

ACS Cancer Conference 2025

March 12-14 | Phoenix, AZ

American Cancer Society

Leticia M. Nogueira, PhD MPH

Scientific Director

Surveillance and Health Equity Sciences Department

ACS Cancer Programs
American College of Surgeons

American Cancer Society

Mission Statement

The mission of the American Cancer Society is to improve the lives of people with cancer and their families through advocacy, research, and patient support, to ensure everyone has an opportunity to prevent, detect, treat, and survive cancer.

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Advancing the mission

National Cancer Database (NCDB)

- Hospital-based cancer registry co-sponsored by the American College of Surgeons and the American Cancer Society
- Covers ~70% of cancer cases in the United States
- Includes
 - Demographic and clinical information
 - Health insurance coverage
 - Treatment information

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Why NCDB? So many data sources!



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Why NCDB?

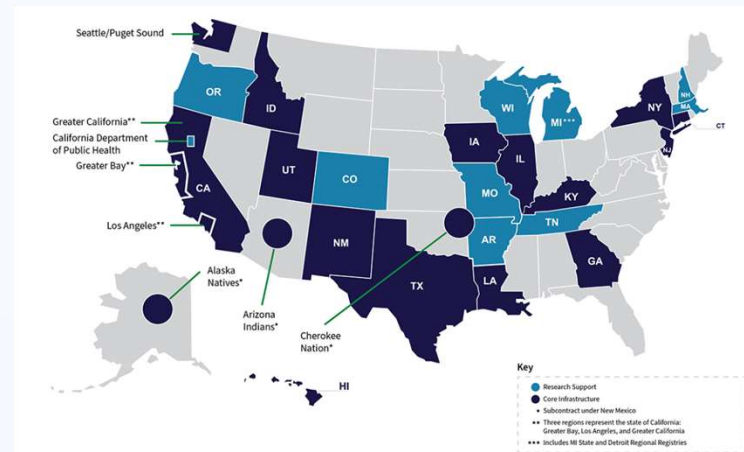
- **National Cancer Database (NCDB)**

- Hospital-based
- Covers ~70% of cancer cases
- Includes
 - Demographic and clinical information
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Hard to evaluate cancer care and outcomes in small populations, such as young adults

- **Surveillance, Epidemiology, and End Results (SEER)**

- Population-based
- Covers ~28% of cancer cases



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Why NCDB?

- National Cancer Database (NCDB)
 - Hospital-based
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 - Includes
 - Demographic and clinical information
 - Health insurance coverage
 - Treatment

Link with claims data to collect cancer treatment information

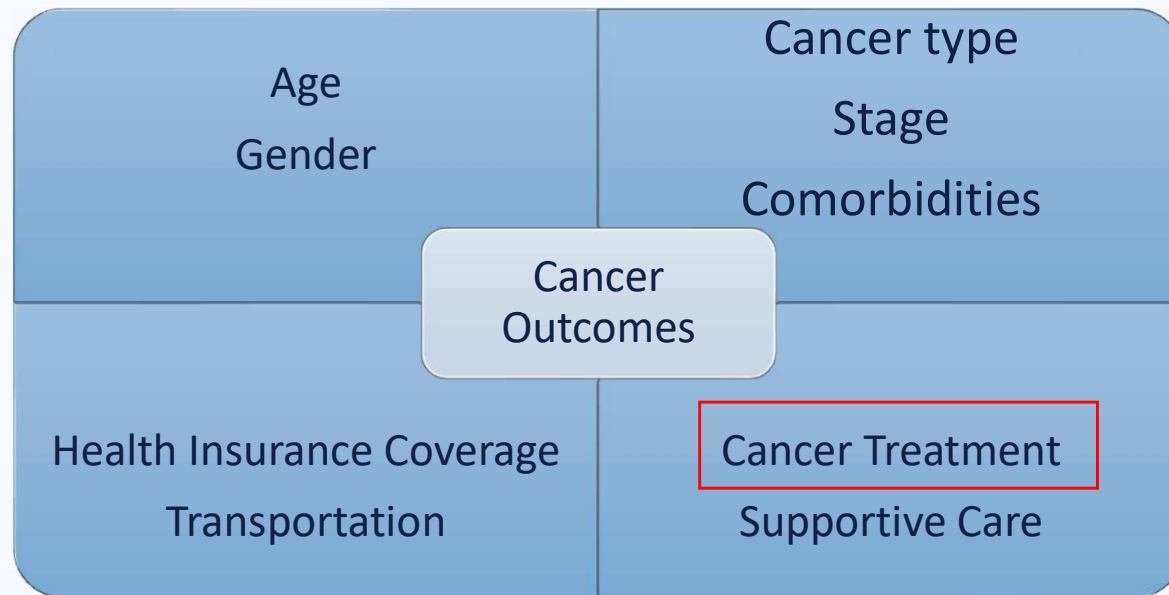
- Surveillance, Epidemiology, and End Results (SEER)
 - Population-based
 - Covers ~28% of cancer cases
 - Includes
 - Demographic and clinical information
 - Health insurance coverage
 - X

Medicare

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Factors contribution to cancer outcomes

Advantage NCDB!



By definition, all patients have health insurance coverage

Link with Medicare to get cancer treatment information

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Factors contributing to cancer care and outcomes

CA: A Cancer Journal for Clinicians

The flagship journal of the American Cancer Society

Association of Insurance with Cancer Care Utilization and Outcomes

*Elizabeth Ward, PhD; Michael Halpern, MD, PhD; Nicole Schrag, MSPH;
Vilma Cokkinides, PhD, MSPH; Carol DeSantis, MPH; Priti Bandi, MS;
Rebecca Siegel, MPH; Andrew Stewart, MA; Ahmedin Jemal, DVM, PhD*

Health insurance coverage
contributes to ~30% of receipt of
cancer care -> outcomes

Research informed several
provisions of the
Affordable Care Act

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Factors contributing to cancer care and outcomes

Cancer Causes Control (2010) 21:1445–1450
DOI 10.1007/s10552-010-9572-z

ORIGINAL PAPER

Disparities in breast cancer prognostic factors by race, insurance status, and education

Carol DeSantis · Ahmedin Jemal · Elizabeth Ward

**CA: A Cancer Journal
for Clinicians**

The flagship journal of the American Cancer Society

OXFORD

Health insurance status and cancer survival in the

Jingxuan Zhao, MPH ¹; Xuesong Han, PhD¹; Leticia Nogueira, PhD, MPH ²; Ahmedin Jemal, DVM, PhD¹; Michael T. Halpern, MD, PhD³

Open Network

Original Investigation | Health Policy

Medicaid Expansion Under the Affordable Care Act and Early Mortality Following Lung Cancer Surgery

Leticia M. Nogueira, PhD, MPH; Daniel J. Boffa, MD, MBA; Ahmedin Jemal, PhD; Xuesong Han, PhD; K. Robin Yabroff, PhD

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JOURNAL OF CLINICAL ONCOLOGY

ORIGINAL REPORT

Association Between Geographic Access to Cancer Care, Insurance Status, and Receipt of Chemotherapy: Geographic Variation of Oncologists and Travel Distance

Ahmedin Jemal, Dean Bajorin, Kosty, Shane Hopkins, James B. Yu,

JCO® Oncology Practice
Association of State Medicaid Income

JNCI J Natl Cancer Inst (2019) 112(10): djz235

doi: 10.1093/jnci/djz235

First published online December 23, 2019

Brief Communication

Survival After Cancer in States

Yun, PhD²; Ahmedin Jemal, DVM, PhD¹; and

Insurance and Factors Associated with Receipt of Prophylactic Mastectomy Among Women With Breast Cancer

Chun Chieh Lin, PhD, MBA; Carol DeSantis, MPH; et al

ONCOLOGY

ORIGINAL REPORT

Factors That Contributed to Black-White Disparities in Survival Among Nonelderly Women With Breast Cancer Between 2004 and 2013

Ahmedin Jemal, Anthony S. Robbins, Chun Chieh Lin, W. Dana Flanders, Carol E. DeSantis, Elizabeth M. Ward, and Rachel A. Freedman

Association Between Insurance Status and Access to racial and ethnic disparities in advanced-stage diagnosis of 10 cancers

Parichoy Pal Choudhury ¹, PhD^{1,*}; Helmhut M. Sineshaw ², MD, MPH²; Rachel A. Freedman, MD, MPH³; Michael T. Halpern, MD, PhD⁴; Leticia Nogueira, MPH, PhD⁵; Ahmedin Jemal ⁶, DVM, PhD¹; Farhad Islami ⁷, MD, PhD¹

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Disasters disrupt access to cancer care

JAMA

RESEARCH LETTER

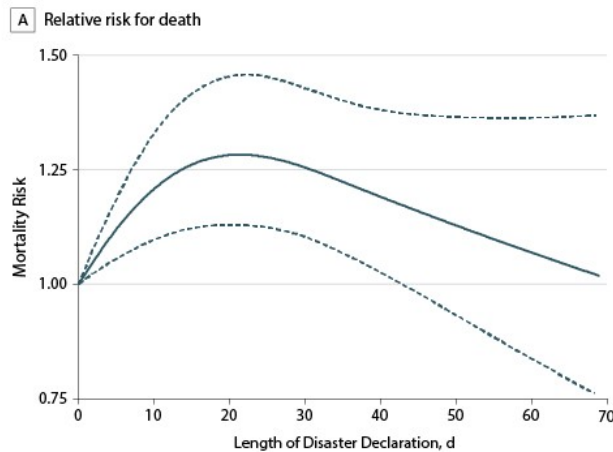
Association Between Declared Hurricane Disasters and Survival of Patients With Lung Cancer Undergoing Radiation Treatment

Leticia M. Nogueira, PhD; Liora Sahar, PhD; Jason A. Efstathiou, MD; Ahmedin Jemal, PhD; et al

Radiation Oncology

- Electricity
- Specialized teams
- Daily schedule

Figure. Association Between Length of Hurricane Disaster Declaration and Risk of Death in Patients With Lung Cancer Undergoing Radiation



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Patients whose facility was impacted by a hurricane disaster during radiation treatment had worse mortality than patients who completed treatment at the same facility but at times when no disasters happened

Disasters result in worse cancer mortality

JAMA Oncology | Original Investigation

Association of Wildfire Exposure While Recovering From Lung Cancer Surgery With Overall Survival

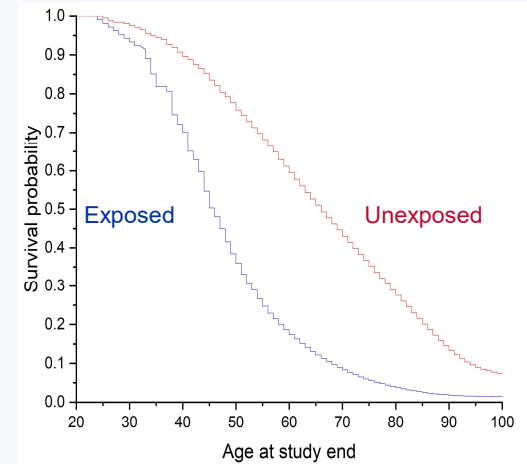
Danlu Zhang, MPH; Yuzhi Xi, PhD; Daniel J. Boffa, MD; Yang Liu, PhD; Leticia M. Nogueira, PhD, MPH

Stress associated with potentially having to evacuate, threat to property and life, water and soil contamination

 **NASA HEALTH AND AIR QUALITY
APPLIED SCIENCES TEAM**
Connecting NASA Data and Tools with Health and Air Quality Stakeholders



<https://pubmed.ncbi.nlm.nih.gov/33189165/>



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Disasters disrupt access to cancer care

Figure. Association Between Length of Hurricane Disaster Declaration and Risk of Death in Patients With Lung Cancer Undergoing Radiation



JOURNAL of the
NATIONAL CANCER INSTITUTE

JOURNAL ARTICLE ACCEPTED MANUSCRIPT

Facility exposure to wildfire disasters and hospital length of stay following lung cancer surgery

Leticia M Nogueira, PhD MPH ✉, K Robin Yabroff, PhD MBA,
Elizabeth Yates, MD, James M Shultz, PhD, R Burciaga Valdez, PhD, MHSA,
Amruta Nori-Sarma, PhD

JAMA Oncology | Original Investigation

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JAMA

RESEARCH LETTER

Between Declared Hurricane Disasters and Risk of Death in Patients With Lung Cancer

THE LANCET
Oncology

Climate-driven Atlantic hurricanes create complex challenges for cancer care

ability
0.7
0.6
THE LANCET
J_nexposed

Safeguarding medically high-risk patients from compounding disasters

James M. Shultz,^{a,*} Sandro Galea,^b Zelde Espinel,^c Amruta Nori-Sarma,^b Lauren T. Shapiro,^d Karen Dimentstein,^e J. Marshall Shepherd,^f and Leticia M. Nogueira^g

Age at study end

OXFORD

Protecting vulnerable patient populations from climate hazards: the role of the nation's cancer centers

Zelde Espinel^a, MD, MA, MPH,¹ James M. Shultz^a, MS, PhD,² Vanina Pavia Aubry, MD,² Omar Muñoz Abraham^a, MD,³ Qianjin Fan^a, PhD, MS,⁴ Tracy E. Crane^a, PhD, MS,⁵ Liora Sahar^a, PhD, GISP,⁶ Leticia M. Nogueira^a, PhD, MPH^{4,*}

JNCI: Journal of the National Cancer Institute, 2023, 00(0), 1-10

<https://doi.org/10.1093/jnci/djad139>

Advance Access Publication Date: July 25, 2023

Commentary

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THE LANCET
Safeguarding medically high
disasters

James M. Shultz,^{a,*} Sandro Galea,^b Zelde Espinel,^c Amruta Nori-
Leticia M. Nogueira^d

JAMA Oncology | Original Investigation

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THE LANCET
Oncology

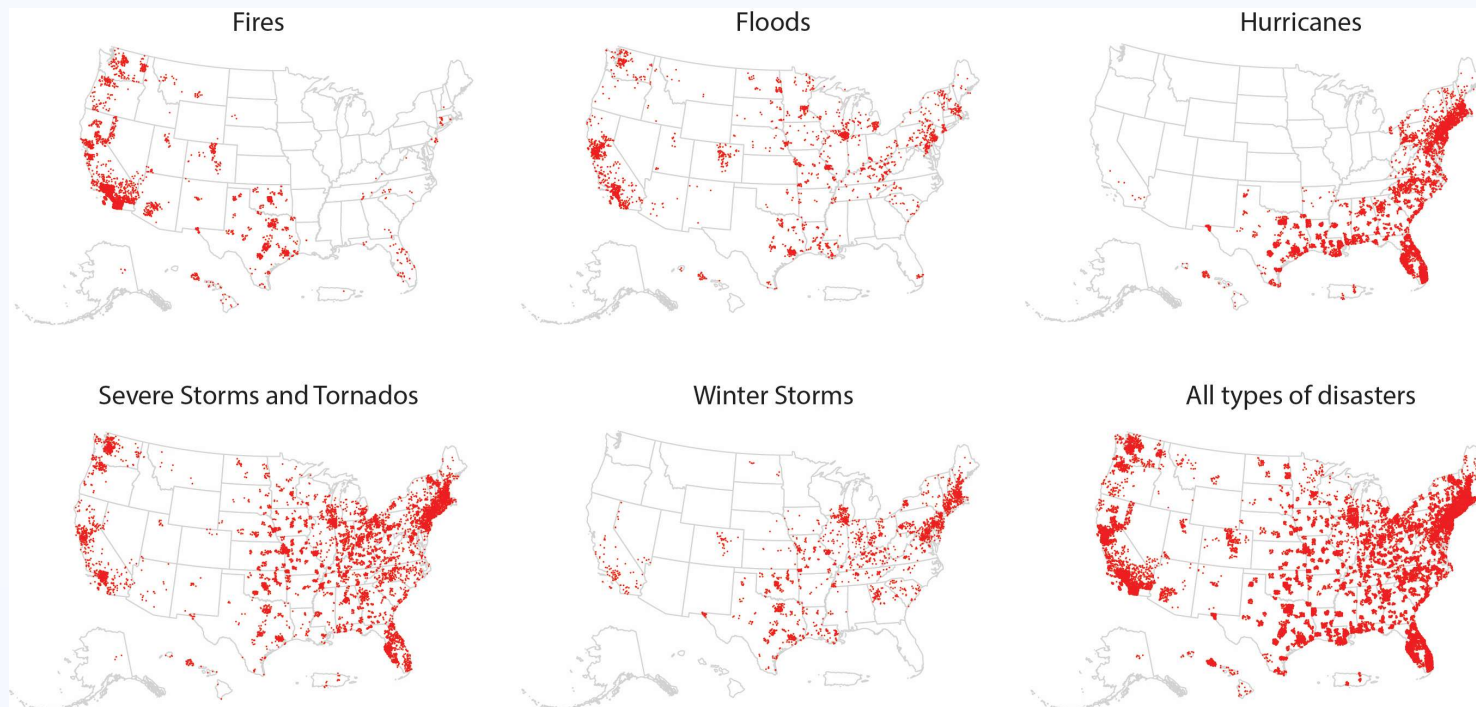
Climate-driven Atlantic hurricanes create complex challenges for
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Disasters are common



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Thank you!

Quality Improvement
Collaborative on Disaster
Preparedness



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Factors contributing to cancer care and outcomes

JAMA
Network | **Open**

Original Investigation | Oncology

Association of Race With Receipt of Proton Beam Therapy for Patients With Newly Diagnosed Cancer in the US, 2004-2018

Leticia M. Nogueira, PhD, MPH; Helmnesh M. Sineshaw, MD, MPH; Ahmedin Jemal, DMV, PhD; Craig E. Pollack, MD, MHS;
Jason A. Efstathiou, MD, DPhil; K. Robin Yabroff, PhD

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