keeping up with their peers during physical activity.

METHODS

The Improving Mobility and Physical Activity After Cancer Treatment (IMPACT) Program was established to provide personalized exercise training to AYA cancer survivors aged 18-39. The hybrid fitness program includes both 3 in-person and 4 telehealth activity sessions over a 3-month duration. The participant is met at their current level of activity through a one-on-one model with an oncology trained physical therapist. Measures are collected at weeks 1, 7 and 13 and include:

Patient Reported Outcome Measures:

- PROMIS Domains: Physical Function, Anxiety, Depressive Symptoms, Fatigue and Pain Interference
- Godin Leisure-Time Exercise Questionnaire

Physical Function Tests:

- 6-minute walk test
- 30-second chair rise test
- Timed plank (prone and side)
- Handgrip dynamometry
- Timed single leg balance.

Figure 1: IMPACT Program Timeline

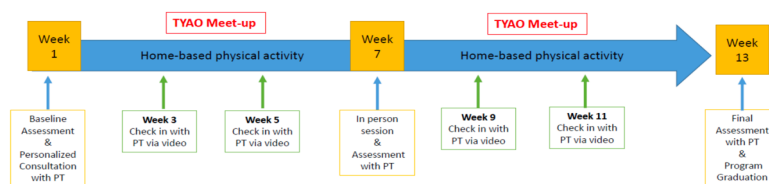


Figure 2: Cancer Types Represented

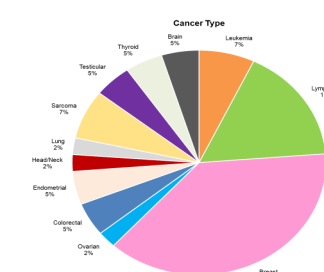


Figure 3: Patient Reported Outcomes Over Time

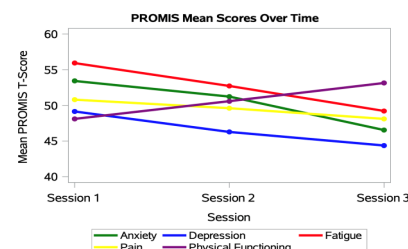


Table 1: Objective Outcome Measures Over Time

Assessment	Session 1 (N=42)	Session 2 (N=42)	Session 3 (N=42)	Total (N=126)	P-value
Right Grip Test Mean	32.2 (7.61)	35.2 (8.25)	37.1 (9.58)	34.8 (8.68)	0.0621 [†]
Mean (SD)					
Left Grip Test Mean	30.6 (7.63)	33.5 (8.32)	34.8 (9.63)	33.0 (8.68)	0.1242 [†]
Mean (SD)					
30sSTS repetitions	16.4 (3.62)	19.4 (3.87)	21.7 (4.24)	19.2 (4.46)	<.0001 [†]
Mean (SD)					
Prone Plank (60 sec goal)	37.7 (16.26)	48.6 (14.48)	53.1 (12.98)	46.4 (15.92)	<.0001 [†]
Mean (SD)					
Right Side Plank (30 sec goal)	17.8 (8.64)	24.6 (6.88)	26.1 (6.27)	22.8 (8.13)	<.0001 [†]
Mean (SD)					
Left Side Plank (30 sec goal)	18.3 (9.05)	23.3 (7.84)	26.1 (5.79)	22.6 (8.27)	0.0011 [†]
Mean (SD)					
6 Minute Walk Test (feet):	1733.9 (294.86)	1875.6 (281.73)	1954.7 (294.75)	1854.7 (301.35)	0.0273 [†]
Mean (SD)					
Right Side - Single Limb Stance (sec)	49.4 (18.57)	50.7 (17.11)	53.3 (15.15)	51.1 (16.95)	0.5613 [†]
Mean (SD)					
Left Side - Single Limb Stance (sec)	51.2 (17.44)	54.5 (13.04)	55.5 (11.46)	53.7 (14.21)	0.2240 [†]
Mean (SD)					
Weekly Leisure-Time Activity Score	33.0 (25.41)	40.8 (21.43)	46.0 (23.06)	39.9 (23.81)	0.0265 [†]
Mean (SD)					

[†]Kruskal-Wallis p-value

RESULTS

A 13-week hybrid program combining aerobic and strength training improved both self-reported and objective measures of physical function and emotional well-being in AYA oncology patients. Statistically significant improvements ($p < 0.05$) were observed in PROMIS Anxiety, Depression, Fatigue, and Physical Function domains, as well as in lower body strength, core strength, and submaximal aerobic endurance. Improvements in grip strength and single-leg balance were observed but did not reach statistical significance.

Adherence: Forty-eight patients enrolled in the program within the first two years. Of these, 42 completed the 13-week exercise intervention, while 6 withdrew due to medical ($n=3$) or personal ($n=3$) reasons.

Program Satisfaction:

- Program rating: Excellent (95.2%), Good (4.8%).
- Recommend the program to other AYA's with Cancer: Strongly Agree (90.5%), Agree (9.5%).

"I would recommend this program to any young adult experiencing cancer. The physical benefits of this program has given me greater agency over my body-which is something I felt I lost during treatment."

CONCLUSIONS

- A hybrid exercise program is safe and feasible for AYA cancer survivors
- Participants were satisfied with the program intervention and reported value in individualized exercise prescription
- Participants reported improved confidence in ability to independently engage in physical activity post-program completion

ACKNOWLEDGEMENTS

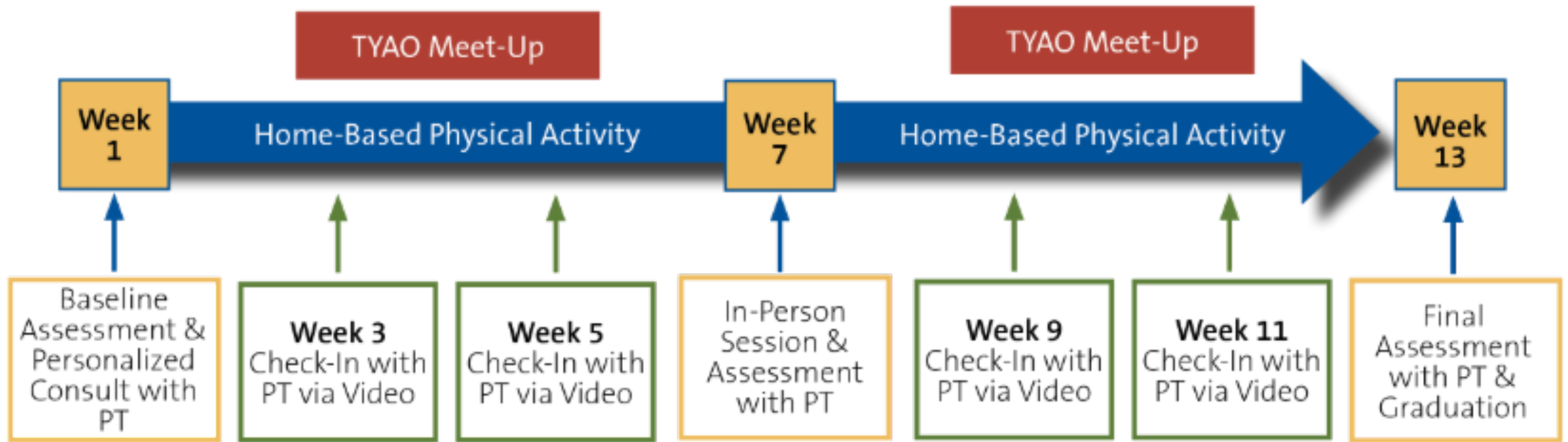
This program is supported by a pilot grant from the I'm Not Done Yet (INDY) Foundation.



Stefanie Stoller, DPT
Poster Presentation



Wellness Education

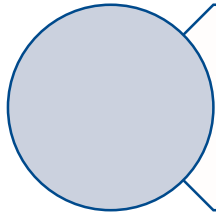


Schedule: Virtual wellness education takes place during the PT video visit on weeks 3, 5, 9, and 11.



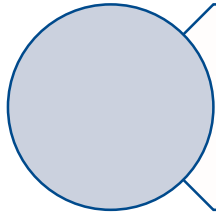
Wellness Education

Topics the Physical Therapists may cover:



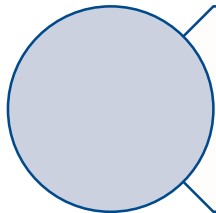
Pain & Mobility

-Understand stiffness, nerve pain, and weakness and how to move safely through it



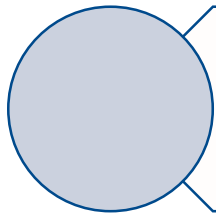
Fatigue

-Learn the difference between cancer fatigue and regular tiredness. Practice pacing and energy-saving strategies.



Nutrition

-Fuel your body for healing, strength, and daily life.



Sleep

-Create better sleep routines and learn tools to manage anxiety for better rest.



Dissemination

1. Completed

- External
 - International Conference on Physiotherapy in Oncology (ICPTO) – Ireland 2026
 - Annual NC AYA Oncology Symposium
- Internal
 - DCI Supportive Care & Survivorship Center Advisory Board Meeting
 - Cancer Care Calendar
 - Tumor Board Meetings-GI and Heme/Onc

2. Scheduled

- Pediatric Oncology Conference – Urubamba, Peru
 - Part of the Duke Global Health Initiative
- Duke Singapore (Duke Funded)

3. Future Presentations

- Duke Oncology Network Webinar
- Menges Partner Presentation
- American Physical Therapy Association – NC 2028
- American Physical Therapy Association CMS Conference – 2028
- American Psychological Oncology Society Conference
- + More | Funding dependent

4. Publications



Next Steps for IMPACT

\$5,500

Phase 1 | Continuation of Program

-Support 10 additional patients through January.

\$11,000

Phase 2 | Training of PTs, Education of Providers, Hardwire Operations

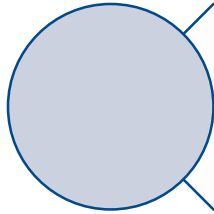
\$12,000

Phase 3 | Dissemination of IMPACT findings, External Best Practices Trainings

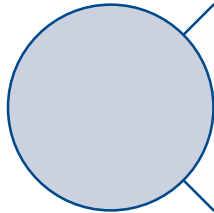
Total Needed: \$28,500



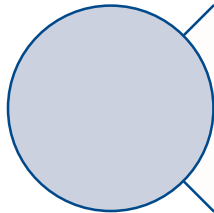
Next Steps for Onco-Fertility Patient Assistance Fund



Use Remaining Balance
-\$18,125



Continue Efforts Around the NC Fertility Preservation
Bill



Continue Driving Fundraising Efforts to Successfully
Reach Goal

Total Needed for FY27: \$40,000