Welcome to the Professional Advancement Virtual Engagement Series (PAVES)

NCI Center for Cancer Health Disparities

NIH NATIONAL CANCER INSTITUTE

October 23, 2024

Our Agenda

Welcome and Housekeeping

Announcements

Presentation: Cancer and Mental Health: Considerations for Every Cancer Researcher

Q and A

Announcements

Intramural Continuing Umbrella of Research Experiences Program

- Supports mentored research experiences (**2-3 years depending on training level which includes postbacs, grad students and postdocs**) for students and scientists from diverse backgrounds on **NCI campuses** in Bethesda, Rockville and Frederick, Maryland.
- Centralized review and program-facilitated matches for scholars to NCI PIs; **applicants do not need to pre-identify a PI to apply**
- **NCI values diversity** and particularly encourages applications from individuals from diverse backgrounds, including those from groups underrepresented in the cancer research workforce, for example those from groups noted in the Notice of NIH's Interest Diversity (NOT-OD-20-031).

Application receipt (Sep 23 – Nov 25) for research experiences beginning Fall 2025. Check out the website for all the details including the slides and recording from the pre-application webinar.

Contact
Dr. Gregory Adams, Jr.
Dr. Jessica Calzola
iCURE@nih.gov

Early Investigator Advancement Program (EIAP)

Objective: To support cancer researchers and clinician scientists to attain an R01 or R-type equivalent funding.

Due Date: November 1, 2024

Program Components

Successes

- **45 cancer scientists** in two cohorts have completed the program.
- **Twelve EIAP Scholars have attained R-type funding** with more under peer review.
- **Two R21's and 1 R03** have been secured.

Dr. Maria Jamela (Jay) Revilleza or Dan Eckstein, MS

eiap@nih.gov or visit https://www.cancer.gov/about-nci/organization/cche/diversity-training/eiap

CURE Research Supplements to Promote Diversity in Health-Related Research: Re-Entry/Re-Integration/Re-training (PA-23-189)

Objective: Promotes the diversity of the research workforce by recruiting, mentoring, training, and supporting the career development of individuals from high school to early-stage investigator levels.

Each supplement supports the research experience of one **identified** trainee with a maximum of two candidates on one parent award.

- Parent grant must have **at least two years** of active status at the time of supplement application; CCHE grants some exceptions

Application receipt: Oct 1 – Dec 1 and **Feb 1 – Mar 31**

Fulera Salami, Dr. Chantel Fuqua, Dr. Jason Liu, or JoBeth McCarthy at CUREsupplements@nih.gov

Administrative Supplements to Support Cancer Disparity Collaborative Research

Objective: To promote cancer disparities research among NCI-funded non-disparity researchers and encourage collaboration with cancer disparities-focused researchers.

*** Final application receipt date for this NOFO.**

Due Date: January 23, 2025

Contact

Dr. Jay Revilleza

Mariajamela.Revilleza@nih.gov

LEARN MORE: https://grants.nih.gov/grants/guide/pa-files/PAR-22-114.html

Impact through Dissemination: Turning Your Research into Action for Cancer Health Equity

SAVE THE DATE: December 4, 3:00 – 4:00 p.m., EST

Charles R. Rogers, PhD, MPH, MS, MCHES®
Founding Director, Men's Health Inequities Research Lab
Founder & President, Colorectal Cancer Equity Foundation
Member, University of Michigan-Mixed Methods Program
X: @crrogersPhD | crrogersPhD.com

Khadijah A. Mitchell, PhD, MS
Assistant Professor
Cancer Prevention and Control Program, Fox Chase Cancer Center, Temple Health Affiliated Faculty Department of Epidemiology and Biostatistics, College of Public Health, Temple University
X: @khadijahmitchell | foxchase.org/khadijah-mitchell-phd-ms

Learning Objectives

[1] **Understand the Power of Research Dissemination**: Attendees will explore why spreading research results widely is crucial for making a real difference in cancer care, especially for underserved communities.

[2] **Explore Innovative Approaches to Sharing Research**: Participants will discover creative ways to share research findings beyond traditional methods, such as using social media, community outreach, and public events to engage a broader audience.

[3] **Learn How to Engage Key Stakeholders**: Attendees will learn strategies to effectively engage healthcare providers, policymakers, and community leaders in the research process to foster partnerships that drive policy change.

[4] **Promote Health Equity Through Research**: Attendees will learn how targeted dissemination efforts can help reduce cancer disparities and improve community outcomes, ensuring that research benefits those who need it most.

Cancer and Mental Health: Considerations for Every Cancer Researcher

Hermioni L. Amonoo, MD, MPP, MPH

Carol C. Nadelson, MD Endowed Chair in Psychiatry
Director, Well-Being and Cancer Research Program, Brigham and Women's Hospital, Dana-Farber Cancer Institute
Associate Professor, Harvard Medical School

Carolyn Lauckner, PhD

Associate Professor
Center for Health, Engagement, and Transformation, Department of Behavioral Science, University of Kentucky College of Medicine

Karen Weihs, MD

Professor of Psychiatry and Family & Community Medicine
Medical Director, Integrated Psychosocial Care, BUMC-T
Member, University of Arizona Comprehensive Cancer Center
University of Arizona College of Medicine

Holistic Approach to Psychological Well-being for Oncology Populations

Hermioni L. Amonoo, MD, MPP

Carol C. Nadelson, MD Endowed Chair in Psychiatry

Director, Wellbeing and Cancer Research Program

Associate Professor, Harvard Medical School

Mass General Brigham

HARVARD MEDICAL SCHOOL

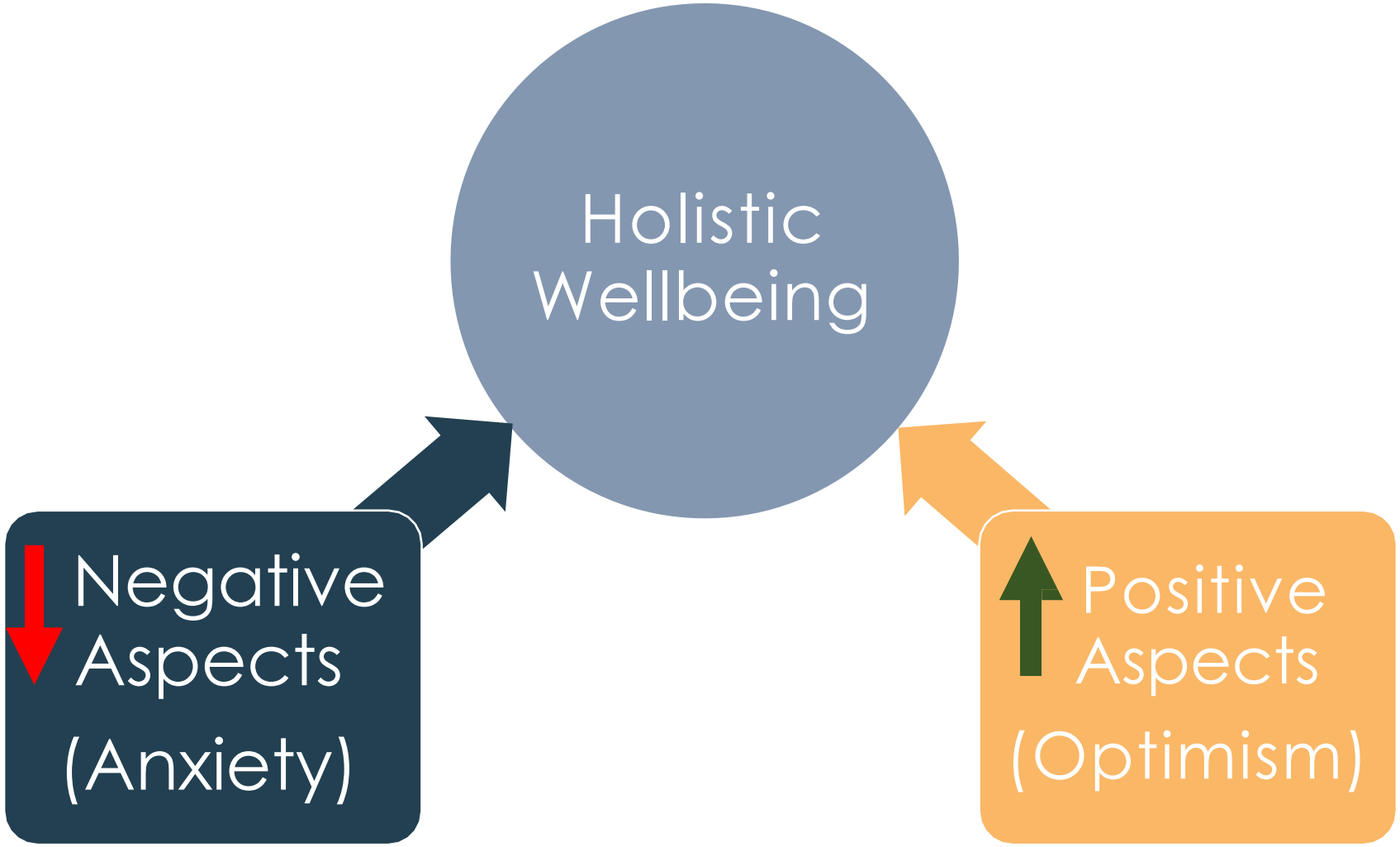
Dana-Farber Cancer Institute

Distress is Common

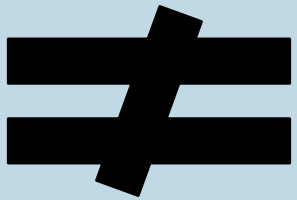
- Depression
- Anxiety
- Post-traumatic stress symptoms
- Poor adjustment and coping
- Demoralization
- Substance abuse

El-Jawahri et al., Cancer 2017; Amonoo et al., Psychosomatics 2019; Amonoo et al., Cancer 2021; Amonoo et al., Cancer 2021; Amonoo et al., Cancer 2021; Vehling et al., Cancer 2017

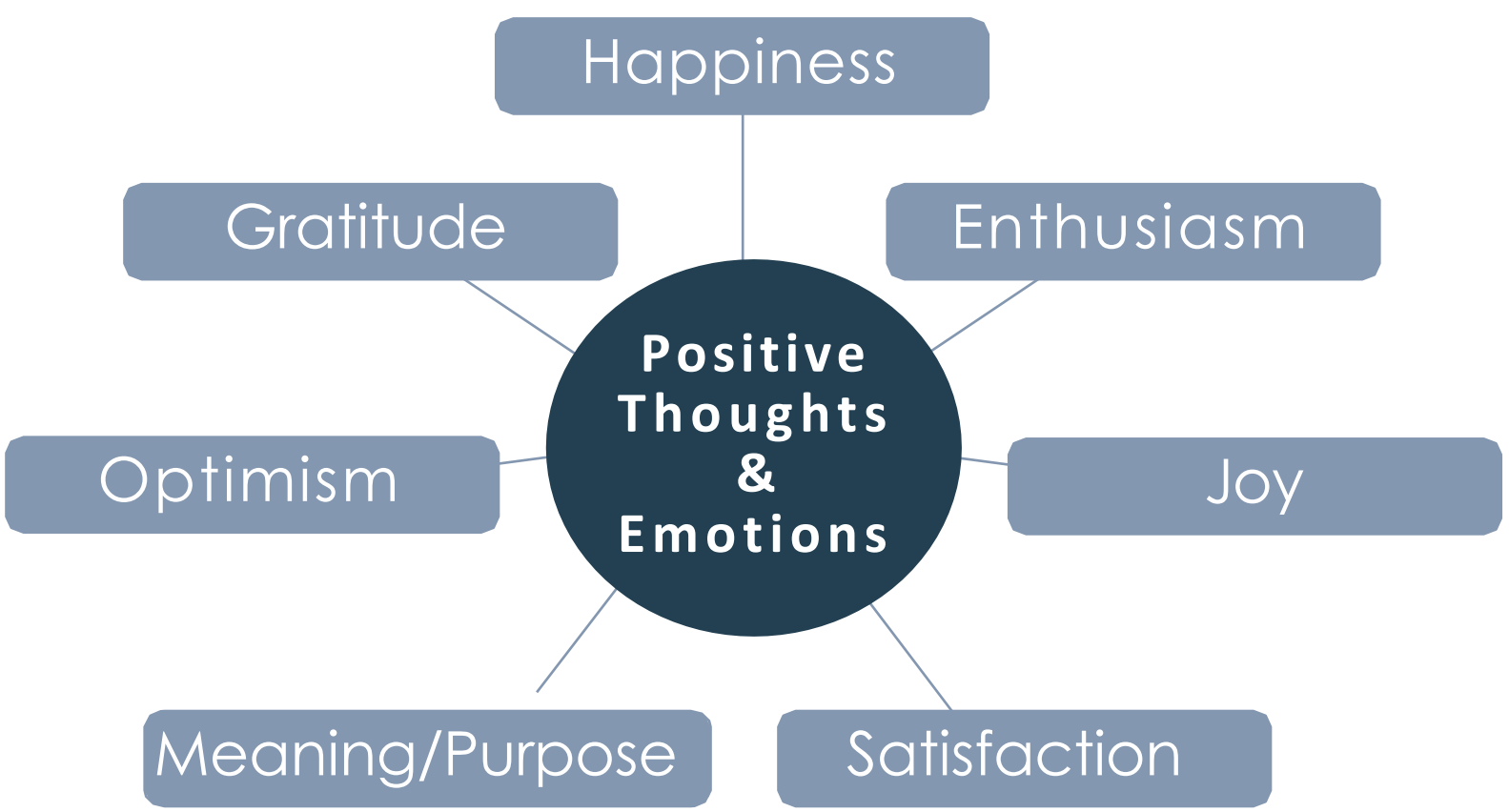
What does optimal psychological health entail?



Rasmussen 2009, Boehm 2012

Lack of Illness  Wellbeing

What comprises positive psychological well-being?



Religiosity

Spirituality

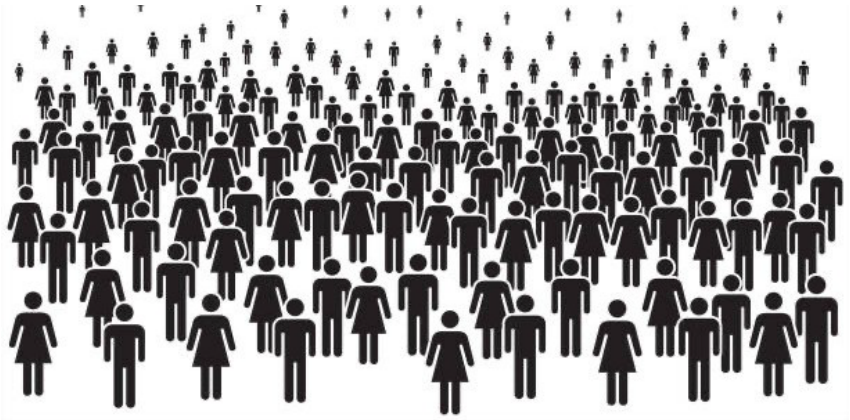
Self-Efficacy

Self-Esteem

Huffman, *General Hospital Psychiatry, 2014*

Specialty Mental Health Clinicians

Social Work
Psychology
Psychiatry
Palliative Care



Limited Access to Care

Evidence-Based Psychological Interventions

Cognitive Behavioral Therapy Skills

Mindfulness and Meditation

Acceptance and Commitment Therapy

Evidence-Based Psychological Interventions

The Oncologist®

Symptom Management and Supportive Care

A Pilot Randomized Controlled Trial of Brief Cognitive-Behavioral Therapy for Anxiety in Patients with Terminal Cancer

Joseph A. Greer,[a] Lara Traeger,[a] Heather Bemis,[b] Jessica Solis,[b] Ellen S. Hendriksen,[a] Elyse R. Park,[a] William F. Pirl,[a] Jennifer S. Temel,[c] Holly G. Prigerson,[d] Steven A. Safren[a]

Home > Supportive Care in Cancer > Article

Evaluating the efficacy of a self-guided Web-based CBT intervention for reducing cancer-distress: a randomised controlled trial

Original Article | Published: 07 August 2015

Volume 24, pages 1043–1051, (2016) Cite this article

Greer, *The Oncologist*, 2012

Beatty, *Supportive Care in Cancer*, 2015

JOURNAL OF CLINICAL ONCOLOGY ORIGINAL REPORT

Mindfulness-Based Cognitive Therapy in Advanced Prostate Cancer: A Randomized Controlled Trial

Suzanne K. Chambers, Stefano Occhipinti, Elizabeth Foley, Samantha Clutton, Melissa Legg, Martin Berry, Martin R. Stockler, Mark Frydenberg, Robert A. Gardiner, Stephen J. Lepore, Ian D. Davis, and David P. Smith

Author affiliations appear at the end of this article.

Published at ascopubs.org/journal/jco on November 21, 2016.

Support information appears at the end of this article.

A B S T R A C T

Purpose

Advanced prostate cancer (PC) is associated with substantial psychosocial morbidity. We sought to determine whether mindfulness-based cognitive therapy (MBCT) reduces distress in men with advanced PC.

Face-to-Face and Internet-Based Mindfulness-Based Cognitive Therapy Compared With Treatment as Usual in Reducing Psychological Distress in Patients With Cancer: A Multicenter Randomized Controlled Trial

Authors: Félix Compen, Else Bisseling, Melanie Schellekens, Rogier Donders, Linda Carlson, Marije van der Lee, and Anne Speckens AUTHORS INFO & AFFILIATIONS

Publication: Journal of Clinical Oncology • Volume 36, Number 23 • https://doi.org/10.1200/JCO.2017.76.5669

Chambers, *Journal of Clinical Oncology*, 2016

Compen, *Journal of Clinical Oncology*, 2018

Evidence-Based Multi-Component Interventions

Multicomponent
Palliative Care

Palliative Care Interventions

JAMA | Original Investigation

Telehealth vs In-Person Early Palliative Care for Patients With Advanced Lung Cancer

A Multisite Randomized Clinical Trial

Joseph A. Greer, PhD; Jennifer S. Temel, MD; Areej El-Jawahri, MD; Simone Rinaldi, ANP-BC; Mihir Kamdar, MD; Elyse R. Park, PhD, MPH; Nora K. Horick, MS; Kedie Pintro, MS; Dustin J. Rabideau, PhD; Lee Schwamm, MD;

Positive Psychological Interventions

Biology of Blood and Marrow Transplantation
journal homepage: www.bbmt.org

Reviews

Positive Psychological Constructs and Health Outcomes in Hematopoietic Stem Cell Transplantation Patients: A Systematic Review

Hermioni L. Amonoo[1,*], Margot E. Barclay[2], Areej El-Jawahri[3], Lara N. Traeger[2], Stephanie J. Lee[4], Jeff C. Huffman[2]

[1] Department of Psychosocial Oncology and Palliative Care, Dana-Farber Cancer Institute, Brookline, Massachusetts
[2] Department of Psychiatry, Massachusetts General Hospital, Boston, Massachusetts
[3] Department of Hematology/Oncology, Massachusetts General Hospital, Boston, Massachusetts
[4] Fred Hutchinson Cancer Research Center, Seattle, Washington

Article history:
Received 3 July 2018
Accepted 24 September 2018

Key Words:
Positive psychology
Positive psychological well-being
Optimism
Health outcomes
Hematopoietic stem cell transplant
Health-related quality of life
Positive constructs

ABSTRACT

Positive psychological constructs (eg, optimism, positive affect) have been independently associated with superior health outcomes across many medical populations. However, there has been little synthesis of the literature examining these associations among patients with hematologic malignancies receiving hematopoietic stem cell transplantation (HSCT). To address this gap we completed a systematic review, using Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines, of studies examining relationships between positive psychological constructs and health-related outcomes (eg, psychiatric symptoms, function, health-related quality of life [HRQoL], or treatment compliance) after HSCT. Eighteen eligible studies (N = 4201; 47% women; mean age, 47.1) were identified. Optimism (n = 12 studies) was the most frequently studied positive construct and HRQoL (examined in n = 11 studies) the most common outcome. All 17 studies with quantitative analyses found a significant ($P < .05$) association between a positive psychological construct and a health outcome; most but not all controlled for 1 or more relevant covariates. Among patients with hematologic malignancies who receive HSCT, positive psychological constructs appear to be associated with improved HRQoL and other health outcomes. Further work is warranted to more comprehensively understand the independent effects of positive psychological constructs on a variety of health outcomes and to develop interventions to promote well-being that are adapted to the needs of this population.

PAPER

WILEY

Positive psychological experiences in allogeneic hematopoietic stem cell transplantation

Hermioni L. Amonoo[1,2,3] | Lydia A. Brown[4] | Carlyn F. Scheu[5] | Rachel A. Millstein[2,5] | William F. Pirl[1,2] | Halyna L. Vitagliano[1,2] | Joseph H. Antin[2,6] | Jeff C. Huffman[2,5]

[1] Department of Psychosocial Oncology and Palliative Care, Dana-Farber Cancer Institute, Boston, Massachusetts
[2] Harvard Medical School, Boston, Massachusetts
[3] Department of Psychiatry, Brigham and Women's Hospital, Boston, Massachusetts
[4] Melbourne School of Psychological Sciences, University of Melbourne, Melbourne, Australia
[5] Department of Psychiatry, Massachusetts General Hospital, Boston, Massachusetts
[6] Stem Cell/Bone Marrow Transplantation Program, Division of Hematologic Malignancy, Dana-Farber Cancer Institute, Boston, Massachusetts

Correspondence
Hermioni L. Amonoo, Department of Psychiatry, Brigham and Women's Hospital, 60

Abstract

Objective: Positive psychological constructs (e.g., optimism and hope) have been associated with superior health outcomes in the recovery from hematopoietic stem cell transplantation (HSCT) in prior work. However, such studies have not examined a broad range of positive psychological constructs, their sources or evolution over time, or their connections with key health behaviors. We used semistructured qualitative interviews in 25 HSCT patients to explore the nature and sources of positive psychological experiences during the first 100 days after transplantation.

Methods: Participants completed interviews during their HSCT hospitalization and approximately 100 days after transplantation. Transcribed interviews were organized and analyzed using NVivo 12 software by two coders ($\kappa = 0.92$). Interviews focused on the breadth of positive psychological experiences, their sources and evolution during the 100 days, and participants' perceived impact of positive constructs on

Bone Marrow Transplantation (2021) 56:2276–2279
https://doi.org/10.1038/s41409-021-01296-9

EBMT

CORRESPONDENCE

A positive psychology intervention to promote health outcomes in hematopoietic stem cell transplantation: the PATH proof-of-concept trial

Hermioni L. Amonoo[1,2,3] · Areej El-Jawahri[3,4] · Christopher M. Celano[3,5] · Lydia A. Brown[6,7,8] · Lauren E. Harnedy[5] · Regina M. Longley[5] · Henry K. Onyeaka[3,5] · Brian C. Healy[3,9] · Corey S. Cutler[3,10] · William F. Pirl[1,3] · Stephanie J. Lee[11] · Jeff C. Huffman[3,5]

Received: 12 January 2021 / Revised: 17 March 2021 / Accepted: 31 March 2021 / Published online: 20 April 2021

Abstract

Allogeneic hematopoietic stem cell transplantation (HSCT) recipients often experience deficits in positive psychological well-being (PPWB) due to intensive treatment and follow-up care. Positive psychology interventions (PPIs) that promote PPWB via deliberate and systematic exercises (e.g., writing a gratitude letter) have consistently improved PPWB in medical populations, yet have never been studied in early HSCT recovery. In this single-arm, proof-of-concept study, we assessed the feasibility and acceptability of a novel eight-session, telephone-delivered PPI in early HSCT recovery. A priori, we defined feasibility as >50% of eligible patients enrolling in the study and >50% of participants completing 5/8 sessions, and acceptability as mean ease and utility scores of weekly participant ratings of PP exercises as 7/10. Of 45 eligible patients, 25 (55.6%) enrolled, 20 (80%) completed baseline assessments, 15 (75%) started the intervention, and 12 (60%) completed the intervention and follow-up assessments. The intervention was feasible (55.6% of eligible participants enrolled; 60% of baseline assessment completers finished 5/8 sessions) and led to very small-to-medium effect-size improvements in patient-reported outcomes. A novel, eight-week, telephone-delivered PPI was feasible and acceptable in allogeneic HSCT recipients. Larger, randomized studies are needed to examine the efficacy of PPIs for improving outcomes in this population.

ORIGINAL RESEARCH

A Positive Psychology Intervention in Allogeneic Hematopoietic Stem Cell Transplantation Survivors (PATH): A Pilot Randomized Clinical Trial

Hermioni L. Amonoo, MD, MPP, MPH[1,2,3]; Elizabeth Daskalakis, BA[2]; Emma D. Wolfe, BA[2]; Michelle Guo, MD[2,3]; Christopher M. Celano, MD[3,4]; Brian C. Healy, PhD[3,5]; Corey S. Cutler, MD, MPH[3,6]; Joseph H. Antin, MD[3,6]; William F. Pirl, MD, MPH[1,2,3]; Elyse R. Park, PhD, MPH[3,4]; Heather S.L. Jim, PhD[7]; Stephanie J. Lee, MD, MPH[8]; Thomas W. LeBlanc, MD, MA[9,10]; Areej El-Jawahri, MD[3,11,*]; and Jeff C. Huffman, MD[3,4,*]

Abstract

Background: Allogeneic hematopoietic stem cell transplantation (HSCT) survivors experience significant psychological distress and low levels of positive psychological well-being, which can undermine patient-reported outcomes (PROs), such as quality of life (QoL). Hence, we conducted a pilot randomized clinical trial to assess the feasibility and preliminary efficacy of a telephone-delivered positive psychology intervention (Positive Affect for the Transplantation of Hematopoietic stem cells intervention [PATH]) for improving well-being in HSCT survivors. **Methods:** HSCT survivors who were 100 days post-HSCT for hematologic malignancy at an academic institution were randomly assigned to either PATH or usual care. PATH, delivered by a behavioral health expert, entailed 9 weekly phone sessions on gratitude, personal strengths, and meaning. We defined feasibility a priori as >60% of eligible participants enrolling in the study and >75% of PATH participants completing ≥6 of 9 sessions. At baseline and 9 and 18 weeks, patients self-reported gratitude, positive affect, life satisfaction, optimism, anxiety, depression, posttraumatic stress disorder (PTSD), QoL, physical function, and fatigue. We used repeated measures regression models and estimates of effect size (Cohen's *d*) to explore the preliminary effects of PATH on outcomes. **Results:** We enrolled 68.6% (72/105) of eligible patients (mean age, 57 years; 50% female). Of those randomized to PATH, 91% completed all sessions and reported positive psychology exercises as easy to complete and subjectively useful. Compared with usual care, PATH participants reported greater improvements in gratitude ($\beta = 1.38$; $d = 0.32$), anxiety ($\beta = -1.43$; $d = -0.40$), and physical function ($\beta = 2.15$; $d = 0.23$) at 9 weeks and gratitude ($\beta = 0.97$; $d = 0.22$), positive affect ($\beta = 2.02$; $d = 0.27$), life satisfaction ($\beta = 1.82$; $d = 0.24$), optimism ($\beta = 2.70$; $d = 0.49$), anxiety ($\beta = -1.62$; $d = -0.46$), depression ($\beta = -1.04$; $d = -0.33$), PTSD ($\beta = -2.50$; $d = -0.29$), QoL ($\beta = 7.70$; $d = 0.41$), physical function ($\beta = 5.21$; $d = 0.56$), and fatigue ($\beta = -2.54$; $d = -0.33$) at 18 weeks. **Conclusions:** PATH is feasible, with promising signals for improving psychological well-being, QoL, physical function, and fatigue in HSCT survivors. Future multisite trials that investigate PATH's efficacy are needed to establish its effects on PROs in this population.

J Natl Compr Canc Netw 2024;22(2D):e237117
doi:10.6004/jnccn.2023.7117

Background

Psychological well-being is vital to every aspect of treatment and recovery following hematopoietic stem cell transplantation (HSCT).[1] Although HSCT is a potentially curative treatment for patients with malignant hematologic conditions, HSCT survivors grapple with enormous physical (eg, fatigue) and psychological symptoms (eg, anxiety) due to high-dose chemotherapy, with significant toxicities and potentially life-threatening complications during a prolonged hospitalization in physical isolation.[2–8] Additionally, HSCT survivors report low levels of positive psychological well-being (PPWB; eg, gratitude), which individuals use to evaluate their lives and to function well.[9]

Psychological distress and PPWB may independently impact outcomes, such as quality of life (QoL) and mortality, throughout the entire HSCT care and recovery continuum.[2–8,10] However, psychosocial interventions that reduce psychological distress while enhancing PPWB are lacking for the HSCT population. In fact, the few tailored psychosocial interventions for the HSCT population primarily focus on alleviating psychological distress during the acute HSCT hospitalization and the immediate recovery period.[11–14] Additionally, the shortage of mental health clinicians has been a major barrier to the accessibility and scalability of existing interventions for this population.[15] Hence, accessible and scalable psychosocial interventions are needed that help patients manage and cope with the various challenges of allogeneic HSCT recovery, especially beyond the transplant hospitalization.

Positive psychology interventions consist of simple exercises (eg, writing a gratitude letter) completed systematically and deliberatively to cultivate PPWB, buffer against psychological distress, promote health behaviors (eg, physical activity), and boost QoL.[16–20] Compared with the few existing psychosocial interventions for HSCT recipients, which are labor-intensive, positive psychology interventions are well accepted, cost-effective, and scalable.[16–21] Because positive psychology interventions have yet

Supplementary material is published online at https://doi.org/10.6004/jnccn.2023.7117

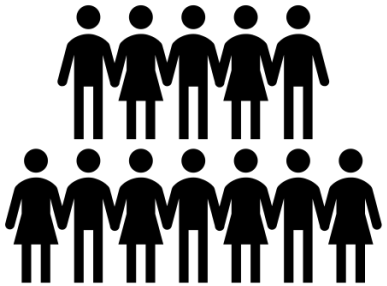
Gaps in Translation from Bench to Bedside

Limited Efficacy RCTs

Limited Pragmatic Trials

Limited Implementation and Dissemination Studies

Limited Access due to Clinician Shortages



Ethnic Minority/ non-English Speaking Patients

Limited Clinical Effectiveness Trials

Ongoing Questions

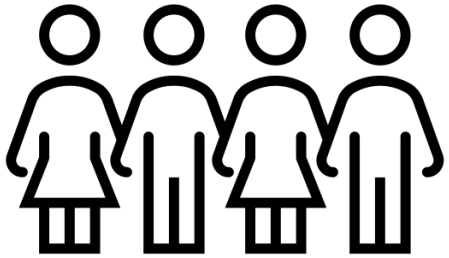
What does this holistic well-being really entail?

What should be in the toolbox?

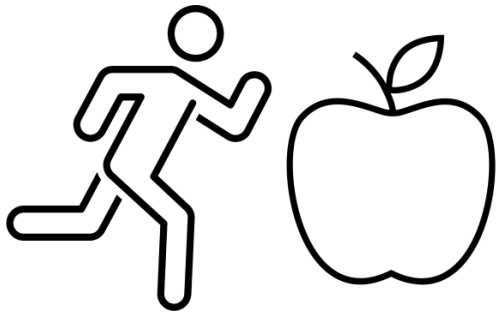
What is the evidence?

Other Types of Interventions

Pharmacological

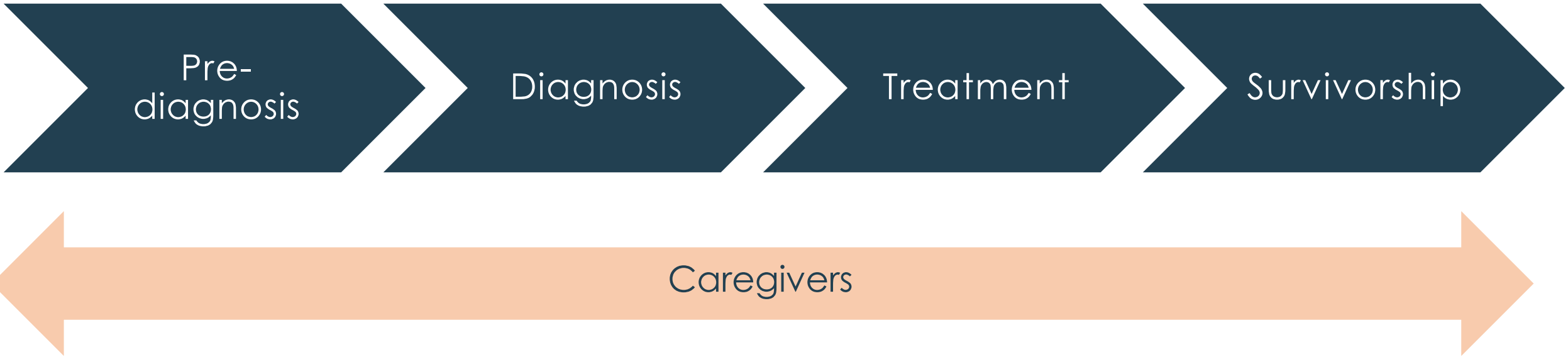


Peer Support

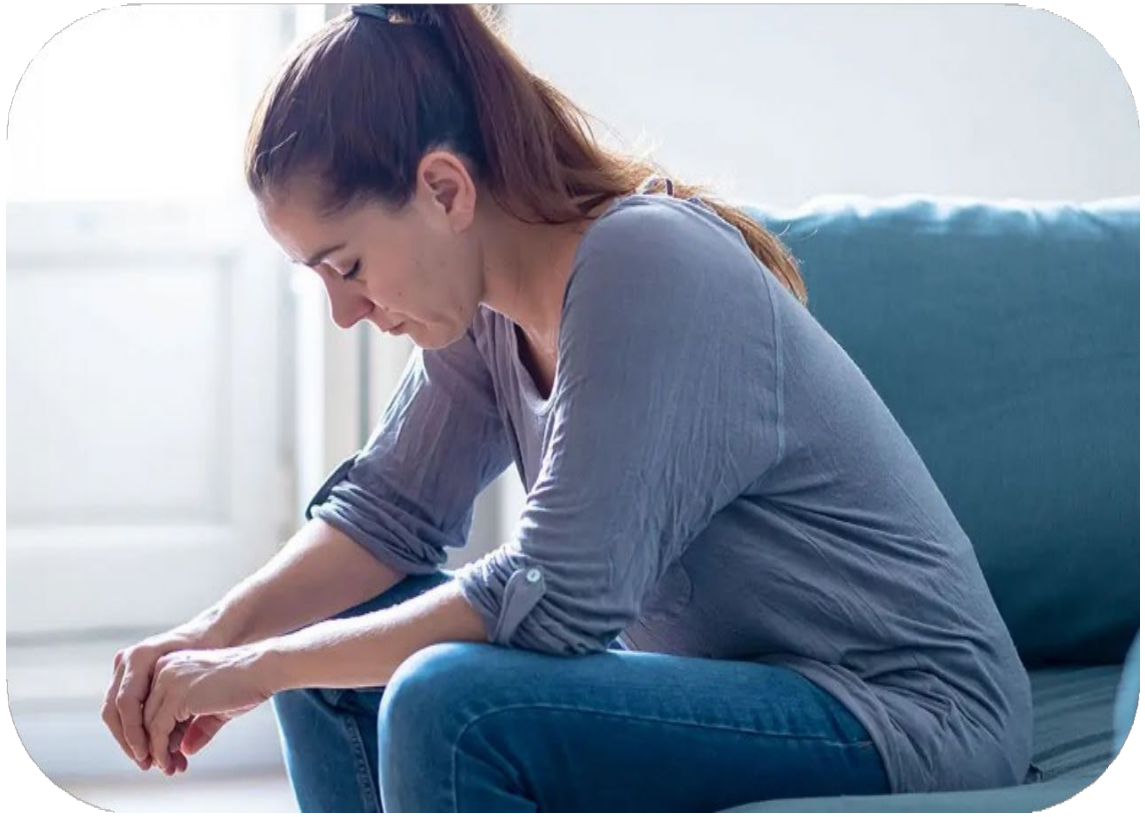


Health Behavior

Cancer Care Continuum



Caregiver Psychological Wellbeing is Low but Supportive Interventions are Lacking



40% of family caregivers report clinically significant depression symptoms

El-Jawahri, *Cancer*, 2020
El-Jawahri, *JAMA*, 2016

Caregiver Outcomes Have the Potential to Impact Patient Outcomes

- Depression and Anxiety
- Quality of Life
- Healthcare Utilizations (e.g., readmissions)
- Treatment Adherence

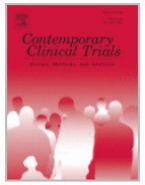
Norskov, *J Cancer Surviv*, 2021
Jonhson, *J Natl Compr Canc Netw*, 2021

Ongoing Work

ELSEVIER

Contemporary Clinical Trials

Volume 122, November 2022, 106923



A randomized controlled trial of emotion regulation therapy for cancer caregivers: A mechanism-targeted approach to addressing caregiver distress

Allison J. Applebaum [a], Morgan Loschiavo [a 1], Katherine Morgan [b 1], Douglas S. Mennin [c], David M. Fresco [d], Michael A. Hoyt [e], Elizabeth Schofield [a], Mia S. O'Toole [f], Julia Cohn [b], Jamie M. Jacobs [b]

RESEARCH ARTICLE Open Access

Efficacy of a telephone outcall program to reduce caregiver burden among caregivers of cancer patients [PROTECT]: a randomised controlled trial

Leila Heckel[1*], Kate M. Fennell[3,4,5], John Reynolds[6], Anna Boltong[7,8], Mari Botti[1,9], Richard H. Osborne[2], Cathrine Mihalopoulos[2], Jacquie Chirgwin[10,11], Melinda Williams[12], Cadeyrn J. Gaskin[13], David M. Ashley[1,14] and Patricia M. Livingston[1]

Home > Supportive Care in Cancer > Article

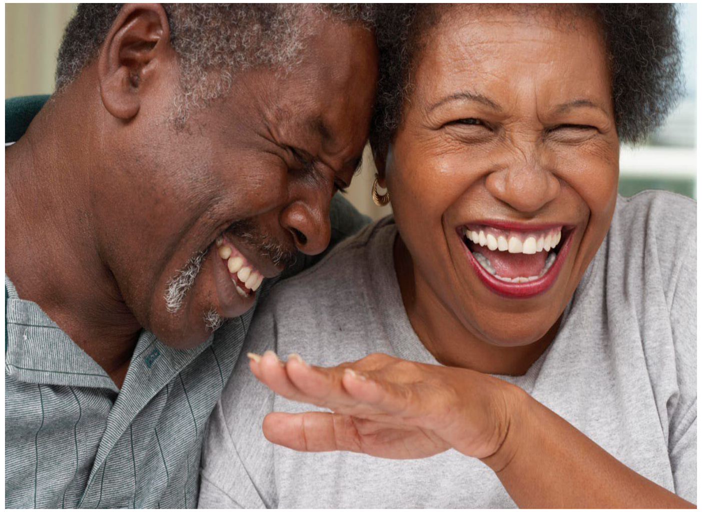
Effects of enhanced caregiver training program on cancer caregiver's self-efficacy, preparedness, and psychological well-being

Original Article | Published: 12 June 2015

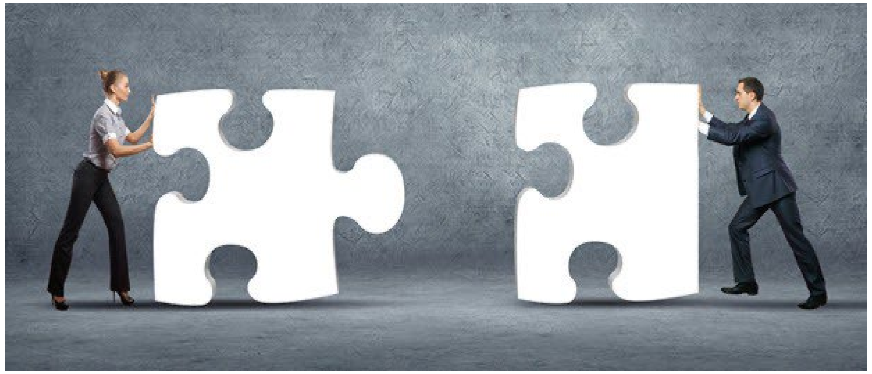
Volume 24, pages 327–336, (2016) Cite this article

Still more work to be done…

In Summary...




RESEARCH
EXAMINE
KNOWLEDGE
PRACTICE
EXPERIMENTATION
FACTS
EXPERIMENT
SCAN
PROBE
PROJECT
SCIENCE
LEARNING
METHODOLOGY



With Gratitude

National Institutes of Health

BRIGHAM HEALTH
BWH BRIGHAM Research Institute

HARVARD CATALYST

AMERICAN SOCIETY OF HEMATOLOGY

OPPENHEIMER GENERATIONS FOUNDATION

Robert Wood Johnson Foundation

NIH NATIONAL CANCER INSTITUTE

HARVARD MEDICAL SCHOOL

CORE Cancer Outcomes Research & Education

DORIS DUKE CHARITABLE FOUNDATION

Addressing Substance Use among Cancer Patients and Survivors

Carolyn Lauckner, PhD
Associate Professor
University of Kentucky

University of Kentucky

Talk Outline

- Examine substance use behaviors of cancer patients and survivors
- Review tools to assess substance use among patients and survivors
- Summarize existing interventions tailored to address substance use in patients and survivors
- Discuss next steps/areas of further research needed

Alcohol Use among Cancer Patients and Survivors

- Alcohol use is common among people with cancer and cancer survivors (Shi et al., 2023)
- 78% of survivors are current drinkers. Of these:
  - 24% report binge drinking
  - 38% engage in hazardous drinking
- 76% of patients receiving treatment are current drinkers. Of these:
  - 23% report binge drinking
  - 28% engage in hazardous drinking
- Potential consequences:
  - Increased side effects from treatment
  - Probable increased risk of recurrence, development of second primaries

Tobacco Use among Cancer Patients and Survivors

- While tobacco use (specifically cigarette smoking) has decreased, the overall rate of use among cancer populations remains high.
- In a nationwide study of cancer patients and survivors (Price et al., 2023):
  - 21% of individuals who were not yet in remission reported current smoking
  - 13% of individuals in remission reported current smoking
- Potential consequences:
  - Increased symptom burden and worse quality of life
  - Increased risk of second primary cancers related to smoking
  - Premature death

Cannabis Use among Cancer Patients and Survivors

- Cannabis use among cancer patients is growing due to recent legalization efforts
- In a survey of patients at 12 cancer centers across the US (Ellison et al):
  - 33% of cancer patients reported using cannabis since their cancer diagnosis
  - 60% of these individuals were current users
- In a large study of cancer survivors (Osaghae et al, 2023):
  - 17% were current cannabis users
  - 1/5 reported using it to help treat their cancer
- Potential effects and consequences:
  - May improve nausea, help to treat neuropathic pain, increase appetite
  - Can cause anxiety/paranoia, lead to dependence

Opioid Use among Cancer Patients and Survivors

- Opioids, which can be effective to manage cancer-related pain, pose substantial risk for substance misuse.
- A 2021 study found that 19% of cancer patients prescribed opioids developed nonmedical opioid use behavior (Yennurajalingam et al., 2021)
- A study of cancer survivors found that 8.3% reported persistent opioid use, and 3% had abuse or dependence (Vitzthum et al., 2019)
- While opioid prescriptions for cancer patients are declining, this may come at the expense of proper pain management (Jairam et al, 2021)

Contributors to Substance Use among Cancer Patients and Survivors

- Pain management
  - Often reported as a reason for use of cannabis and opioids
- Psychological and emotional distress
  - Many people with cancer experience “scanxiety,” which can contribute to increased substance use. Psychological and emotional distress are shown to lead to increased tobacco and alcohol use (Ng et al., 2022)
- Cancer treatment
  - Lauver et al. (2007) identified cancer treatment as a significant source of stress for patients (including side effects and physical limitations), with substance use being one way of coping with this stress.
- Sleep disturbances associated with cancer treatment

Screening for Substance Use

- Even if your research project doesn't target substance use, you should still ask about it!
- Alcohol
  - AUDIT-C: Assess for unhealthy alcohol use w/3-item questionnaire (screen)
  - PROMIS measures of alcohol use, consequences, and expectancies (for longer surveys)
- Tobacco
  - Cancer Patient Tobacco Use Questionnaire (C-TUQ): Assesses tobacco use: Use Core items (4) for screening, extended for research
  - Cigarette Dependence Scale (CDS-12): Assesses tobacco dependence

Screening for Substance Use

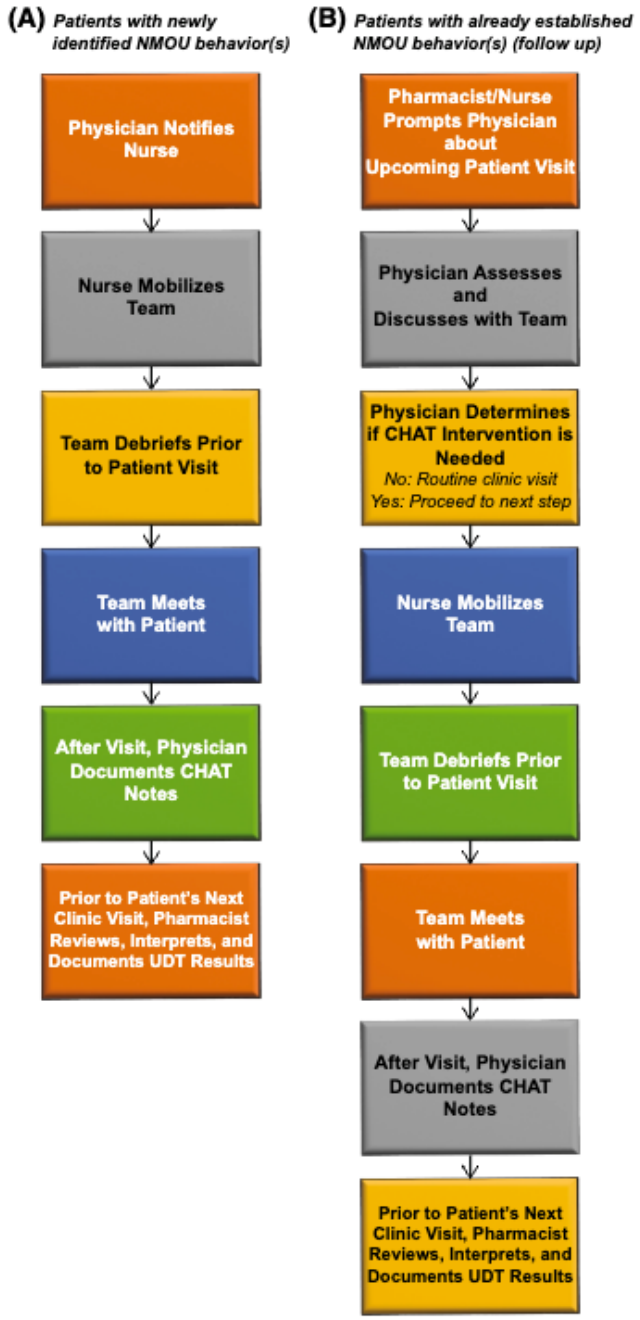
- Illicit Substances
  - Drug Abuse Screening Test (DAST-10)
- Opioids
  - Opioid Risk Tool (ORT): Assess the risk of substance use in cancer patients
  - Screener and Opioid Assessment for Patients with Pain (SOAPP): Assess for opioid misuse in cancer patients
- Combined screening:
  - Tobacco, Alcohol, Prescription medications, and other Substance (TAPS) Tool (NIDA)

Existing Interventions

- Research has shown that tailored interventions often result in better outcomes.
  - However, there are few tailored to address the unique substance use patterns of cancer patients and survivors.
- Smoking cessation interventions are most common; a recent systematic review (2022) found 23 studies describing interventions
  - Most were referrals to existing interventions (e.g., quitlines), pharmacotherapies, or EHR-based referral systems
  - Outcomes varied, though several studies reported significant effects on quit rates
- Systematic review by McGeechan et al. (2017) found only 7 articles describing alcohol reduction interventions
  - Only 1 had a significant effect on alcohol use compared to a control

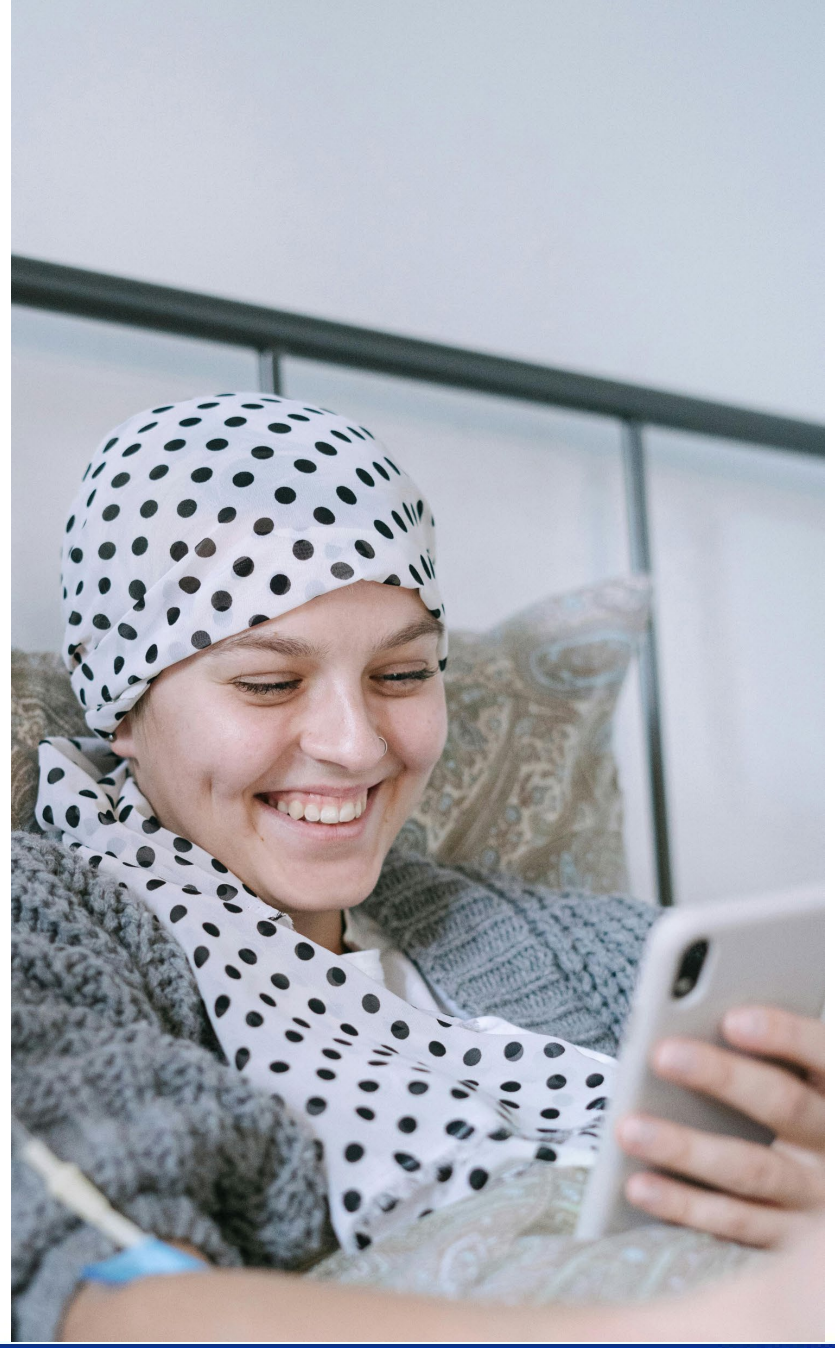
Intervention Examples

- CHAT (Compassionate High-Alert Team) intervention: Developed for cancer patients receiving opioids with documented nonmedical opioid use behavior (Arthur et al., 2022):
  - Team-based approach, based in principles of motivational interviewing
  - At least one team encounter, frequent follow-ups, monitoring of opioid use, random drug screens
  - Led to a significant reduction in nonmedical opioid use and pain intensity



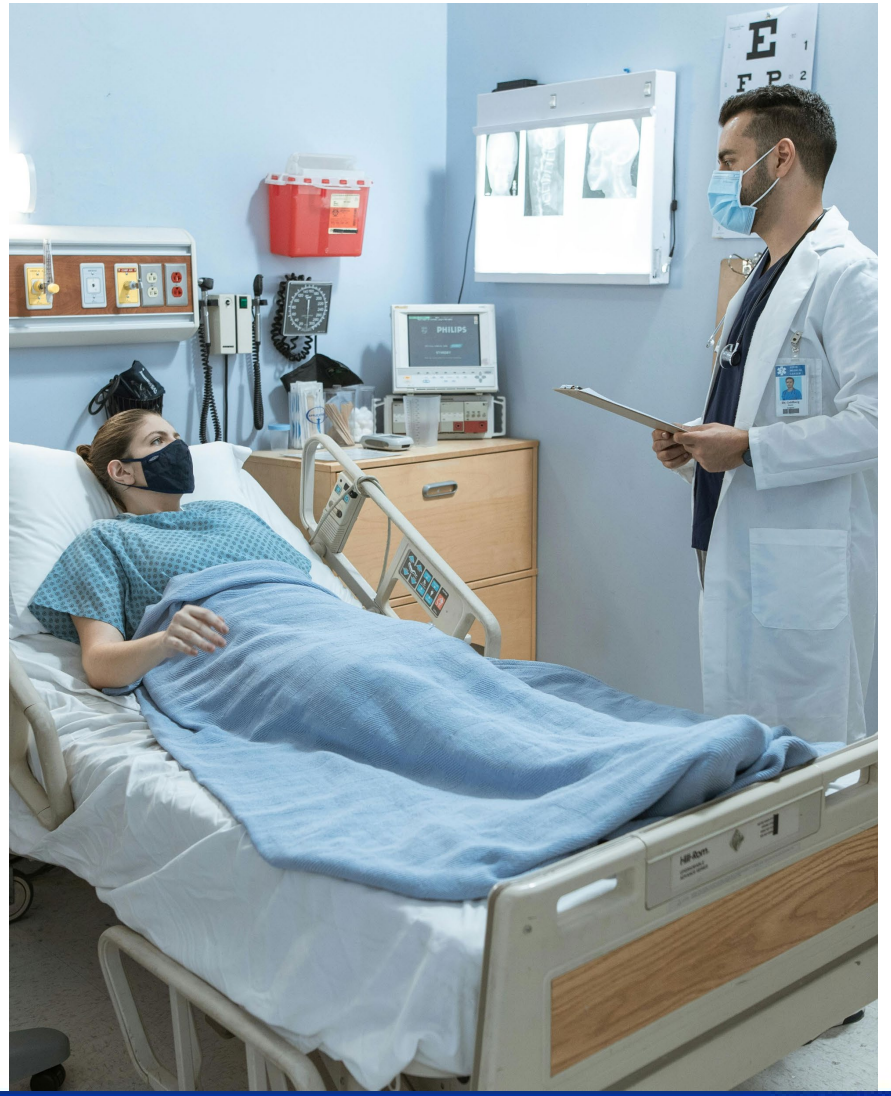
Intervention Examples

- Duffy et al (2006) developed a tailored intervention to address alcohol use, smoking, and depression in patients with Head and Neck cancers
  - Nurse-delivered, based on cognitive behavioral therapy
  - 9-11 sessions delivered via phone, paper workbook
  - Medications offered as needed for smoking cessation/depression
- Led to significant decreases in smoking cessation, but not alcohol or depression



Intervention Examples

- STOP-OP Study: Smoking and Alcohol Cessation Intervention for Bladder Cancer Patients Undergoing Surgery (2022)
  - Received 5 in-person counseling sessions, pharmacotherapy
  - Based on the Gold Standard Programme for alcohol and smoking cessation, including enhancing motivation, managing withdrawal, managing relapse, and benefits of quitting
  - Led to significant effects on quit rates (alcohol and tobacco) in the intervention vs. control group



Summarizing the Literature

- Characteristics of interventions to date:
  - Address substance use as part of multicomponent interventions (e.g., healthy lifestyle, dietary management).
  - Incorporate content related to the intersection of alcohol/substance use and cancer
  - Delivered remotely via phone or computer/website
  - Mostly pilot studies/small samples
  - Intensive, time-consuming interventions
  - Difficulty achieving effects on alcohol use

Moving the Field Forward

- Interventions to date have done a good job of tailoring content for a cancer context
  - Have employed focus groups, interviews, and pilot studies
- Areas to improve:
  - Adaptation of previously-tested evidence-based interventions
  - More larger-scale RCTs
  - More diverse populations of survivors
  - Lower resource interventions to enhance scalability and sustainability

Thank you!

Carolyn Lauckner

Carolyn.Lauckner@uky.edu

Acknowledgments: Thank you to Kimberly Haney for her assistance in preparing this presentation, and to NIAAA and NCI for funding my program of research.

References

- Shi MS, Luo C, Oduyale OK. Alcohol consumption among adults with a cancer diagnosis in the All of Us research program. Jama Netw Open. 2023;6(8):e2328328. doi: 10.1001/jamanetworkopen.2023.28328.
- Price SN, Palmer AM, Fucito LM. Tobacco use and cancer-related symptom burden: Analysis of the US Population Assessment of Tobacco and Health Study. Cancer. 2023 Aug 1;129(15):2385-2394. doi: 10.1002/cncr.34746.
- Woodley N, Slim MAM, Ton T, Montgomery J, Douglas C. Does recreational drug use influence survival and morbidity associated with laryngeal cancer. Addict Health. 2022 Apr;14(2):115-126. doi: 10.22122/AHJ.2022.196452.1287.
- Barclay JS, Owens JE, Blackhall LJ. Screening for substance abuse risk in cancer patients using the Opioid Risk Tool and urine drug screen. Support Care Cancer. 2014 Jul;22(7):1883-8. doi: 10.1007/s00520-014-2167-6.
- Duffy SA, Ronis DL, Valenstein M. A tailored smoking, alcohol, and depression intervention for head and neck cancer patients. Cancer Epidemiol Biomarkers Prev. 2006;15(11):2203-2208. doi: 10.1158/1055-9965.EPI-05-0880.
- McGeechan GJ, Newbury-Birch D, Ferguson J, Waller G, Giles EL. A systematic review of alcohol interventions for people living with and beyond cancer. Alcohol Change UK: London, UK) Available at https://alcoholchange. org. uk/publication/a-systematic-review-of-alcoholinterventions-for-people-living-with-and-beyond-cancer [Verified 21 February 2019]. 2017 Dec 20.
- Jairam V, Yang DX, Verma V, James BY, Park HS. National patterns in prescription opioid use and misuse among cancer survivors in the United States. JAMA network open. 2020 Aug 3;3(8):e2013605.
- Arthur JA, Edwards T, Lu Z, Tang M, Amaram-Davila J, Reddy A, Hui D, Yennurajalingam S, Anderson AE, Jennings K, Reddy S. Interdisciplinary intervention for the management of nonmedical opioid use among patients with cancer pain. Cancer. 2022 Oct 15;128(20):3718-26.
- Lauridsen SV, Thomsen T, Jensen JB, Kallemose T, Behrend MS, Steffensen K, Poulsen AM, Jacobsen A, Walther L, Isaksson A, Thind P. Effect of a smoking and alcohol cessation intervention initiated shortly before radical cystectomy—the STOP-OP study: a randomised clinical trial. European urology focus. 2022 Nov 1;8(6):1650-8.

References

- Hawkes AL, Chambers SK, Pakenham KI, Patrao TA, Baade PD, Lynch BM, Aitken JF, Meng X, Courneya KS. Effects of a telephone-delivered multiple health behavior change intervention (CanChange) on health and behavioral outcomes in survivors of colorectal cancer: a randomized controlled trial. J Clin Oncol. 2013 Jun 20;31(18):2313-1.
- Hollen PJ, Tyc VL, Donnangelo SF, Shannon SV, O'Laughlen MC, Hinton I, Smolkin ME, Petroni GR. A substance use decision aid for medically at-risk adolescents: results of a randomized controlled trial for cancer-surviving adolescents. Cancer Nurs. 2013 Sep-Oct;36(5):355-67. doi: 10.1097/NCC.0b013e31827910ba.
- Osaghae, I., Chido-Amajuoyi, O.G., Talluri, R. et al. Prevalence, reasons for use, perceived benefits, and awareness of health risks of cannabis use among cancer survivors – implications for policy and interventions. J Cancer Surviv (2023).
- Ellison GL, Helzlsouer KJ, Rosenfield SM, Kim Y, Ashare RL, Blaes AH, Cullen J, Doran N, Ebbert JO, Egan KM, Heffner JL. Perceptions, prevalence, and patterns of cannabis use among cancer patients treated at 12 NCI-Designated Cancer Centers. JNCI Monographs. 2024 Aug;2024(66):202-17.
- Yennurajalingam S, Arthur J, Reddy S, et al. Frequency of and Factors Associated With Nonmedical Opioid Use Behavior Among Patients With Cancer Receiving Opioids for Cancer Pain. JAMA Oncol. 2021;7(3):404–411. doi:10.1001/jamaoncol.2020.6789
- Vitzthum LK, Riviere P, Sheridan P, Nalawade V, Deka R, Furnish T, Mell LK, Rose B, Wallace M, Murphy JD. Predicting Persistent Opioid Use, Abuse, and Toxicity Among Cancer Survivors. J Natl Cancer Inst. 2020 Jul 1;112(7):720-727. doi: 10.1093/jnci/djz200. PMID: 31754696; PMCID: PMC7357328.
- Frazer K, Bhardwaj N, Fox P, Stokes D, Niranjan V, Quinn S, Kelleher CC, Fitzpatrick P. Systematic review of smoking cessation interventions for smokers diagnosed with cancer. International Journal of Environmental Research and Public Health. 2022 Dec 18;19(24):17010.

Emotion Processing and Social Support Impact Mental and Physical Health in Cancer Survivors

Karen Weihs, M.D.

Professor of Psychiatry and Family & Community Medicine

University of Arizona Cancer Center

Tucson, AZ

10-21-24

Disclosures

- Dr. Weihs is site co-investigator for a Jansen sponsored clinical trial of a Phase III drug for depression augmentation

Stress

STRESS is generated when the demands of cancer survivorship tax or exceed the capacity of survivors to pursue their life goals, resulting in psychological or biological changes that may place the person at risk of mental and physical disease.

Selye, 1956

Negative emotions signal interference with progress toward cancer survivors' life goals

Positive emotions signal accelerated progress toward life goals

Emotional Processing

Characterized by acknowledging distress and accepting the emotions generated by ones life experience.

Facilitates resolution of distress and decreases psychopathology over time, as demonstrated in both laboratory and clinical studies.

Coping with Emotion during stress and coping processes

- Emotional approach coping = processing and expressing negative emotion
- Emotional avoidance coping = avoiding, repressing, denying negative emotion

Does coping with emotion impact mental and physical health of cancer survivors?

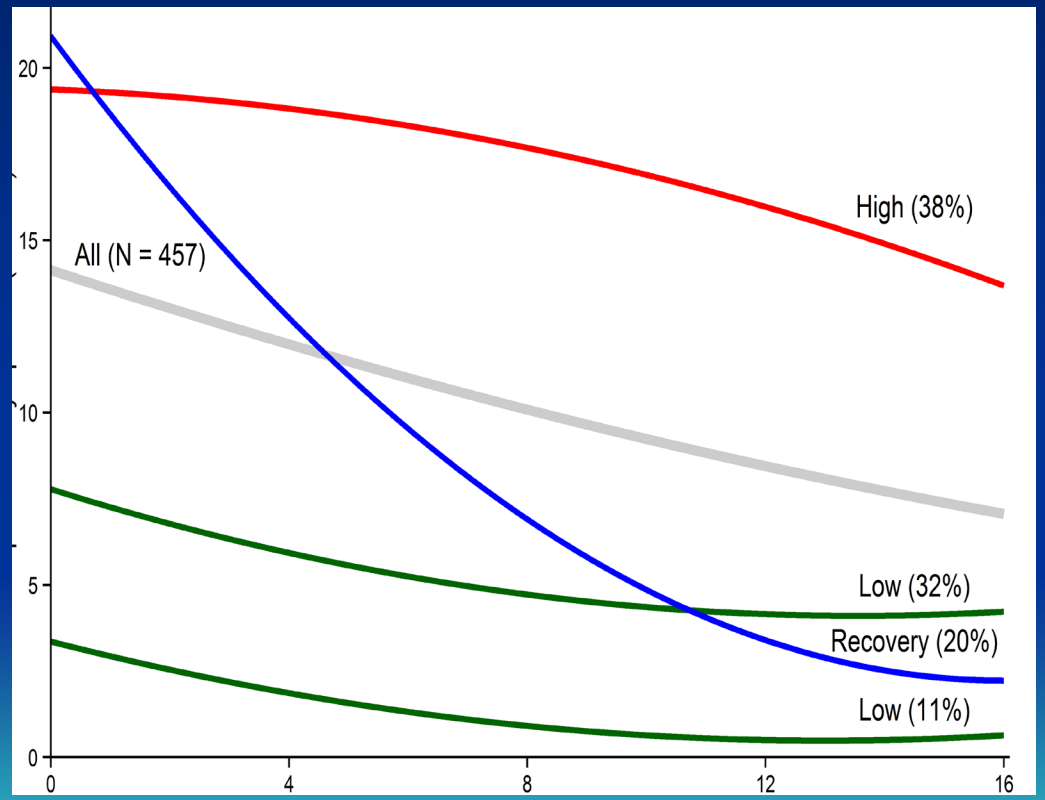
Coping & Depressive Symptom Trajectory Classes over One Year

High depression trajectory

- →*Higher and more persistent avoidance oriented coping*
- →*Persistently lower acceptance oriented coping*
- →*Lower and decreasing emotion expression coping*

Recovery trajectory

- →*Lower and decreasing avoidance coping*
- →*Higher and increasing acceptance oriented coping*
- →*Higher and increasing emotion expression coping*



StantonAL, Wiley JF, Krull, KL,Crespi,CM, Hammen, C.,Weihs KL, (2015). Breast Cancer Res Treat **154(1): 105-115.**

Coping with Emotion and Breast Cancer Outcome

Prospective Longitudinal Study;

847 breast cancer patients, 9 yr. follow-up

Expressing Emotion RR = 0.6 [0.4, 0.9]

Suppressing Emotion RR = 1.4 [1.1, 1.9]

Reynolds, P., Hurley, S., et al.
Am J Epidemiol 2000; 152(10): 940-9.

nature medicine

Nature Medicine | Volume 30 | June 2024 | 1680–1688

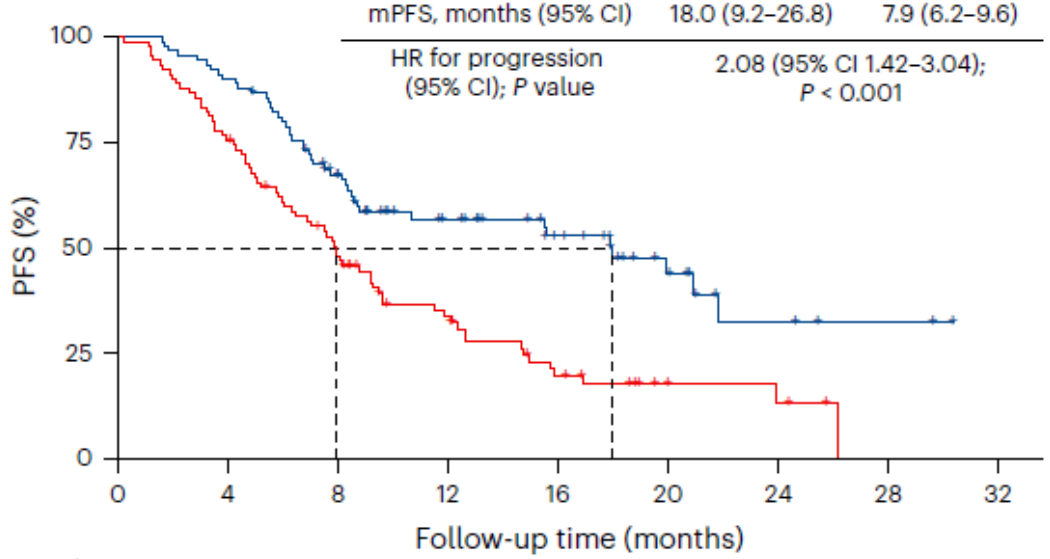
Article

https://doi.org/10.1038/s41591-024-02929-4

Association between pretreatment emotional distress and immune checkpoint inhibitor response in non-small-cell lung cancer

a PSM-based population

	No ED	ED
No. events/no. patients	44/90	69/90
mPFS, months (95% CI)	18.0 (9.2–26.8)	7.9 (6.2–9.6)
HR for progression (95% CI); *P* value	2.08 (95% CI 1.42–3.04); *P* < 0.001	

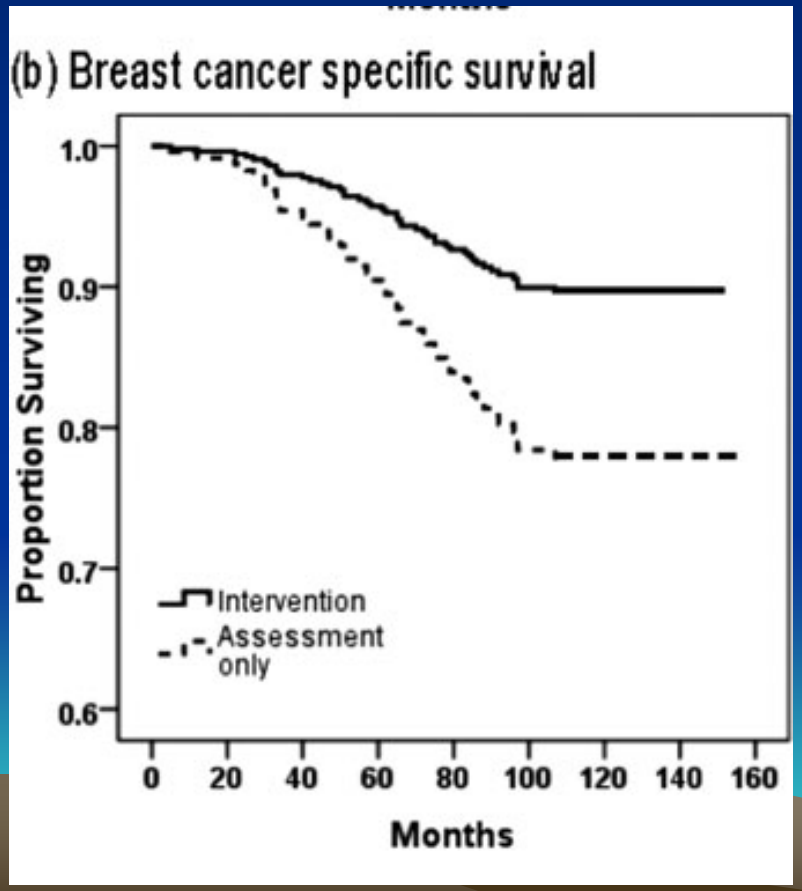


Number at risk

No ED	90	81	55	35	24	12	5	2	0
ED	90	68	41	24	12	5	3	0	0

Interventions that change coping with emotional distress can increase survival time

Andersen, B. L., H. C. Yang, et al. (2008). "Psychologic intervention improves survival for breast cancer patients: a randomized clinical trial." Cancer **113**(12): 3450-8.



29 sessions – 36 hours
Over 12 months

Stress management, dietary education
Support for adherence to Rx

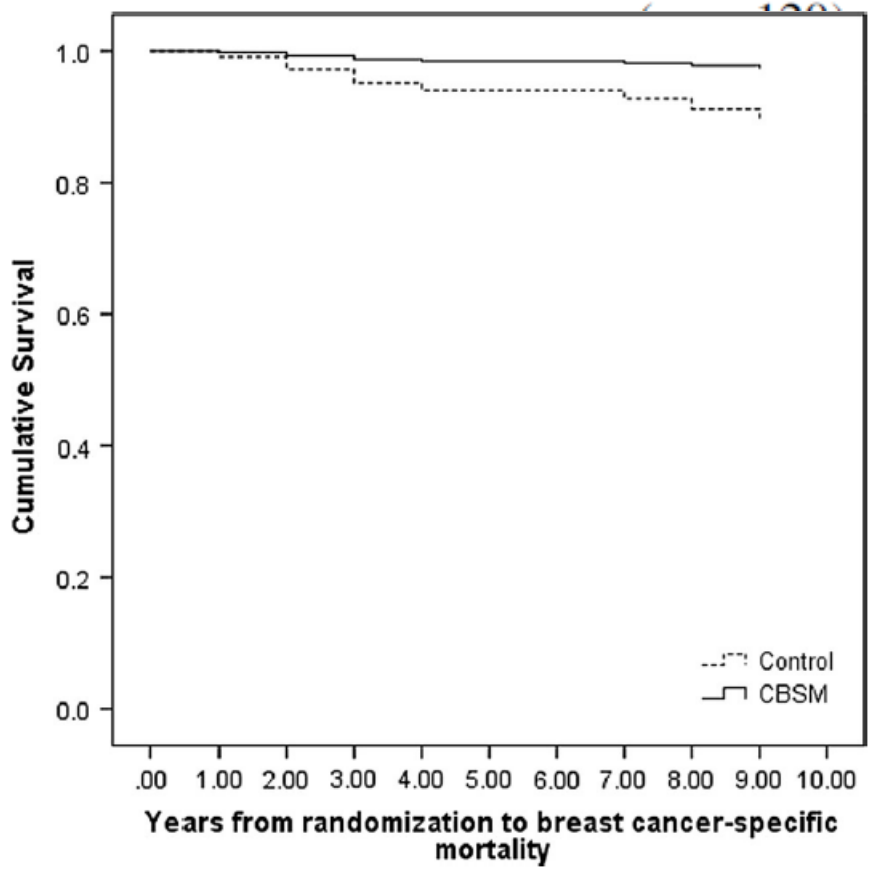
Breast Cancer Res Treat (2015) 154:319–328
DOI 10.1007/s10549-015-3626-6

CLINICAL TRIAL

A randomized controlled trial of cognitive-behavioral stress management in breast cancer: survival and recurrence at 11-year follow-up

Jamie M. Stagl[1] · Suzanne C. Lechner[2,3] · Charles S. Lisa M. Gudenkauf[4] · Devika R. Jutagir[4] · Alain Diaz Bonnie B. Blomberg[3,5] · Gail Ironson[4] · Stefan Glück[7]

1998 to 2005, women ($N = 240$) 2–10 weeks post-surgery for non-metastatic Stage 0–IIIb breast cancer were randomized to a 10-week, group-based CBSM intervention ($n = 120$) or a 1-day psychoeducational seminar control



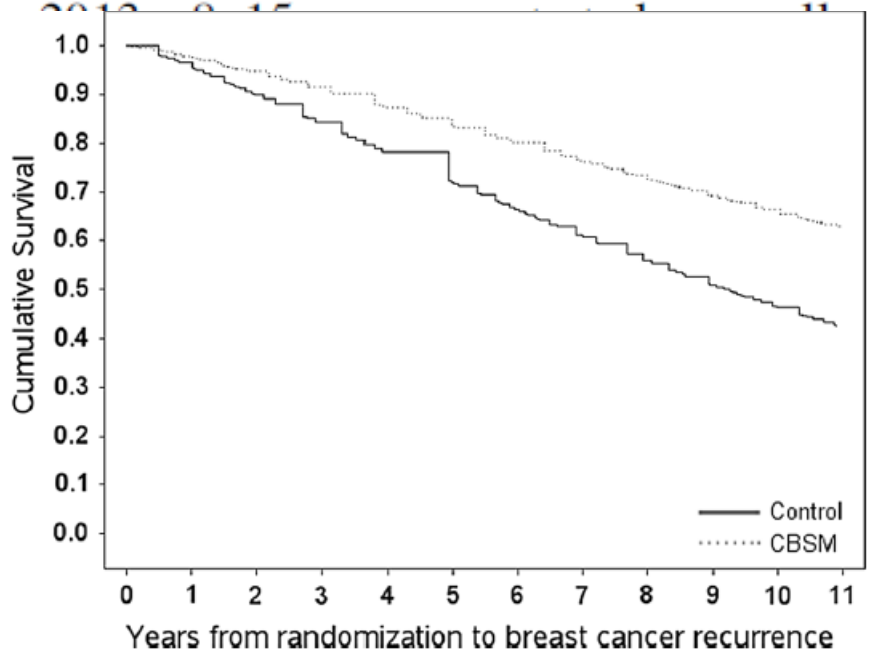


Fig. 4 Disease-free interval difference in study groups. Differences between study groups (CBSM vs. control) with Weibull accelerated failure time models on disease-free interval controlling for covariates: age, stage of disease, HER2/neu, endocrine therapy, and tumor size. "Cumulative Survival" indicates disease-free interval

- Emotion is the currency of interpersonal relationships; knowing how self and other feel greatly assists in healthy functioning and interpersonal problem solving.

Social Relationships decrease Mortality Risk

Holt-Lunstad, J., T. B. Smith, et al. (2012).
"Social relationships & mortality risk: a meta-analytic review."
PLoS Medicine / Public Library of Science 7(7): e1000316.

Associations of social networks with cancer mortality: A meta-analysis
87 Studies

- Having high levels of perceived social support, larger social network, and being married were associated with decreases in relative risk for mortality of 25%, 20%, and 12%, respectively.

- Never married patients had higher mortality rates than widowed and divorced/separated patients.

Martin Pinquart [a,*], Paul R. Duberstein [b]

Critical Reviews in Oncology/Hematology 75 (2010) 122–137

- Associations of social network with mortality were stronger in younger patients

- Relationships varied by cancer site, with stronger associations of social support observed in studies of patients with leukemia and lymphomas and stronger associations of network size observed in studies of breast cancer.

- Further randomized intervention studies are needed to test causal hypotheses about the role of social support and social network for cancer mortality.

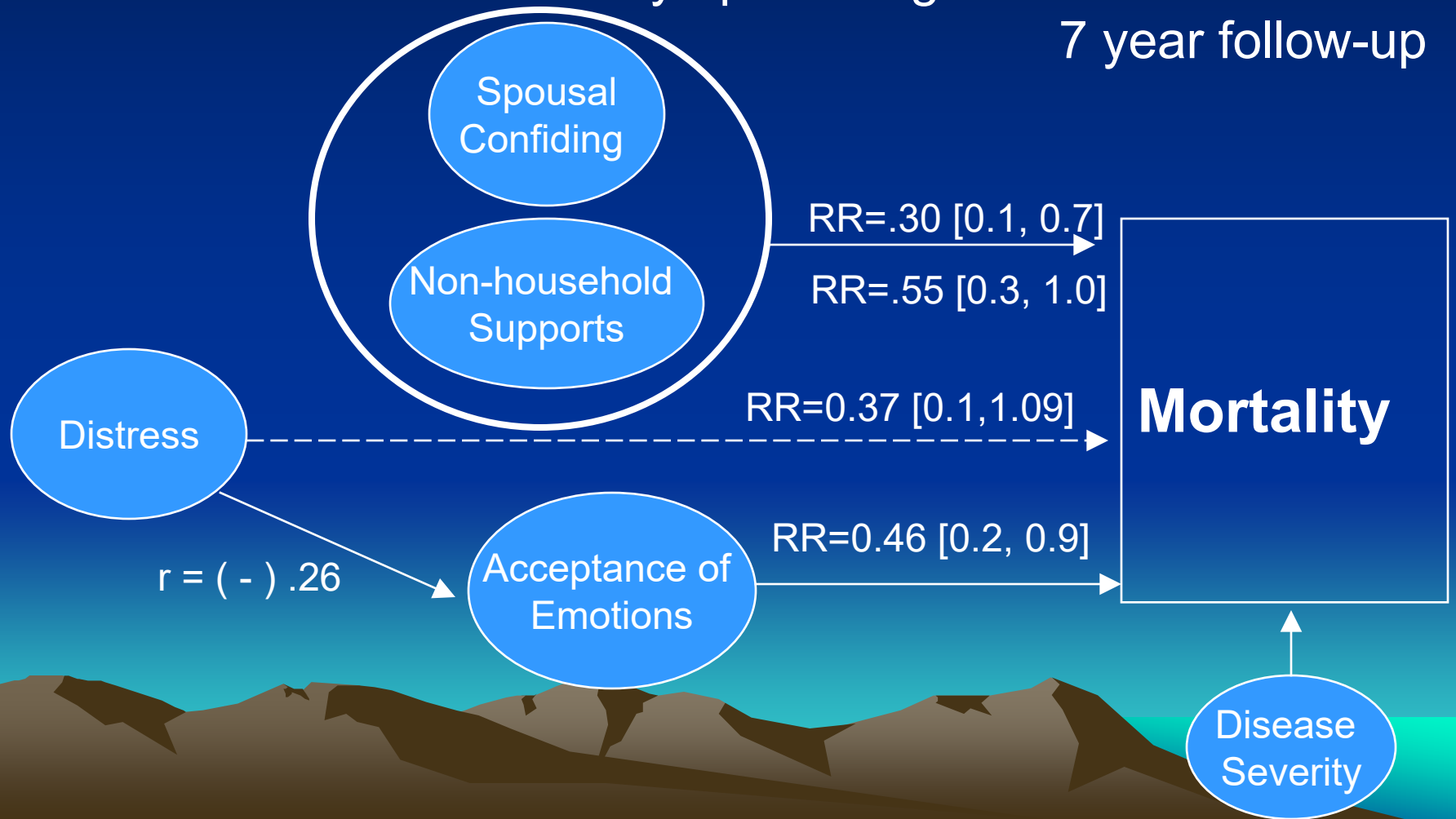
Individual & Relational Responses to Threat → Mortality

Enrollment criteria: Stage II breast cancer with 2 family members

Study Design: Prospective, Longitudinal

n= 90 Enrolled 1 yr. post Diagnosis 16 deaths

7 year follow-up



- BOTH emotional processing and relationship support variables are unique predictors of mortality, and should be investigated in future studies of the effects of stress on breast cancer progression.

Acknowledgements

Annette L. Stanton, PhD
Emma E. Bright, MA
Timothy J. Williamson, MA
Jennifer Krull, PhD
Stanton Stress & Coping Lab

Richard Lane, MD, Ph.D.
Martha Barron, MS
Laura Eparvier, RN

Joshua Wiley, PhD

FUNDING

NCI 1R01 CA133081 (Stanton & Weihs, co-PIs)
BCRF-17-151 (Stanton)
NCI P30CA023074 (Weihs, PI: Kraft)
NIH/NCI P30 CA 16042 (Crespi, PI: Gasson)
NIMH 5 T32 MH015750 (Kim, PI: Dunkel Schetter)

Question and Answer

Please enter your question(s) or comment(s) in the chat or raise your hand using the icon .

Thank you for attending and please stay connected!

@nciCCHE

NCI Center for Cancer Health Equity (CCHE)

http://CCHE.cancer.gov