
Pathways Study Forum

The Pathways Study

**Advancing Knowledge to Improve Outcomes for
Women with Breast Cancer and
Top Actionable Findings**

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29 April 2026



Disclosure Information for Larry Kushi

No financial conflicts to disclose

The views and interpretations of data presented here are my own and do not necessarily represent those of Kaiser Permanente or any other organization with which I am affiliated.

What We Will Cover ...

- A brief background
- An overview of the Pathways Study
- Select findings related to two focus areas of Pathways Study
 - Dietary patterns
 - Physical activity
- Brief summaries of other findings
- Where the Pathways Study is going from here

Diet, Nutrition, Physical Activity and Cancer: a Global Perspective

A summary of the Third Expert Report



World Cancer Research Fund/
American Institute for Cancer Research.
**Diet, Nutrition, Physical Activity and
Cancer: a Global Perspective**
Continuous Update Project
Third Expert Report, 2018

There is substantial evidence that dietary factors play an important role in the development of cancer

Known Risk Factors for Breast Cancer



Gender



Family History



Radiation



Weight



Increasing Age



Age at First Birth



Breast Density



Physical Activity



Genetics



Parity



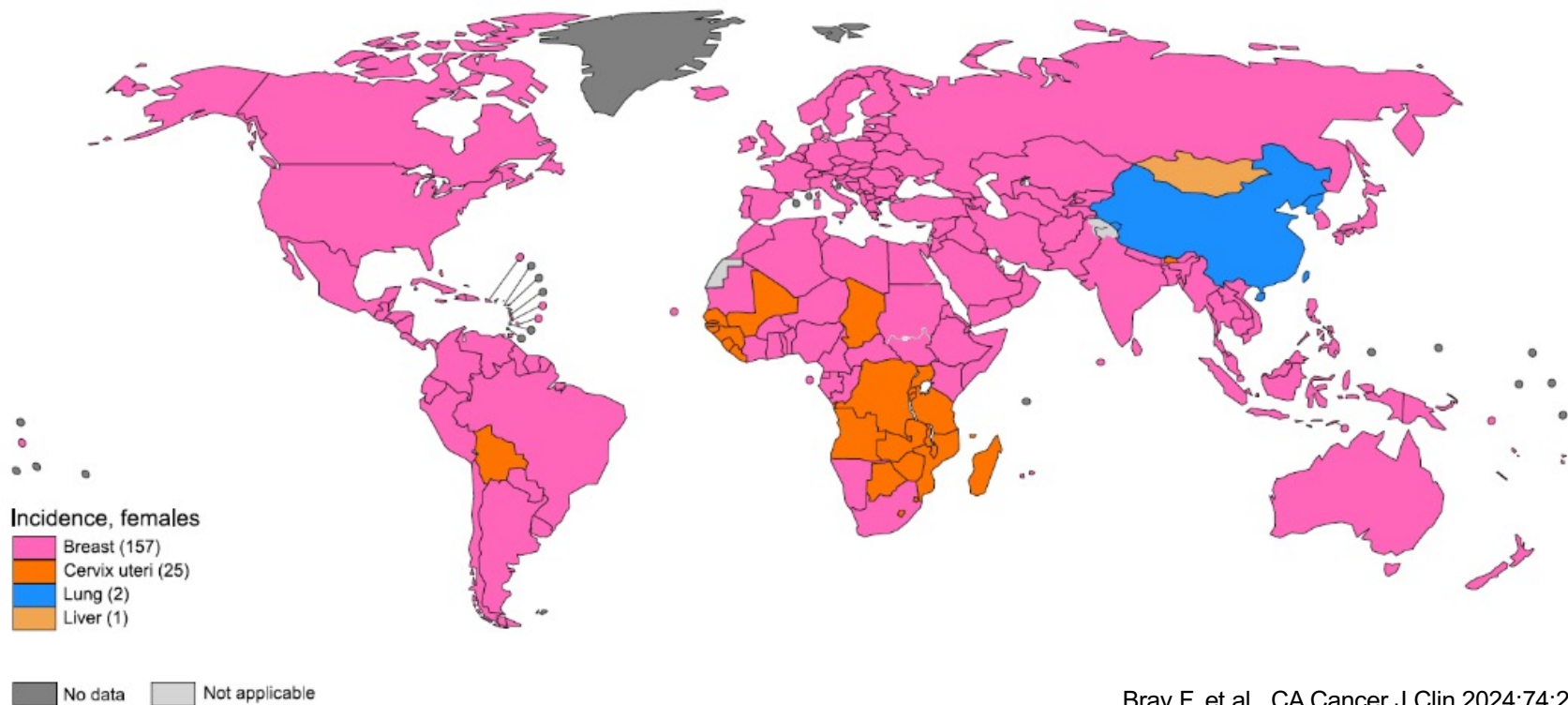
Hormone Replacement



Alcohol

Breast Cancer is the Most Common Cancer among Women in the Vast Majority of Countries Globally

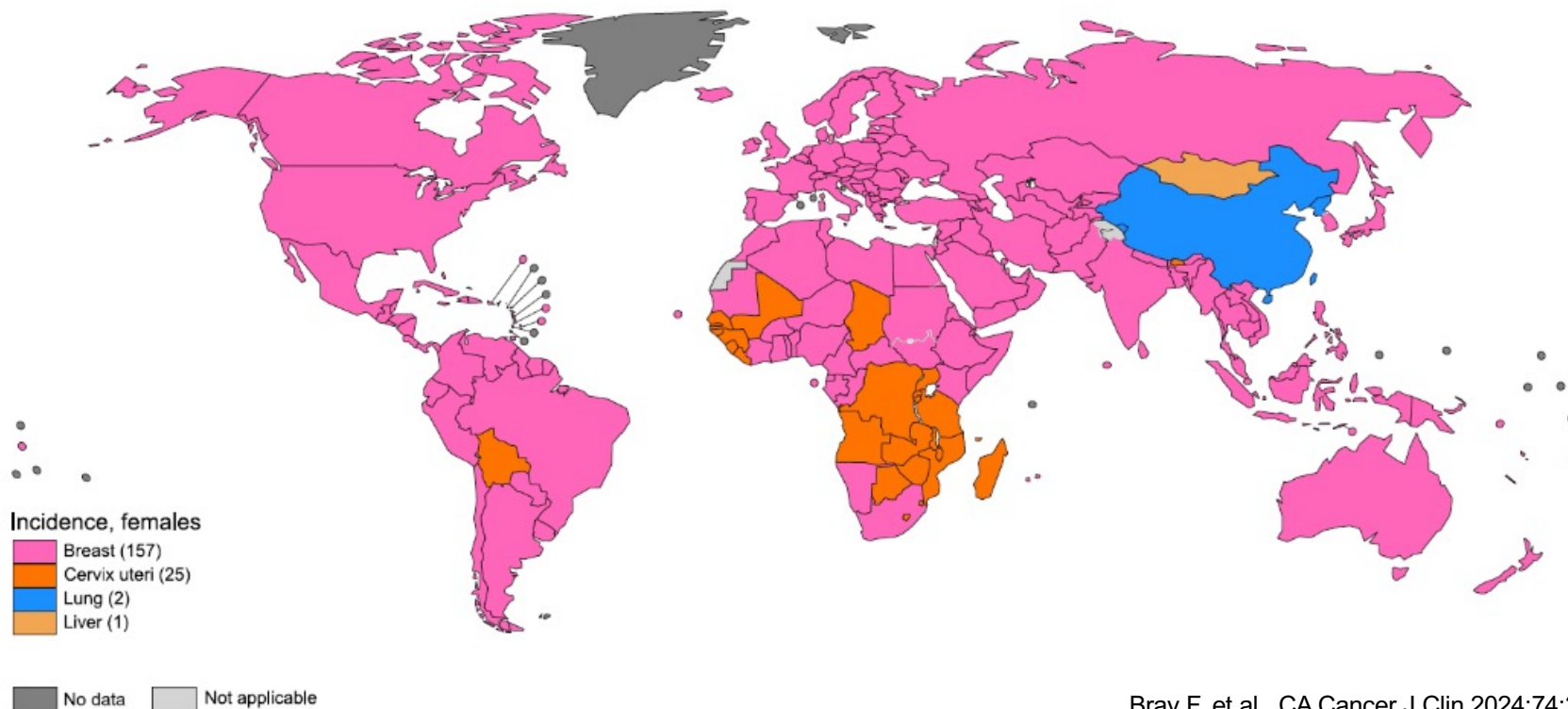
(Globocan 2022, International Agency for Research on Cancer, World Health Organization)



Bray F, et al., CA Cancer J Clin 2024;74:229-263

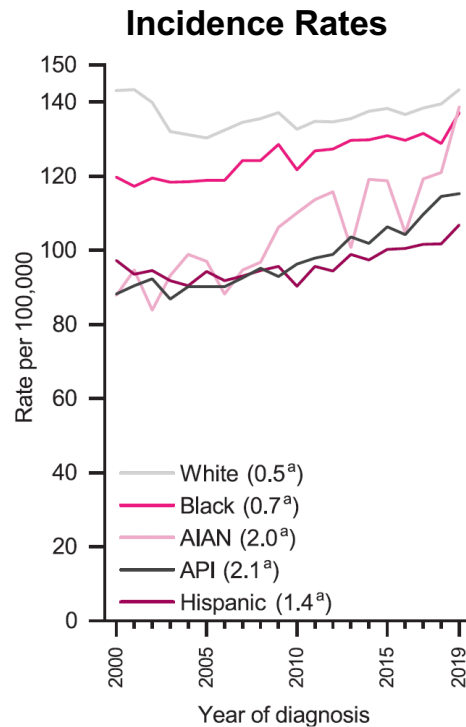
Breast Cancer is also the Most Common Cause of Cancer Deaths among Women in the Vast Majority of Countries Globally

Globocan 2022, International Agency for Research on Cancer, World Health Organization

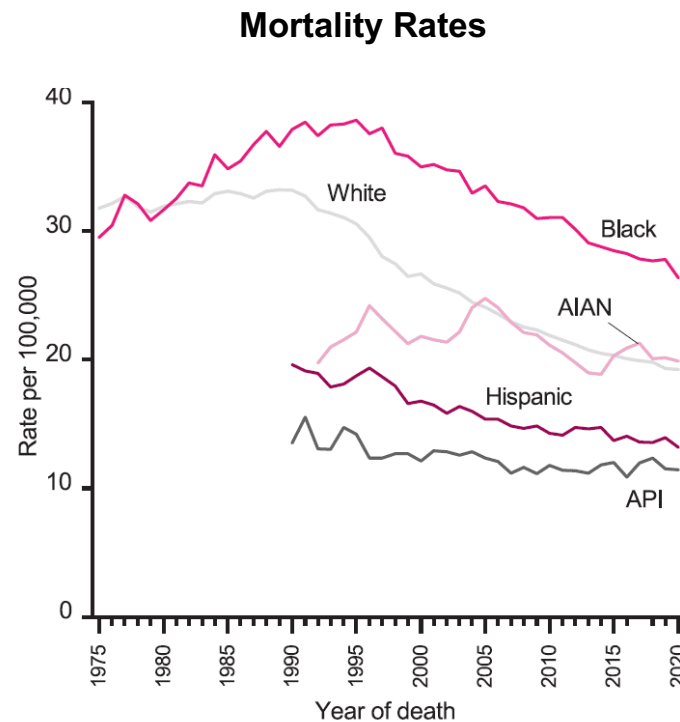


Bray F, et al., CA Cancer J Clin 2024;74:229-263

Breast Cancer Incidence Rates have been Increasing, while Breast Cancer Mortality Rates have been Decreasing in the US



^aAverage annual percent increase



The American Cancer Society estimates that there are more than **4 million** breast cancer survivors in the US today

Giaquinto AN, et al., CA Cancer J Clin 2022;72:524-541

<https://www.cancer.org/cancer/types/breast-cancer/about/how-common-is-breast-cancer.html>

American Cancer Society Nutrition and Physical Activity Guidelines for Cancer Survivors

CA Cancer J Clin 2012;62:242-274.

“After receiving a diagnosis of cancer, survivors soon find there are few clear answers to even the simplest questions, such as:

- *Should I change what I eat?*
- *Should I exercise more?*
- *Should I gain or lose weight?*
- *Should I take dietary supplements?*

“Cancer survivors receive a wide range of advice from many sources about foods they should eat, foods they should avoid, how they should exercise, and what types of supplements they should take, if any. Unfortunately, this advice is often inconsistent and not supported by data.”

American Cancer Society Nutrition and Physical Activity Guidelines for Cancer Survivors

CA Cancer J Clin 2012;62:242-274.

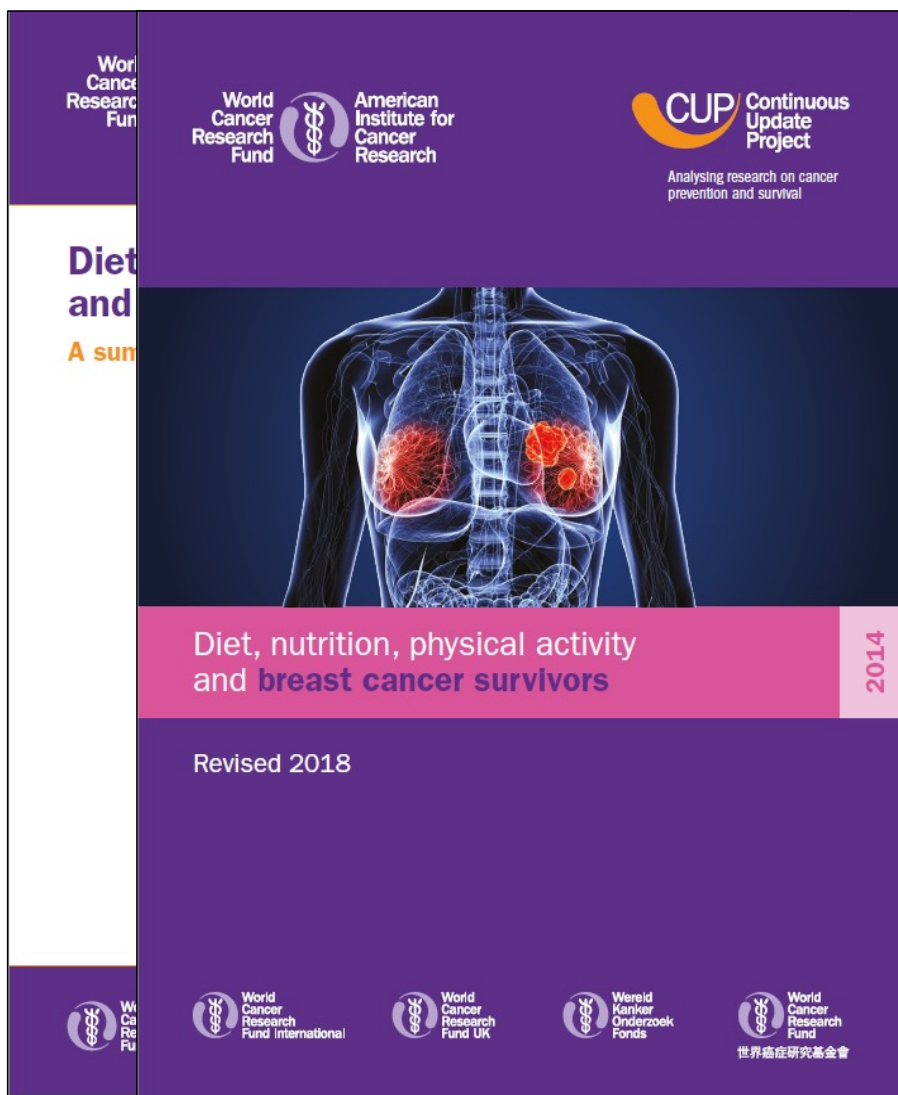
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“Cancer survivors receive a wide range of advice from many sources about foods they should eat, foods they should avoid, how they should exercise, and what types of supplements they should take, if any. Unfortunately, this advice is often inconsistent and not supported by data.”

Most recent position statement from the ACS:

Rock CL, et al. American Cancer Society nutrition and physical activity guideline for cancer survivors. *CA Cancer J Clin* 2022;72:230-262.



World Cancer Research Fund/
American Institute for Cancer Research.
**Diet, Nutrition, Physical Activity and
Cancer: a Global Perspective**
Continuous Update Project
Third Expert Report, 2018

World Cancer Research Fund/
American Institute for Cancer Research.
**Diet, Nutrition, Physical Activity and
Breast Cancer Survivors**
Continuous Update Project
Third Expert Report, 2014 (revised 2018)

Prospective Study of Breast Cancer Survivorship

Project Number
1R01CA105274-01A1

Contact PI/Project Leader
KUSHI, LAWRENCE H

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Organization Type
Research Institutes

State Code
CA
Congressional District
09

Other Information

Opportunity Number
[PAS-02-009](#)

Study Section
[Special Emphasis Panel\[ZRG1-HOP-D\(02\)M\]](#)

Fiscal Year
2004

Award Notice Date
20-September-2004

Administering Institutes or Centers
National Cancer Institute

CFDA Code
393

DUNS Number
150829349

UEI
P1RTMASB37B5

Project Start Date 20-September-2004

Project End Date 31-August-2009

Budget Start Date 20-September-2004

Budget End Date 31-August-2005

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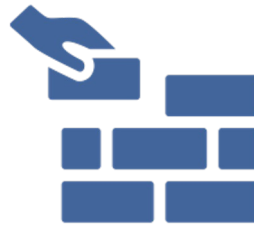
31-August-2005

Goals of the Pathways Study



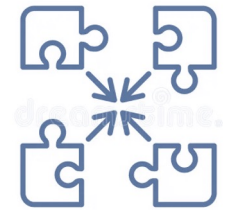
Advance

Knowledge to improve outcomes for women with breast cancer.



Create






A comprehensive **research platform** to study multi-level factors across survivorship.



Integrate

Input of survivors, caregivers, advocates, and clinicians.

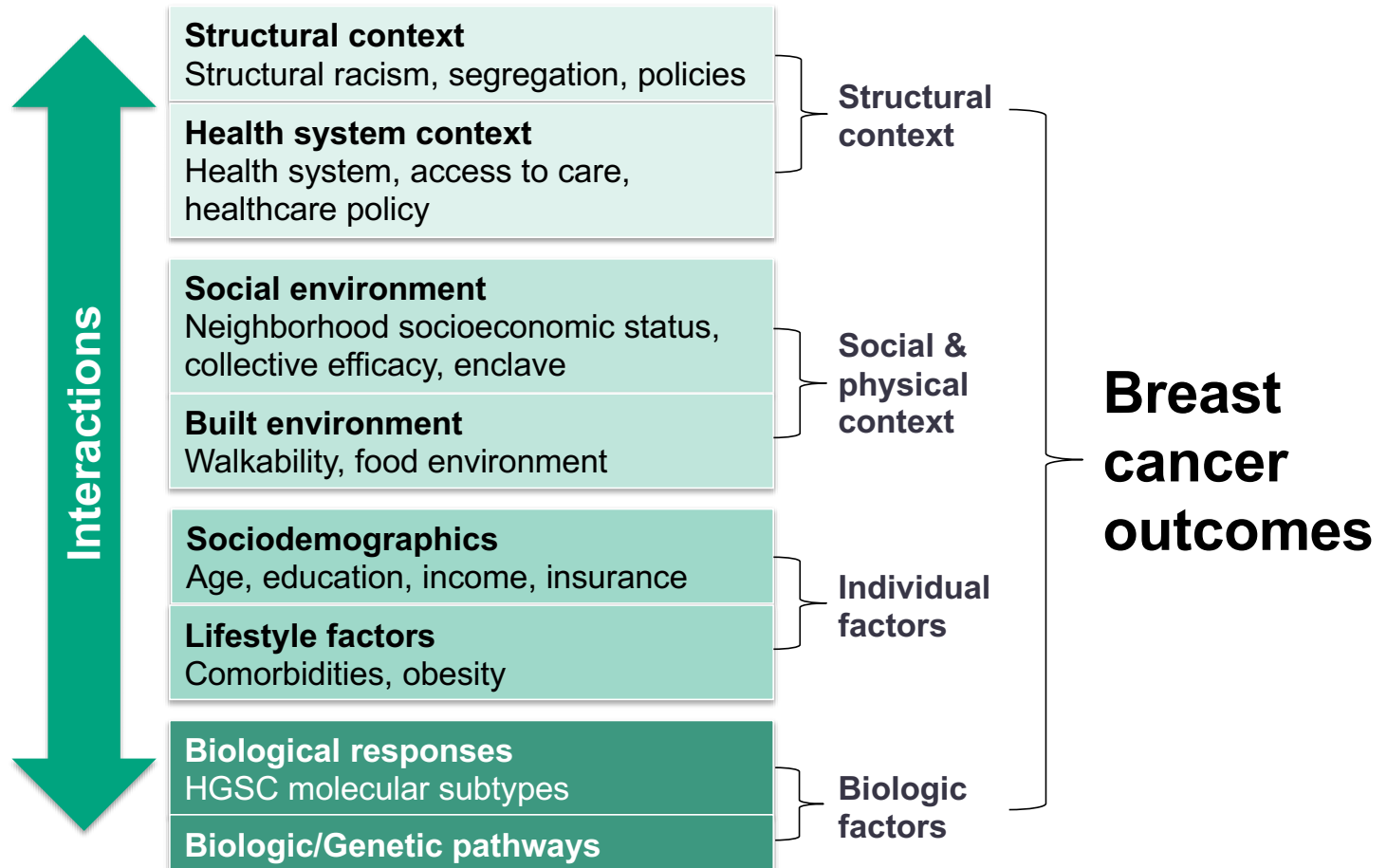
Core institutions collaborating on the Pathways Study

Institution	Lead Investigator	Roles
 KAISER PERMANENTE®	Lawrence Kushi, ScD	Cohort recruitment/follow-up; self-reported and clinical characteristics
 ROSWELL PARK. <small>COMPREHENSIVE CANCER CENTER</small>	Christine Ambrosone, PhD	Genetic and molecular factors
 UC DAVIS	Theresa Keegan, PhD	California Cancer Registry/OSHPD linkage
 UCSF University of California San Francisco	Scarlett Gomez, PhD	Neighborhood social/contextual factors
 zero breast cancer	Lianna Hartmour, MA	Community perspectives

A Cells-to-Society Model for Breast Cancer Outcomes Research

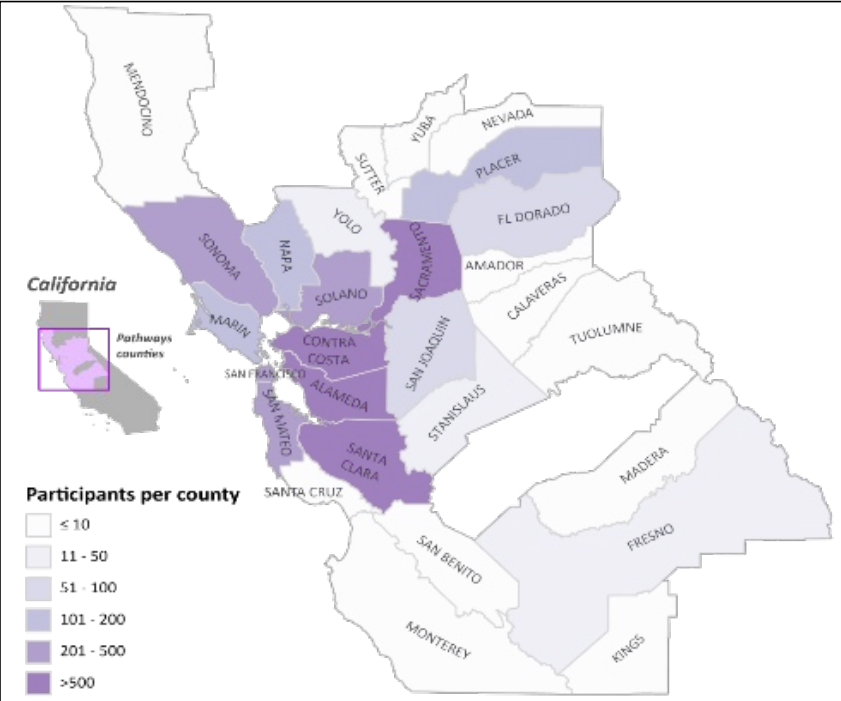
A framework for multilevel research

Centers for Population Health and Health Disparities, NIH

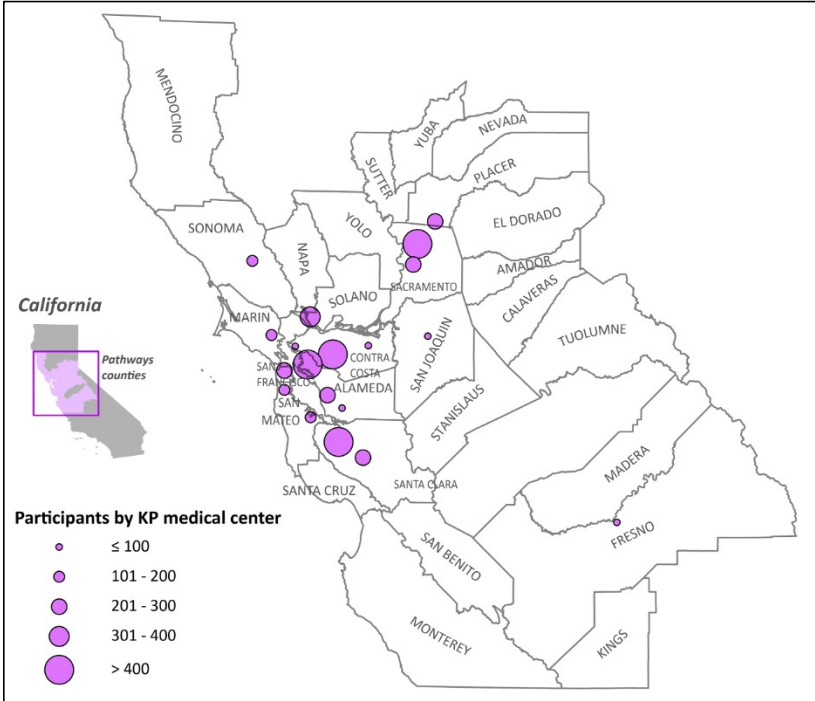


Adapted from
Warnecke et al. AJPH 2008

The Pathways Study enrolled participants across a wide geographic area throughout the KPNC service region



By County



By Medical Center

Pathways Study: Select Participant-Reported Domains



Medications



Physical Activity



FACT-B



LOT-R (Optimism)



Vitamins and Supplements



Lymphedema



FACT - Taxane



Body Size Measurements



Complementary and
Alternative Medicine (CAM)



Religion and Spirituality



MOS (Social Support)



Food Frequency
Questionnaire



Organic Foods



SF-12

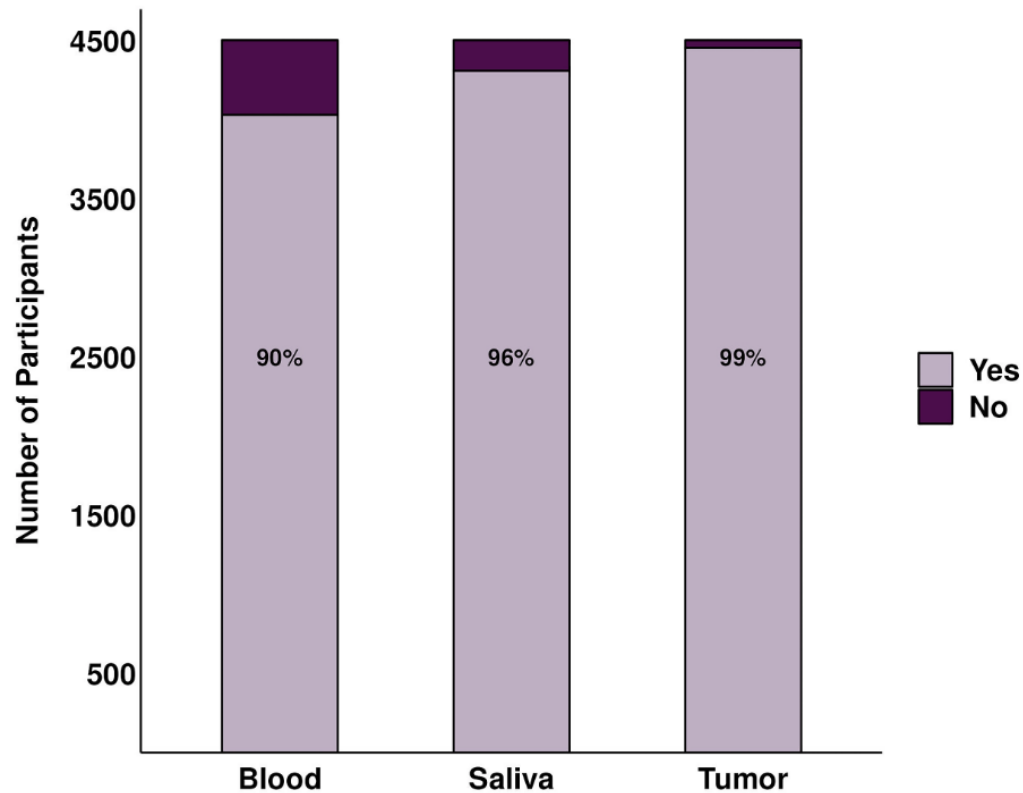


CES-D (Depression)



3-Day Food Diary

Pathways Study Biospecimen Collection



Select genetic biomarkers:

- Germline (SNPs, GWA)
- Polygenic risk scores
- DNA methylation (*in process*)
- Tumor gene expression

Select biological biomarkers:

- Inflammatory
- Bone
- Hormonal
- Immune
- Breast adipose tissue

Follow-up & Outcomes Ascertainment in the Pathways Study



Self-report
Report by families



EHR-based recurrence algorithm,
with confirmation by chart review



Cancer registry, EHR/VDW

- Cardiovascular risk factors
- Cardiovascular diseases
- Metabolic disorders
- Fractures



National Death Index (VDW)

- Deaths
- Deaths due to breast cancer
- Other causes of death

OXFORD












JNCI Cancer Spectrum (2021) 5(2): pkab019

doi: 10.1093/jncics/pkab019

First published online 2 March 2021

Article

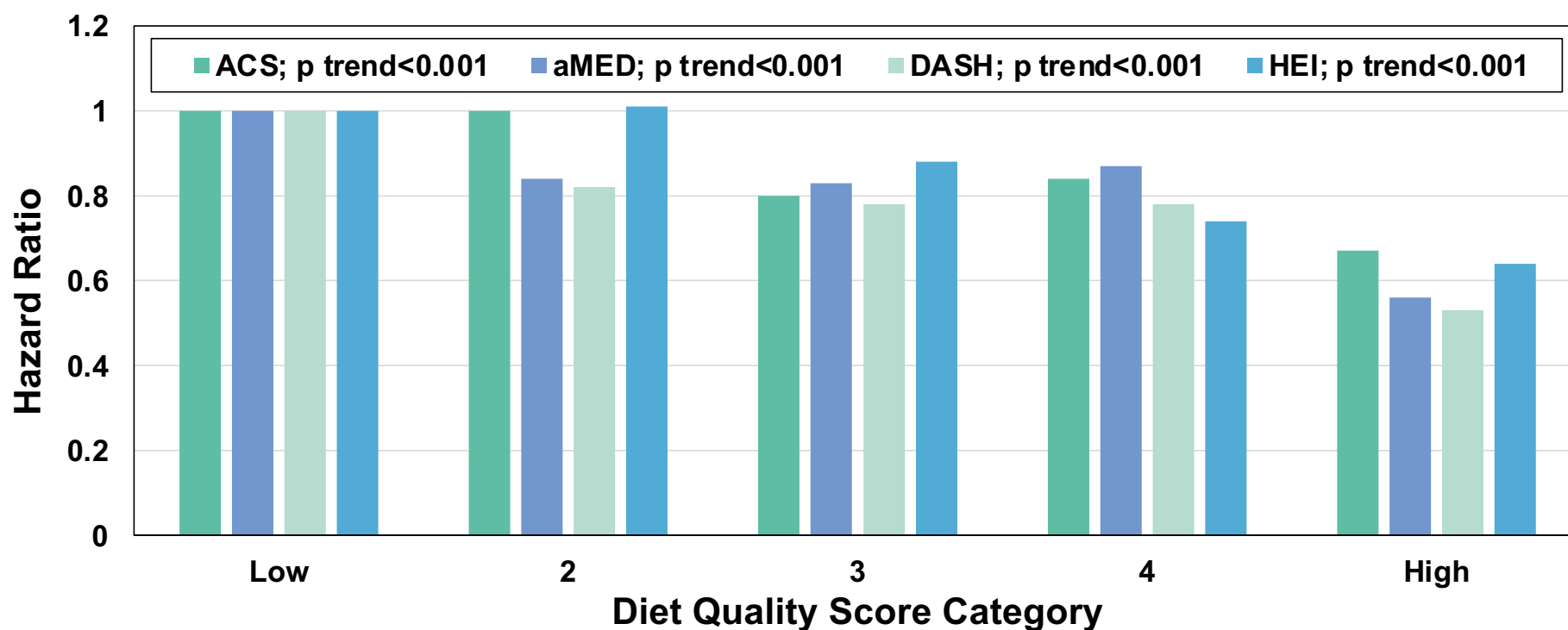
Diet Quality and Breast Cancer Recurrence and Survival: The Pathways Study

Isaac J. Ergas , MPH,^{1,*} Elizabeth M. Cespedes Feliciano , ScD, SM,¹ Patrick T. Bradshaw , PhD,² Janise M. Roh , MSW, MPH,¹ Marilyn L. Kwan , PhD,¹ Jen Cadenhead , MS, RDN,¹ Margarita Santiago-Torres , PhD,³ Alyssa N. Troeschel , MPH,⁴ Barbara Laraia , PhD, MPH, RD,^{2,5} Kristine Madsen , MD, MPH,⁵ Lawrence H. Kushi , ScD¹

¹Division of Research, Kaiser Permanente Northern California, Oakland, CA, USA; ²Division of Epidemiology and Biostatistics, School of Public Health, University of California, Berkeley, CA, USA; ³Division of Public Health Sciences, Cancer Prevention Program, Fred Hutchinson Cancer Research Center, Seattle, WA, USA; ⁴Department of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, GA, USA and ⁵Division of Community Health Sciences, School of Public Health, University of California, Berkeley, CA, USA

*Correspondence to: Isaac Ergas, MPH, Division of Research, Kaiser Permanente Northern California, 2000 Broadway, Oakland, CA 94612, USA (e-mail: isaac.j.ergas@kp.org).

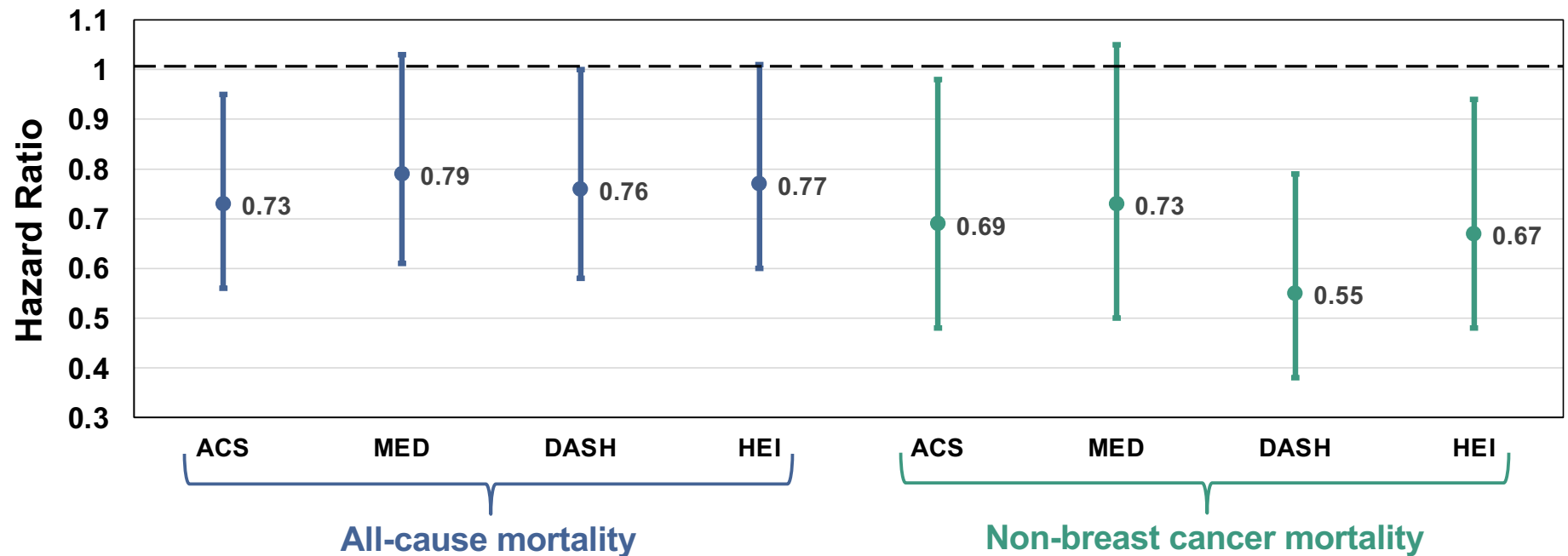
Higher Diet Quality is Associated with Lower Mortality Risk in the Pathways Study



Ergas, et al., *JNCI Cancer Spectrum* 2021;5(2):pkab019

Diet quality around diagnosis was associated with all-cause and non-breast cancer mortality

Hazard ratios & 95% confidence intervals comparing the highest to lowest quintiles



Ergas, et al., *JNCI Cancer Spectrum* 2021;5(2):pkab019






JNCI Cancer Spectrum, 2024, 8(2), pkae013

<https://doi.org/10.1093/jncics/pkae013>

Article

Diet quality and cardiovascular disease risk among breast cancer survivors in the Pathways Study

Isaac J. Ergas , PhD, MPH, MFA,^{1,*} Richard K. Cheng, MD, MS,² Janise M. Roh , MSW, MPH,¹ Lawrence H. Kushi, ScD,¹ Jacob K. Kresovich, PhD, MPH,³ Carlos Iribarren , MD, MPH, PhD,¹ Mai Nguyen-Huynh, MD, MAS,¹ Jamal S. Rana, MD, PhD,^{1,4} Eileen Rillamas-Sun, PhD, MPH,⁵ Cecile A. Laurent, MS,¹ Valerie S. Lee, MHS,¹ Charles P. Quesenberry, PhD,¹ Heather Greenlee, ND, PhD, MPH,^{2,5} Marilyn L. Kwan, PhD¹

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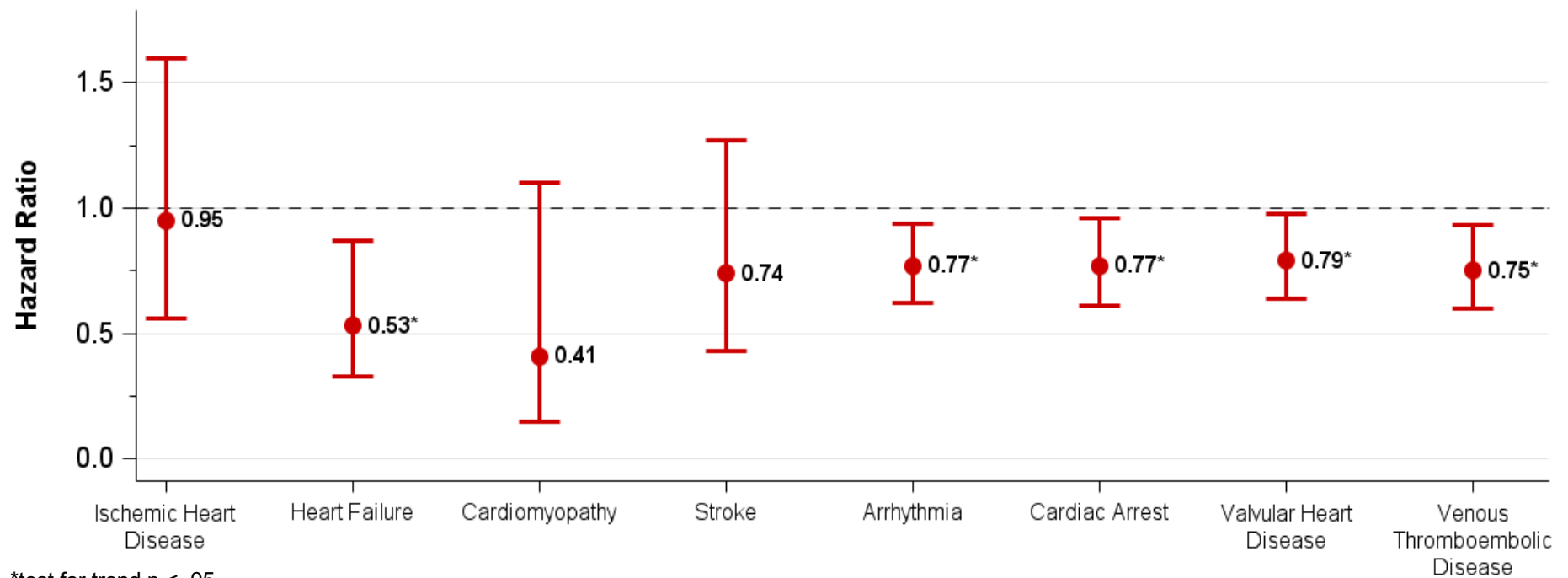
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Participants with diets that were most concordant with the DASH dietary index were at lower risk for CVD outcomes compared to those least concordant

Hazard ratios and 95% confidence intervals comparing the highest to lowest quartiles

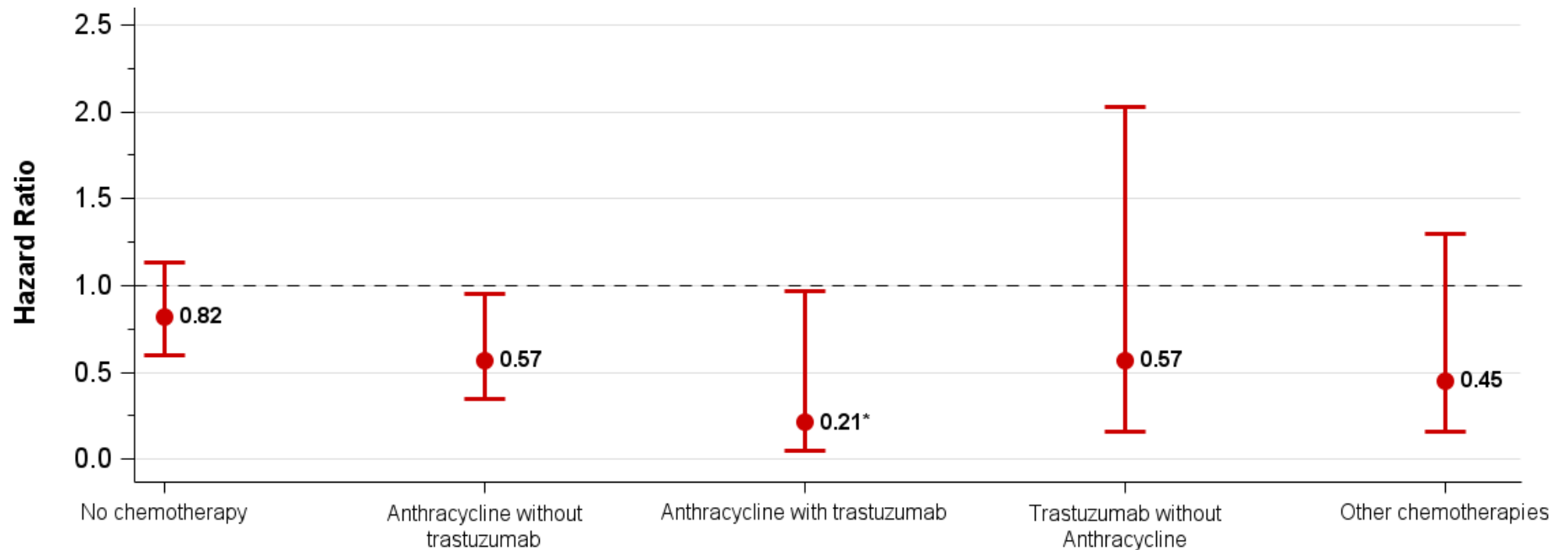


*test for trend $p < .05$

Ergas IJ, et al. *JNCI Cancer Spectr.* 2024

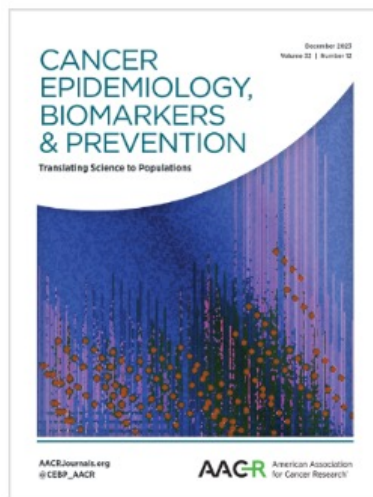
The association of the DASH diet and CVD incidence or CVD-related death differed by chemotherapy type ($p_{heterogeneity} = 0.03$)

Hazard ratios and 95% confidence intervals comparing the highest to lowest quartiles



*test for trend $p < .05$

Ergas IJ, et al. *JNCI Cancer Spectr.* 2024



Hypothetical Interventions on Diet Quality and Lifestyle Factors to Improve Breast Cancer Survival: The Pathways Study

Isaac J. Ergas^{1,2}, Patrick T. Bradshaw², Elizabeth M. Cespedes Feliciano¹, Janise M. Roh¹, Marilyn L. Kwan¹, Barbara Laraia^{2,3}, Kristine A. Madsen³, Song Yao⁴, Catherine Thomsen⁵, and Lawrence H. Kushi¹



ABSTRACT

Background: The number of breast cancer survivors is increasing, yet evidence to inform dietary and lifestyle guidelines is limited.

Methods: This analysis included 3,658 participants from the Pathways Study, a prospective cohort of women diagnosed with invasive breast cancer. A healthy plant-based dietary index score (hPDI), an American Cancer Society (ACS) nutrition guidelines score, a 2015 Healthy Eating Index score (HEI), hours per week of moderate to vigorous physical activity (PA), and lifetime cumulative pack-years of cigarette smoking (SM) were each measured at diagnosis, 6, 24, and 72 months. Using g-computation, 5- and 10-year risk ratios (RR), risk differences, and 95% confidence intervals (CI) for all-cause mortality under hypothetical interventions on diet quality, PA, and SM, compared with the natural course (no intervention) were calculated.

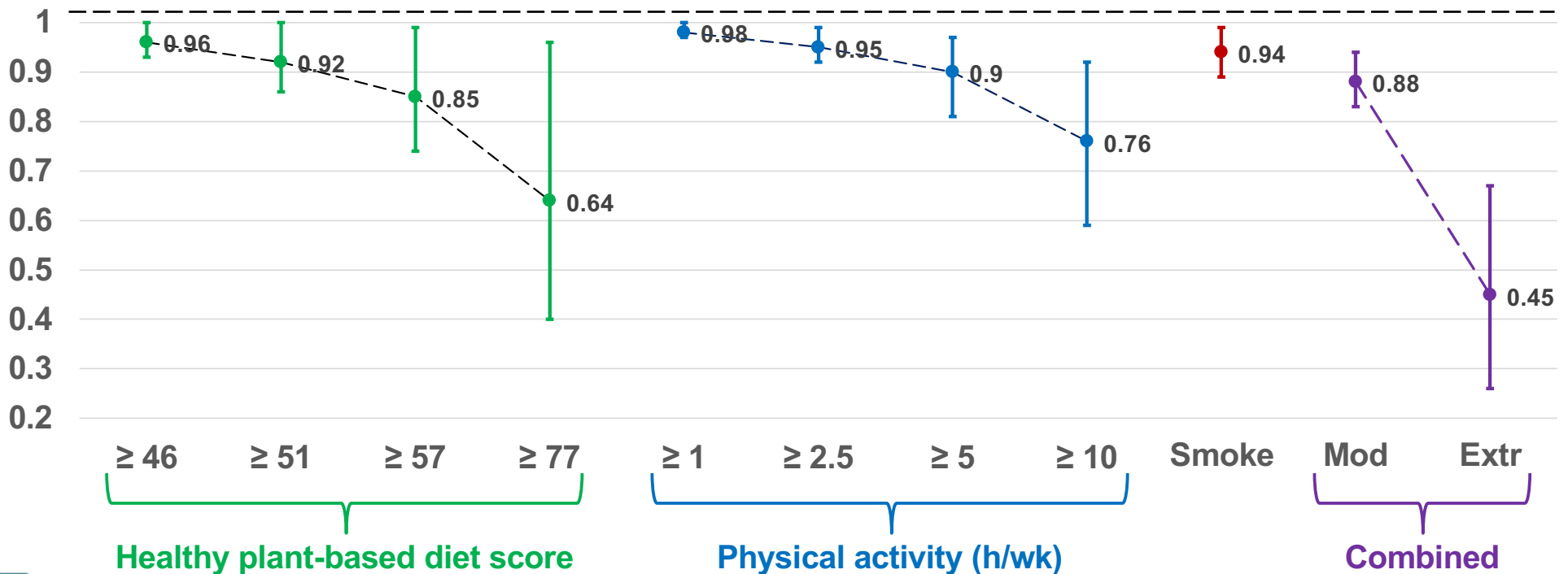
Results: Hypothetical moderate to extreme interventions on hPDI, ACS, and HEI, each in combination with PA and SM, showed 11% to 56%, 9% to 38%, and 9% to 49% decreases in 5-year risks of all-cause mortality compared with no intervention, respectively [(hPDI: $RR_{\text{moderate}} = 0.89$, 95% CI: 0.82–0.94; $RR_{\text{extreme}} = 0.44$, 95% CI: 0.26–0.67), (ACS: $RR_{\text{moderate}} = 0.91$, 95% CI: 0.85–0.96; $RR_{\text{extreme}} = 0.62$, 95% CI: 0.43–0.82), (HEI: $RR_{\text{moderate}} = 0.91$, 95% CI: 0.84–0.95; $RR_{\text{extreme}} = 0.51$, 95% CI: 0.33–0.72)]. While 10-year relative risks were slightly attenuated, absolute risk reductions were more pronounced.

Conclusions: Interventions to improve diet quality, increase PA, or reduce SM at the time of diagnosis may improve survival among breast cancer survivors.

Impact: We estimate that over 10% of deaths could be delayed by even moderate adoption of these behaviors.

Improved diet quality, physical activity and smoking after a breast cancer diagnosis was associated with a lower 5-year risk of all-cause mortality













Risk ratios and 95% confidence intervals comparing the hypothetical intervention with the natural course



A Key Actionable Finding: Diet Quality

- Diet quality at and after breast cancer diagnosis is an important consideration for improving prognosis and long-term health
- Improving diet quality after diagnosis can reduce the risk of **all-cause mortality**, especially when combined with increased physical activity and not smoking
- Dietary patterns that improve outcomes:
 - **Emphasize plant foods:** vegetables, fruit, whole grains, legumes, nuts
 - **Limit red and processed meats** and added sugars

Physical activity and incident cardiovascular disease in breast cancer survivors: the Pathways Study

Jacob K. Kresovich , PhD^{*1,2}, Alicia R. Richards, PhD¹, Isaac J. Ergas , PhD³, Rikki Cannioto , PhD, EdD⁴, Catherine Thomsen, MPH⁵, Cecile A. Laurent , MS³, Salma Shariff-Marco , PhD^{6,7}, Eileen Rillamas-Sun , PhD^{8,9}, Tatjana Kolevska , MD³, Song Yao , MD, PhD⁴, Christine Ambrosone , PhD⁴, Lawrence Kushi , ScD³, Heather Greenlee , ND, PhD^{8,9}, Marilyn L. Kwan , PhD³

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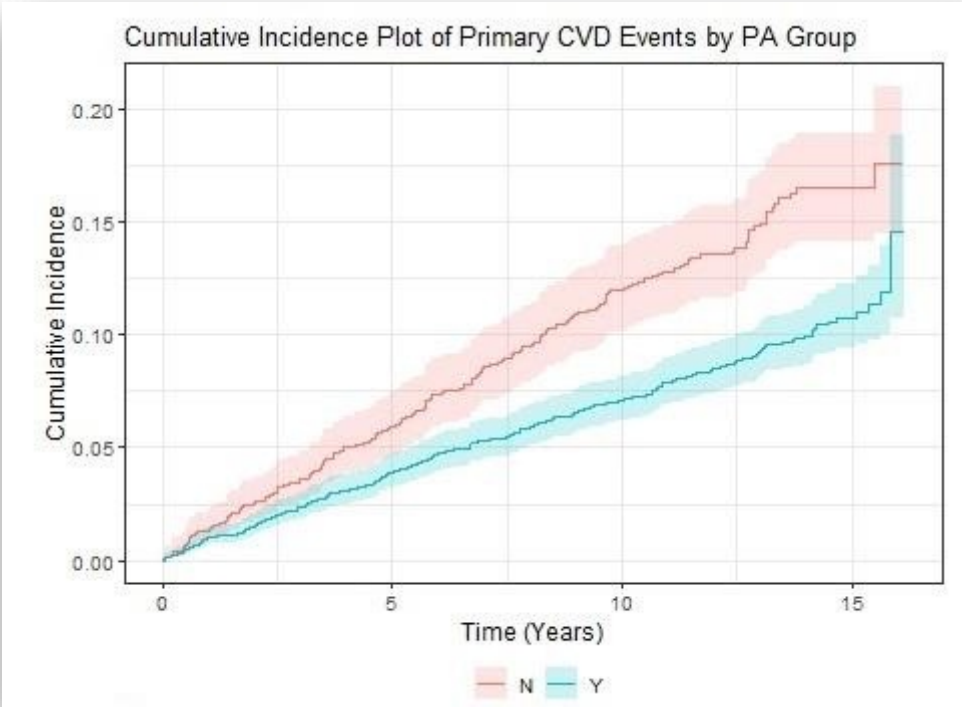
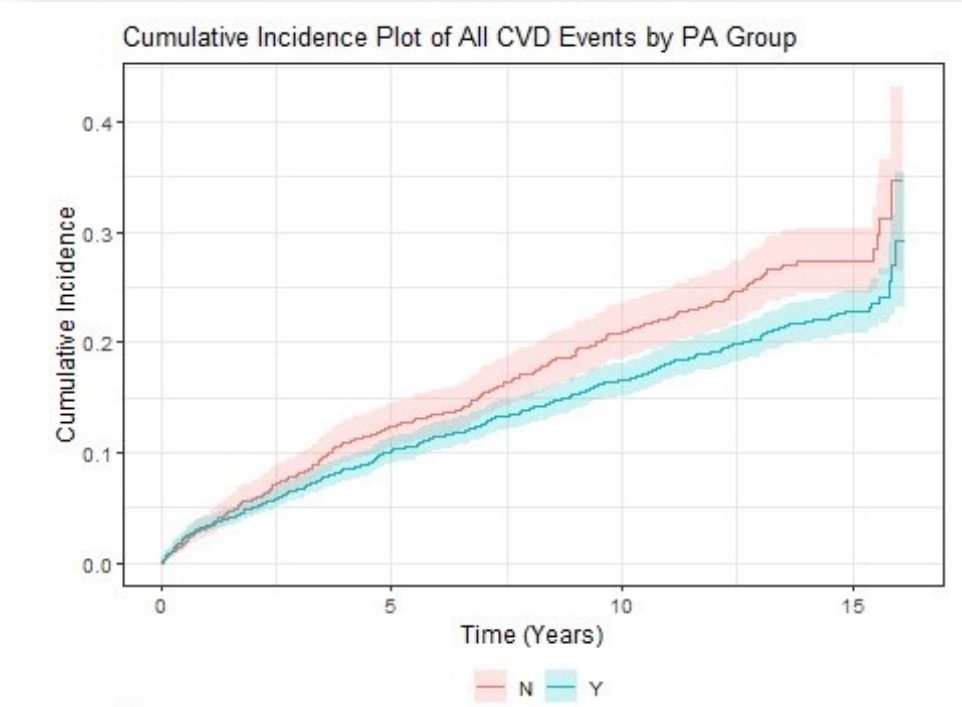
⁷Helen Diller Family Comprehensive Cancer Center, University of California San Francisco, San Francisco, CA 94158, United States

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Women who met CDC physical activity guidelines had a lower incidence of cardiovascular events than women who did not



Kresovich, et al., AACR Annual Meeting, 2024

Original Investigation | Oncology

Tailored Exercise Strategies and Mortality Among Breast Cancer Survivors

Jinani Jayasekera, MS, PhD; Isaac J. Ergas, PhD, MPH; Jacob Schneider, MPH; Emma Tian, MPH; Kaitlyn M. Wojcik, MPH; Janise M. Roh, MPH; Jacqueline B. Vo, PhD, RN, MPH; Lawrence H. Kushi, ScD; Oliver W.A. Wilson, PhD; Emma E. McGee, MS, PhD

Abstract

IMPORTANCE Guidelines recommend tailored (ie, individualized) exercise strategies for cancer survivors. However, there are limited data on the effects of these strategies on long-term mortality outcomes among breast cancer survivors.

OBJECTIVE To estimate the effect of tailored exercise strategies on mortality for breast cancer survivors.

DESIGN, SETTING, AND PARTICIPANTS In this cohort study, a target trial protocol was first specified to approximately mirror the Colon Health and Lifelong Exercise Change (CHALLENGE) trial among breast cancer survivors. Observational data from the Pathways Study were used to emulate this first target trial. These results were then extended by emulating a second target trial of more pragmatic, tailored exercise strategies applied to a broader population of breast cancer survivors. Women enrolled in the Kaiser Permanente Northern California health plan were recruited from January 2006 to December 2013, and were followed up through December 2021. Analyses were performed between September 2024 and September 2025.

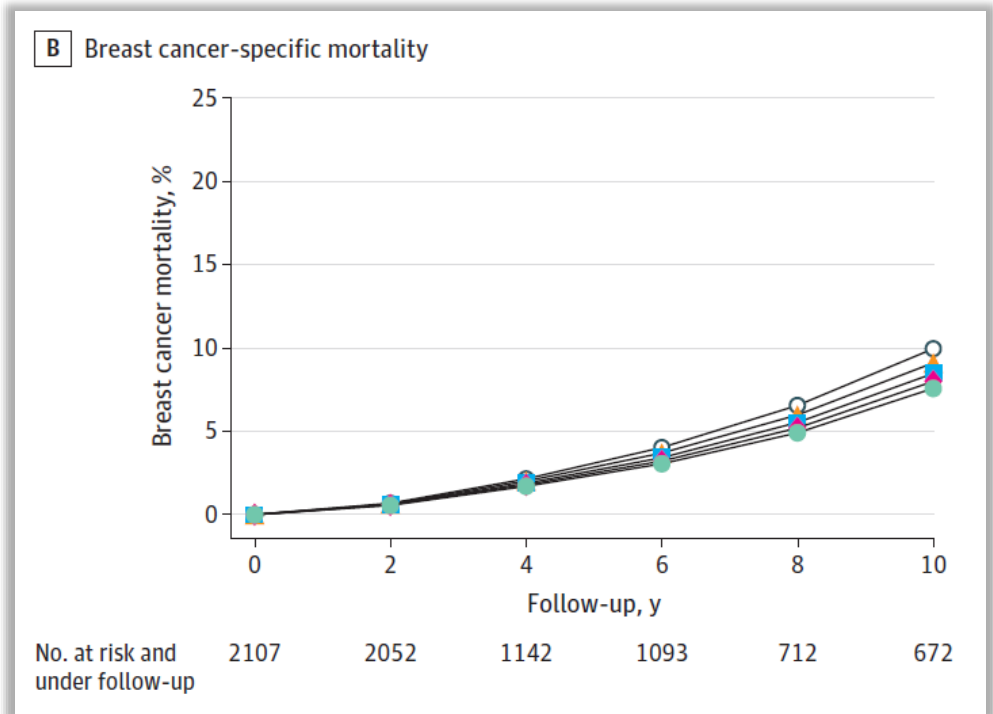
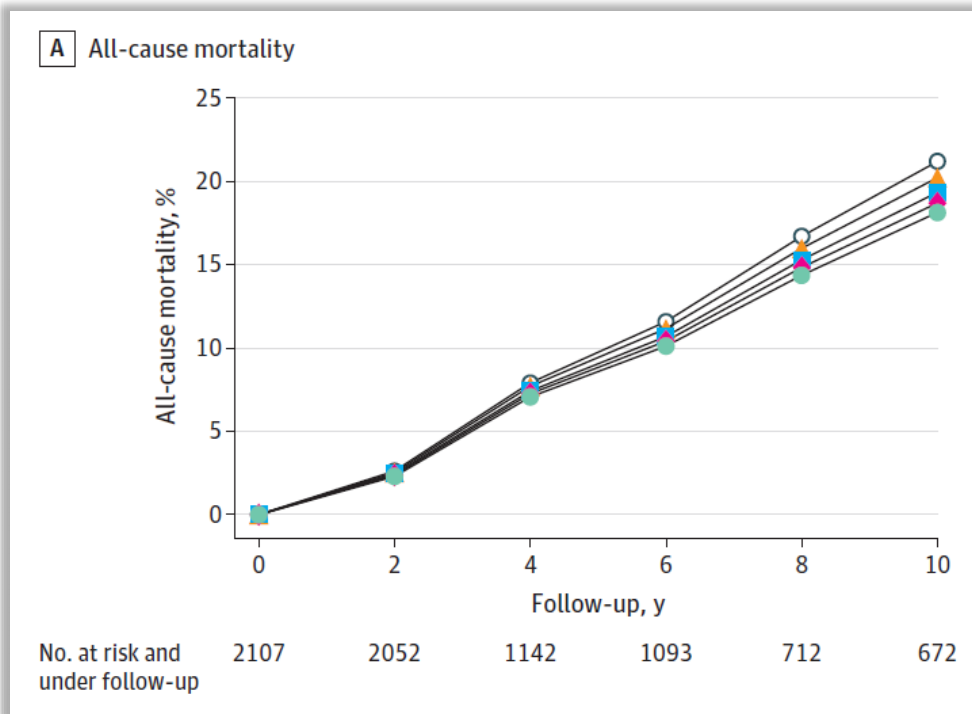
Key Points

Question How do tailored (ie, individualized) exercise strategies affect mortality among breast cancer survivors?

Findings This cohort study with a target trial emulation design initially included 959 women and approximately replicated the results of the Colon Health and Lifelong Exercise Change randomized trial among breast cancer survivors. These findings were then extended to show that more pragmatic, tailored strategies requiring adaptive increases in exercise levels were associated with lower 10-year all-cause and breast cancer-specific mortality

Physical Activity Decreases Mortality After Breast Cancer

Jayasekera, et al., JAMA Network Open. 2026;9(4):e265177.



- No intervention
- ▲ Increase total weekly aerobic exercise by 15 min of vigorous or 30 min of moderate
- Increase total weekly aerobic exercise by 30 min of vigorous or 60 min of moderate
- ◆ Increase total weekly aerobic exercise by 45 min of vigorous or 90 min of moderate
- Increase total weekly aerobic exercise by 60 min of vigorous or 120 min of moderate













Invited Commentary | Oncology

Advancing Breast Cancer Survivorship Through Individualized Exercise Interventions

Danish Ahmad, MBBS, MSc, PhD

- “**For clinicians**, this study provides evidence to support more specific and confident conversations with breast cancer survivors about the potential benefits of individualized physical activity.
- “**For health systems**, it reinforces the value of embedding tailored exercise strategies within survivorship care models, potentially through partnerships with community programs, telehealth-based coaching, or integration of exercise physiologists into oncology practices.
- “Together, these findings move the field closer to translating epidemiologic observations into practical, patient-centered approaches that address the evolving needs of a growing population of cancer survivors.”

Development and Validation of a Simulation Model–Based Tool to Support Individualized Physical Activity Discussions and Prescriptions for Breast Cancer Survivors

Jinani C. Jayasekera, MS, PhD¹ ; Oliver W.A. Wilson, PhD¹ ; Clyde Schechter, MD² ; Jennifer L. Caswell Jin, MD³ ; Kaitlyn M. Wojcik, MPH, CPH¹ ; Nicolien T. van Ravesteyn, PhD⁴; Jonathan Wall, MM⁵; Jacob Schneider, MPH¹ ; Lia L. D'Addario, MPH⁶ ; Janise M. Roh, MPH⁶ ; Swarnavo Sarkar, PhD⁷ ; Lisa Cadmus-Bertram, PhD⁸ ; John P. Pierce, PhD⁹; Amy Trentham-Dietz, PhD¹⁰ ; Lawrence H. Kushi, ScD⁶ ; and Charles E. Matthews, PhD¹¹

DOI <https://doi.org/10.1200/CCI-25-00151>

JCO Clin Cancer Inform 2025;9: e2500151.

ABSTRACT

PURPOSE Clinical guidelines recommend offering individualized physical activity prescriptions to cancer survivors. However, there are limited tools to support individualized physical activity discussions and prescriptions. We developed and validated a simulation model–based tool to estimate individualized survival outcomes for postdiagnosis physical activity among postmenopausal breast cancer survivors.

METHODS We adapted an established simulation modeling approach developed within the Cancer Intervention and Surveillance Modeling Network to estimate breast cancer–specific and all-cause survival associated with postdiagnosis physical activity for 50- to 75-year-old (postmenopausal) women with stage I to III invasive breast cancer. Model estimates were generated for 60,480 subgroups based on age, weight status (BMI), stage, tumor subtype, treatment, aerobic (<30 min/wk [no/minimal], ≥30 to <150 min/wk [insufficient], ≥150 to <300 min/wk [active], ≥300 min/wk [highly active]), and muscle-strengthening (<2 or ≥2 d/wk) activity. The outcomes were 10-year survival and absolute survival benefits for different levels of physical activity by individual characteristics and treatment. Model inputs were derived from trials, cohort studies, registry, and surveillance data. External validation used independent data.

ACCOMPANYING CONTENT

-  [Data Sharing Statement](#)
-  [Data Supplement](#)

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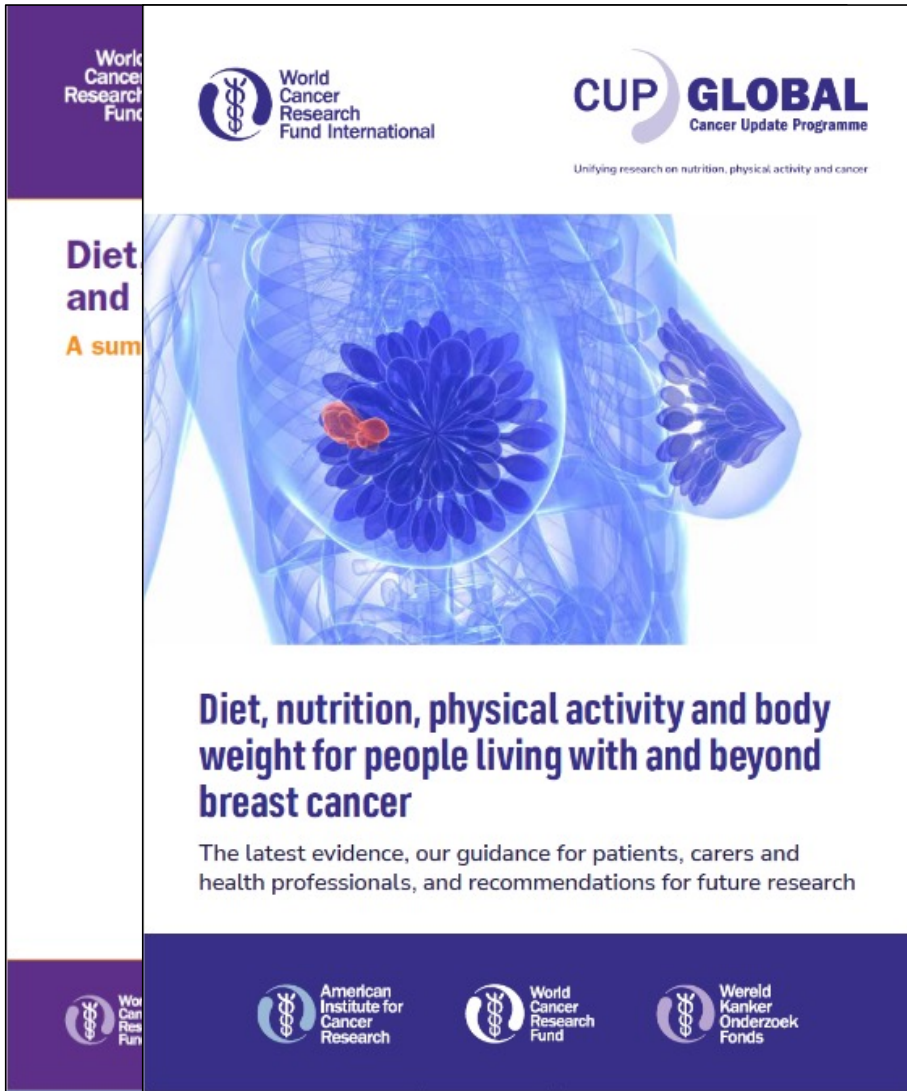
OPEN ACCESS | ORIGINAL REPORTS |  | October 17, 2025 | Latest version



Clinical Inputs	Model Output																											
<p>Breast Cancer Diagnosis</p> <p>Fill With Random Data Clear Data</p> <p>Age at breast cancer diagnosis (in years) 65-69</p> <p>Breast cancer stage at diagnosis II</p> <p>Human Epidermal Growth Factor Receptor 2 (HER2) Negative</p> <p>Estrogen Receptor (ER) and Progesterone Receptor (PR) status ER and/or PR positive</p> <p>Treatments received Chemotherapy and hormonal therapy</p> <p>Weight status (body mass index range) Obese ($\geq 30.0 \text{ kg/m}^2$)</p>	<p>Simulation Model Results for 10-year Breast Cancer-Specific Survival Rates for Aerobic & Muscle-Strengthening Activity in 65-69-year-old Women Diagnosed with Stage II, Hormone Receptor Positive (HR+), HER2-Negative Breast Cancer and an Obese Weight Status</p> <p>Aerobic & Muscle-Strengthening Physical Activity per Week (Up to 2 Years of Adherence)</p> <table border="1"> <thead> <tr> <th>Aerobic Activity</th> <th>No/minimal</th> <th>No/minimal</th> <th>Insufficient</th> <th>Insufficient</th> <th>Active</th> <th>Active</th> <th>Highly active</th> <th>Highly active</th> </tr> <tr> <th>Muscle-Strengthening</th> <td><2-days</td> <td>≥ 2-days</td> <td><2-days</td> <td>≥ 2-days</td> <td><2-days</td> <td>≥ 2-days</td> <td><2-days</td> <td>≥ 2-days</td> </tr> </thead> <tbody> <tr> <td>10-year Breast Cancer-Specific Survival Rates</td> <td>78.8%</td> <td>80.5%</td> <td>81.6%</td> <td>83.7%</td> <td>86.7%</td> <td>88.8%</td> <td>92.0%</td> <td>93.3%</td> </tr> </tbody> </table> <p>Aerobic activity levels: no/minimal (<30-min/week); insufficient (≥ 30 to <150-min/week); active (≥ 150 to <300-min/week); highly active (≥ 300-min/week)</p>	Aerobic Activity	No/minimal	No/minimal	Insufficient	Insufficient	Active	Active	Highly active	Highly active	Muscle-Strengthening	<2-days	≥ 2 -days	<2-days	≥ 2 -days	<2-days	≥ 2 -days	<2-days	≥ 2 -days	10-year Breast Cancer-Specific Survival Rates	78.8%	80.5%	81.6%	83.7%	86.7%	88.8%	92.0%	93.3%
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<p>Exercise Behavior</p> <p>Aerobic activity No/minimal activity (<30 mins/week)</p> <p>Muscle-strengthening frequency (per week) <2-days</p>	<p>Use of Model Output</p> <p>This example describes a 65-69-year-old woman with stage II, HER2-negative, ER and/or PR-positive breast cancer and obesity. Other characteristics include receipt of chemotherapy, hormonal therapy, less than 30 minutes of walking per week, and engaging in less than 2 days per week of strength training activities.</p> <p>The model estimates the chance of survival associated with different amounts and types of physical activity for simulated women with similar features.</p> <p>In this specific scenario, a simulated woman with similar characteristics and no/minimal activity may have a 79% chance of surviving breast cancer over the next decade. However, increasing walking to at least 15-20 minutes a day for 2-5 days a week (or 30 to <150 mins/week) could be associated with an increase in her chance of surviving breast cancer in the next 10 years up to about 82%.</p>																											

A Key Actionable Finding: Physical Activity

- Physical activity at and after breast cancer diagnosis is an important consideration for improving prognosis and long-term health
- Improving physical activity after diagnosis can reduce the risk of **all-cause mortality**
- Increasing levels of physical activity have survival benefit
- Recommendations from various organizations suggest:
 - At least 150 minutes a week of moderate-intensity activity such as brisk walking, or 60 minutes a week of vigorous-intensity activity
 - At least 2 days a week of activities that strengthen muscles



World Cancer Research Fund/
American Institute for Cancer Research.
**Diet, Nutrition, Physical Activity and
Cancer: a Global Perspective**
Continuous Update Project
Third Expert Report, 2018

World Cancer Research Fund/
American Institute for Cancer Research.
**Diet, Nutrition, Physical Activity and
Body Weight for People Living with
and Beyond Breast Cancer**
Continuous Update Project
2024

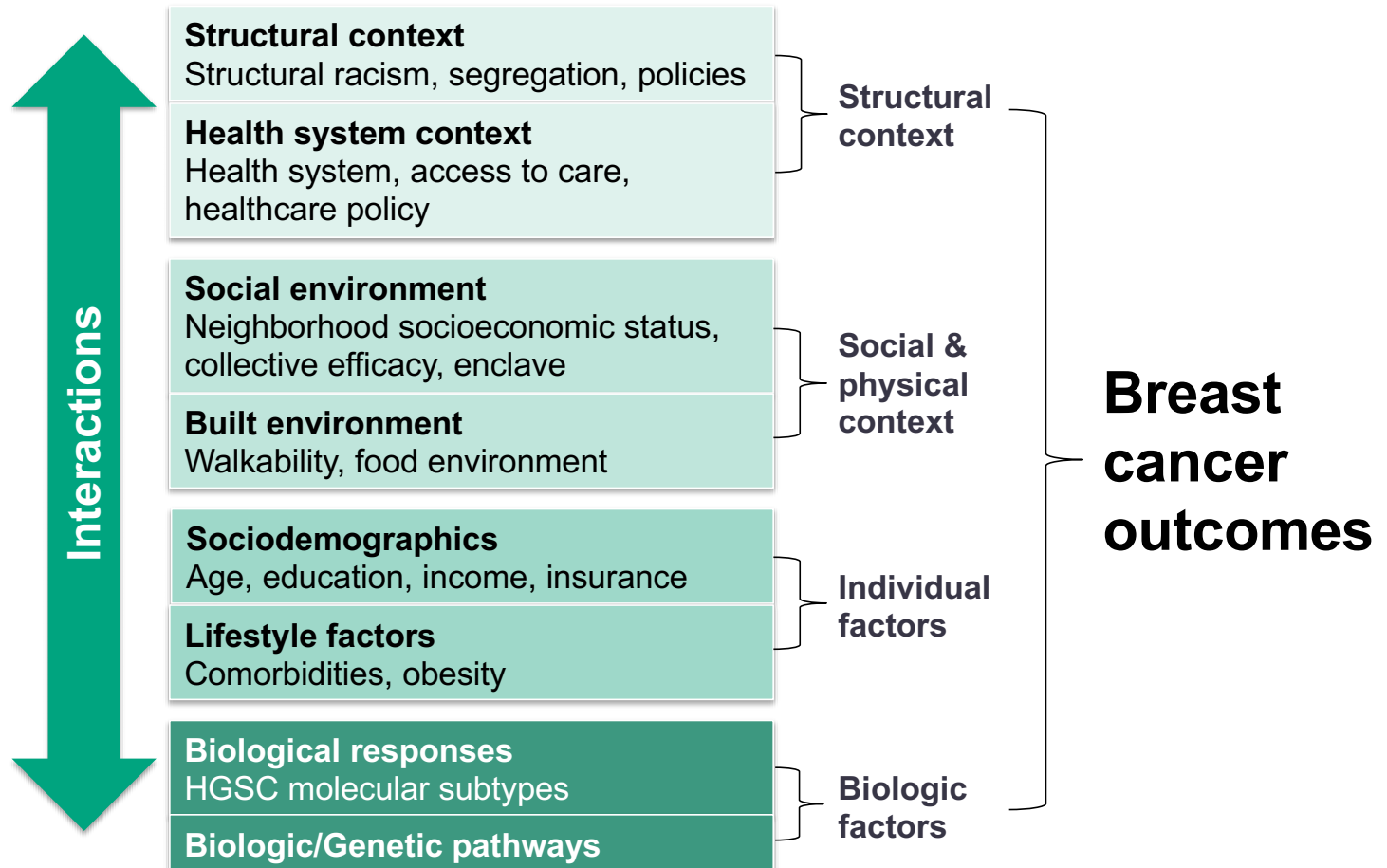
Clinical Implications of These Findings

- **Diet quality assessment** should be encouraged as part of standard clinical intake at the time of breast cancer diagnosis
- **Physical activity assessment** should also be encouraged – indeed, at KP, “exercise as a vital sign” is routinely assessed during outpatient visits
- **A personalized activity recommendation tool** has been developed based on Pathways Study information, and could be implemented in clinical care
- **Ongoing monitoring of diet and physical activity** over the course of the breast cancer survivorship period should be encouraged
- Assessment of “**diet as a vital sign**” should be encouraged as part of routine care – regardless of whether one has or is at risk of breast cancer

A Cells-to-Society Model for Breast Cancer Outcomes Research

A framework for multilevel research

Centers for Population Health and Health Disparities, NIH

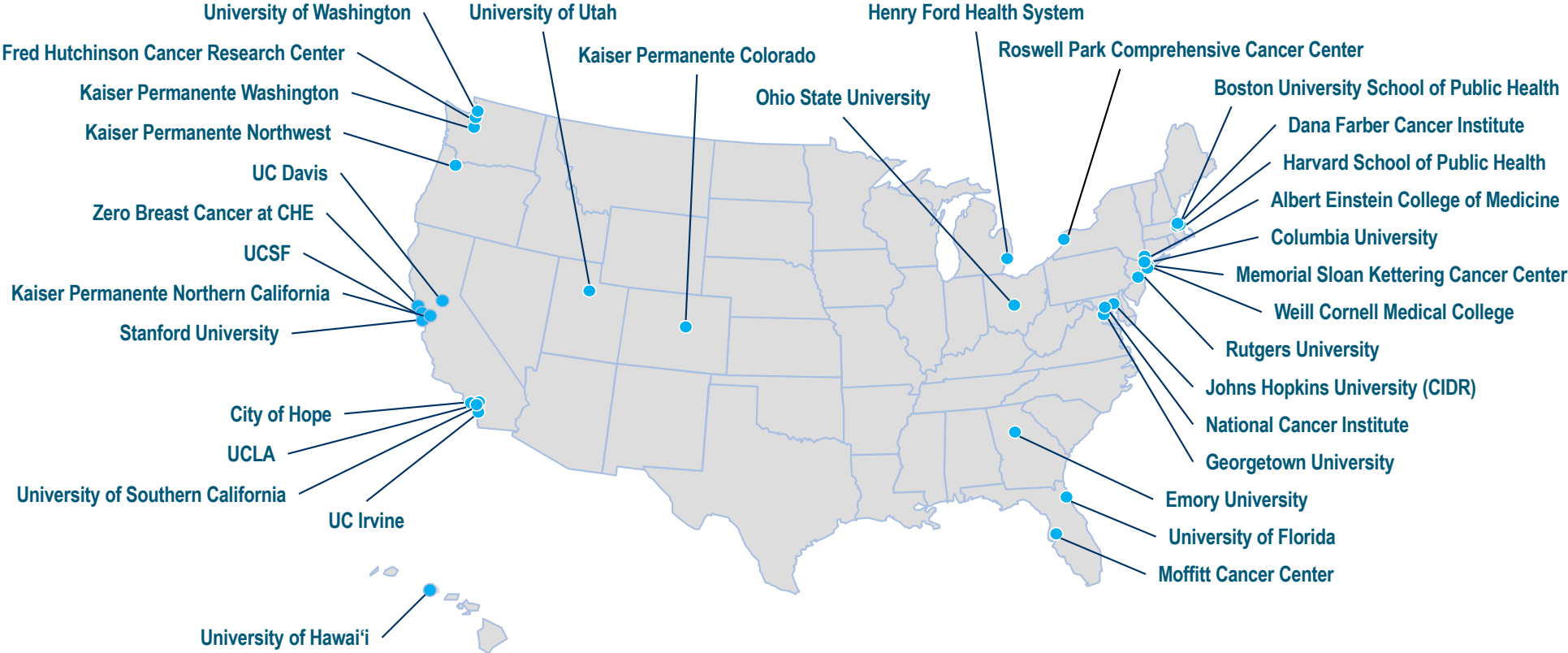


Adapted from Warnecke et al. AJPH 2008

Pathways Study Collaborative Network



Pathways Study Collaborative Network



There are many ways to live
with breast cancer.
Each woman will make her
own choices and walk her own
path.



About Our Study

Explore and learn more about our data



Collaborate With Us

Find the information you need to collaborate with us



What We Are Learning

Resources and information for our participants

Summary

- The Pathways Study has become the basis or catalyst for a broad array of research projects related to breast cancer survivorship, prognosis, and outcomes.
- Ongoing follow-up and enhancement of Pathways Study resources will continue to generate new projects examining the breast cancer experience.
- The Pathways Study can be a model for study of multi-level factors in cancer – and it already has.
- Our ultimate goal is to improve outcomes and the care experience of women with breast cancer – there is much to do and much promise in this research.



Thank You!
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