

William Mitchell, MS4¹; Rebecca Eary, DO²; Laura Howe-Martin, Ph.D²; Angela Orino, M.D.^{2,4}; Daniel Bowers, MD²; Katelyn Jetelina, Ph.D³; Emily Berry, MSPH²; Keith Argenbright, MD,MMM^{1,2,3,4}
¹TCU School of Medicine, ²UT Southwestern Medical Center Moncrief Cancer Institute, ³Department of Clinical Sciences, UT Southwestern Medical Center, ⁴University of Texas Southwestern Medical Center Harold C. Simmons Cancer Center

RESEARCH QUESTION

Are adolescent and young adult (AYA) cancer survivors with chemotherapy-induced cardiotoxicity at a higher risk of developing depression and anxiety than AYA cancer survivors with less severe chemotherapy-associated side effects?

BACKGROUND

The incidence for adolescent and young adult (AYA) cancer survivors has slowly increased over the last 25 years. Less is known about the AYA cancer population than other cancer populations and this population has not seen the same positive trends in mortality over the last few decades when compared to cancers diagnosed in childhood or later in adulthood. As treatments continue to improve and cancer patients have longer survival periods, there has been an increased incidence of long-term chemotherapy-related side effects, of which cardiotoxic side effects are associated with the highest mortality rate. While there is research documenting the cardiotoxic side effects that may develop, less has been published regarding patient perceptions of this cardiovascular diagnosis and how it affects the mental and behavioral health of an AYA cancer survivor. The primary goal of this study is to provide proof-of-principle to support a larger, follow-up investigation designed to understand the psychosocial effect that a disease diagnosis with severe clinical effects may have on AYA cancer survivor cared for in an urban cancer survivorship clinic in Dallas, TX.

AIM

Provide proof-of-concept for AYA mental health study

METHODS

- Prospective cohort study using 90-minute semi-structured interviews addressing cancer experience, diagnosis with a treatment related effect, trust in healthcare and COVID-19 behaviors in combination with surveys
- Interviews were transcribed and coded to determine themes or categories prevalent within the interview.
- Patients seen through the "After the Cancer Experience" (ACE) Survivorship program at the UT-Southwestern (UTSW) campus.
- Portion of patients with cardiotoxic side effects from chemotherapy and remaining patients with less severe side effects from chemotherapy.
- Figure 1 details study flow and participant recruitment

Measurement tools:

- Personal Health Questionnaire (PHQ-9)
- Generalized Anxiety Disorder Scale (GAD-7)
- Quality of Life Patient/Cancer Survivor Version (QOL-CSV)
- Healthcare System Distrust Scale
- Demographics questionnaire

This proof-of-concept pilot study shows how future researchers may survey adolescent and young adult cancer survivors' mental health to assess how the development of cancer treatment related side effects may influence their well-being

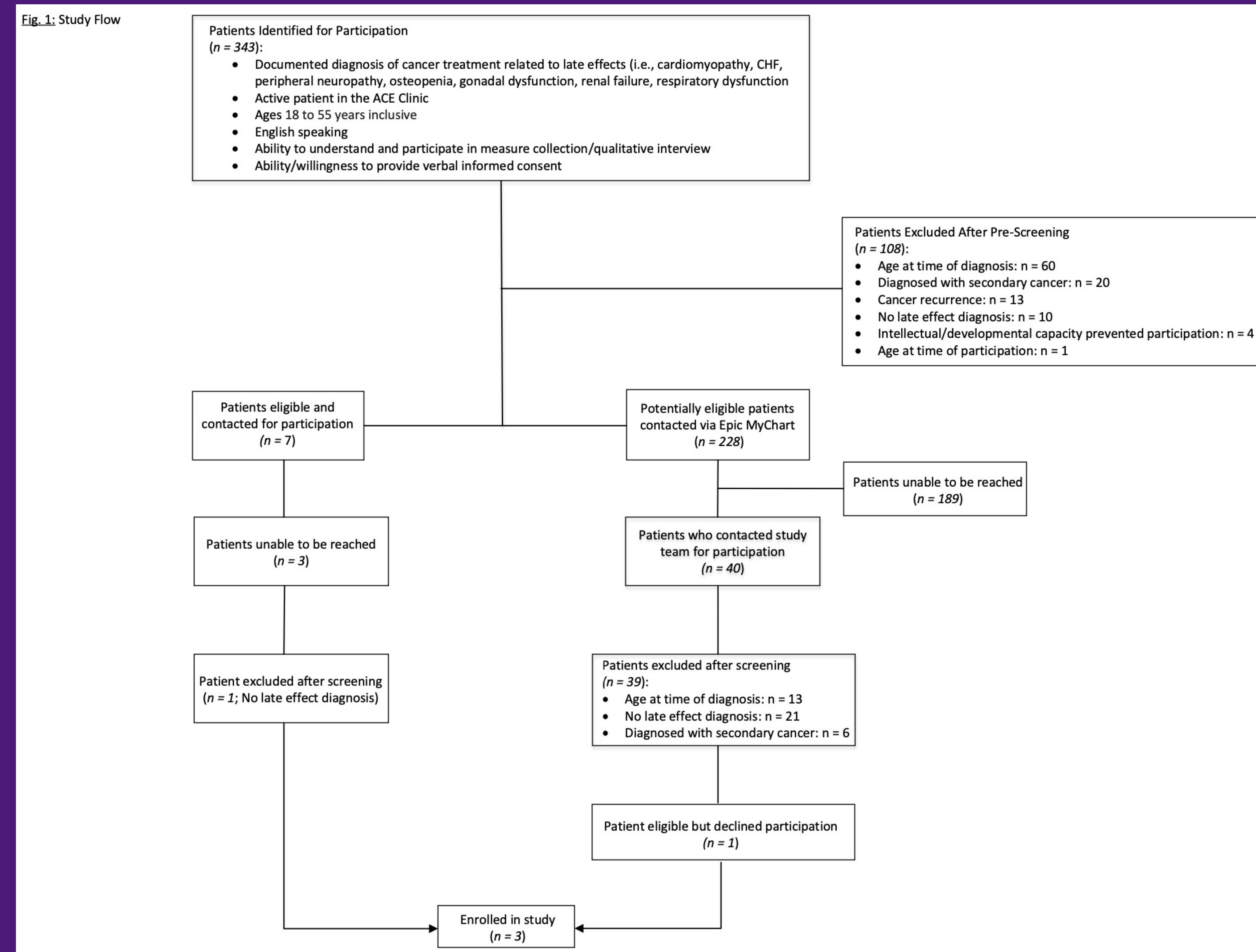


Figure 1: Study flow, including recruitment strategy and efficacy



QR code for more information

RESULTS

Patient demographics described in Table 1.

TABLE 1: Demographics	N	%
Gender		
Female	2	66.67
Male	1	33.33
Median Age		
Median Age at Enrollment	45	IQR: 7
Median Age at Diagnosis	16	IQR: 0.75
Treatment		
Chemotherapy only	1	33.33
Chemotherapy with Surgery	2	66.67
Chemotherapy Side Effect		
Cardiotoxicity	1	33.33
Peripheral Neuropathy	2	66.67
Footdrop	1	33.33
Marital Status		
Single	2	66.67
Married	1	33.33

Semi-Structured Interviews

Several reoccurring themes emerge, including mental health care practices, identity formation, need for social and emotional independence, and lost time due to the diagnosis and treatment.

Unfortunately, the lack of sample size in this pilot study is not sufficient to perform data analysis and reliably test the hypothesis.

CONCLUSIONS

Adequate study recruitment proved to be a major limitation of this study. However, it did prove, unequivocally, a proof of concept for this study which could then be successfully implemented as a multi-site study. Recruitment posed as a major barrier to study completion as only three participants successfully enrolled and completed the study. Not enough data was collected to compare rates of anxiety and depression in cancer survivors suffering from chemotherapy-induced cardiotoxicity to less severe chemotherapy-related side effects. Initial data does suggest that survivors who underwent mental health counseling and addressed mental health concerns during cancer treatment were better equipped to cope with a late effect diagnosis later in life. This study highlighted the difficulty in recruiting cancer survivors into a research study, especially during the COVID pandemic.

FUTURE DIRECTIONS

Future research should be done to fully assess whether certain late effect diagnoses that cancer patients develop may place them at a greater risk of developing anxiety and depression. Early detection of mental health concerns in cancer patients may not only address the immediate mental health needs, but also better equip a patient to maintain long term positive mental health when faced with subsequent challenges and diagnoses related to cancer treatment. In addition, many cancer patients may benefit from an effective mental health intervention to improve quality of life, patient satisfaction, and completeness of care that may improve long term mental health outcomes.

ACKNOWLEDGEMENTS

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