

# Unique Barriers to Cancer Care Access for Rural Patients

*Awareness is the first step to a solution*



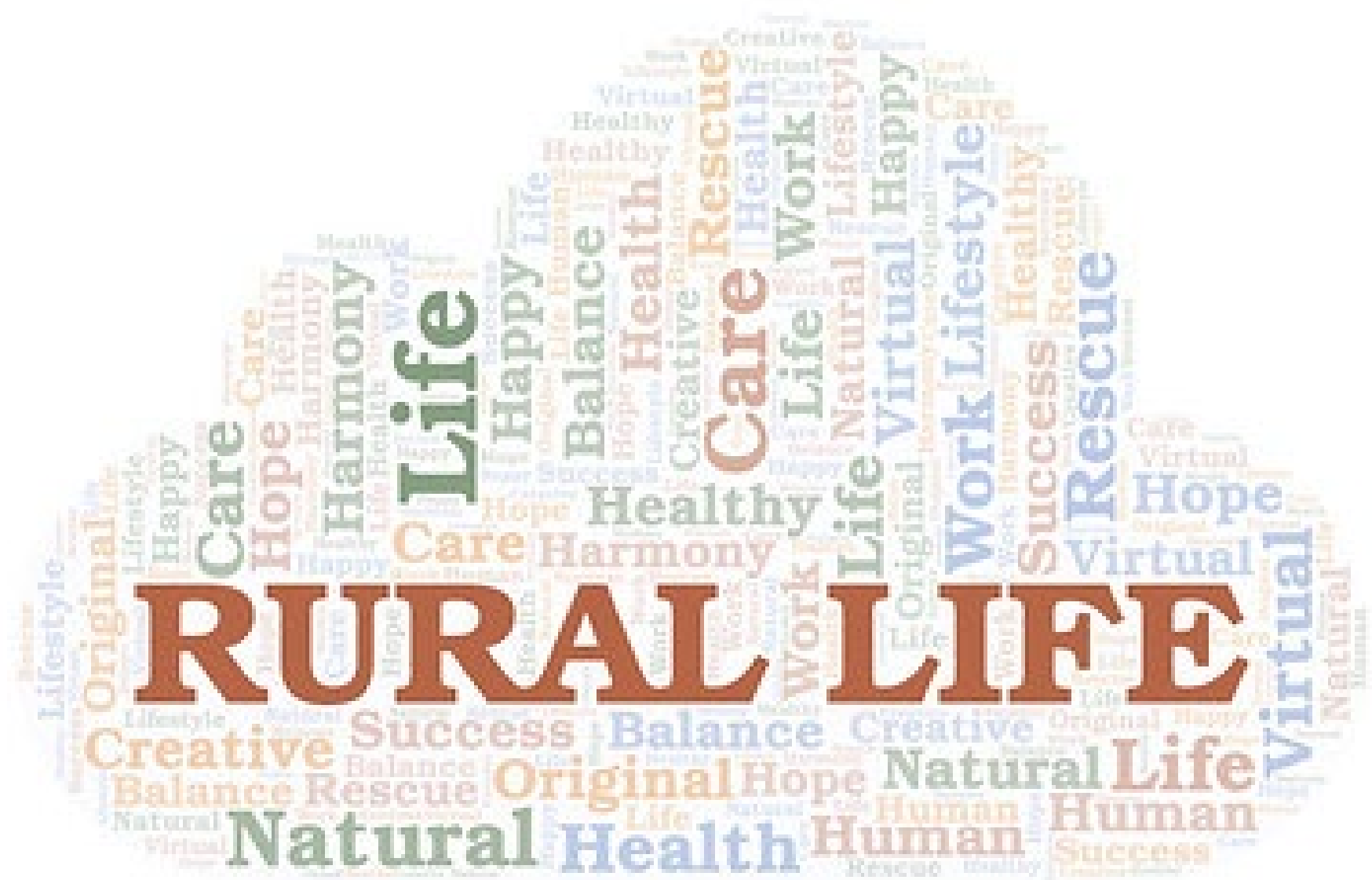
Sweetwater Regional  
— CANCER CENTER —



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Disclosures: None





# Rural Health Disparities

Current Epidemiology Reports (2023) 10:1–16  
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PMID: 36404874

EPIDEMIOLOGY OF AGING (B MEZUK, SECTION EDITOR)



## Aging in Rural Communities

Steven A. Cohen<sup>1</sup> · Mary L. Greaney<sup>1</sup>

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### Abstract

**Purpose of Review** Population aging is occurring worldwide. (US). However, in the US, the population is aging more rapidly presents unique challenges. Understanding and addressing the health equity across the lifespan and all geographies. This review (2022) on rural aging and highlight future directions and oppo

**Recent Findings** The review first addresses several methodolo of measure used, the composition of each measure, and the considers important concepts and context when describing w and environmental conditions. The review assesses several ke population health among older adults. Health and social serv aging in rural areas. Racial and ethnic minorities, indigenou populations in the discussion of rural older adults and healthy longitudinal, place-based research to promote healthy aging a

**Summary** Policies, programs, and interventions to reduce r health equity and healthy aging necessitate a context-specific rural–urban differences in population health and healthy agi programs, policies, and interventions.

**Keywords** Rural health · Aging · Epidemiology · Social deter

### RESEARCH ARTICLE

## Rural-urban disparities in health outcomes, clinical care, health behaviors, and social determinants of health and an action-oriented, dynamic tool for visualizing them

William B. Weeks<sup>1\*</sup>, Ji E. Chang<sup>2</sup>, José A. Pagán<sup>2</sup> , Jeffrey Lumpkin<sup>1</sup>, Divya Michael<sup>1</sup>, Santiago Salcido<sup>1</sup> , Allen Kim<sup>1</sup>, Peter Speyer<sup>3</sup>, Ann Aerts<sup>3</sup>, James N. Weinstein<sup>4,5,6</sup>, Juan M. Lavista<sup>1</sup>

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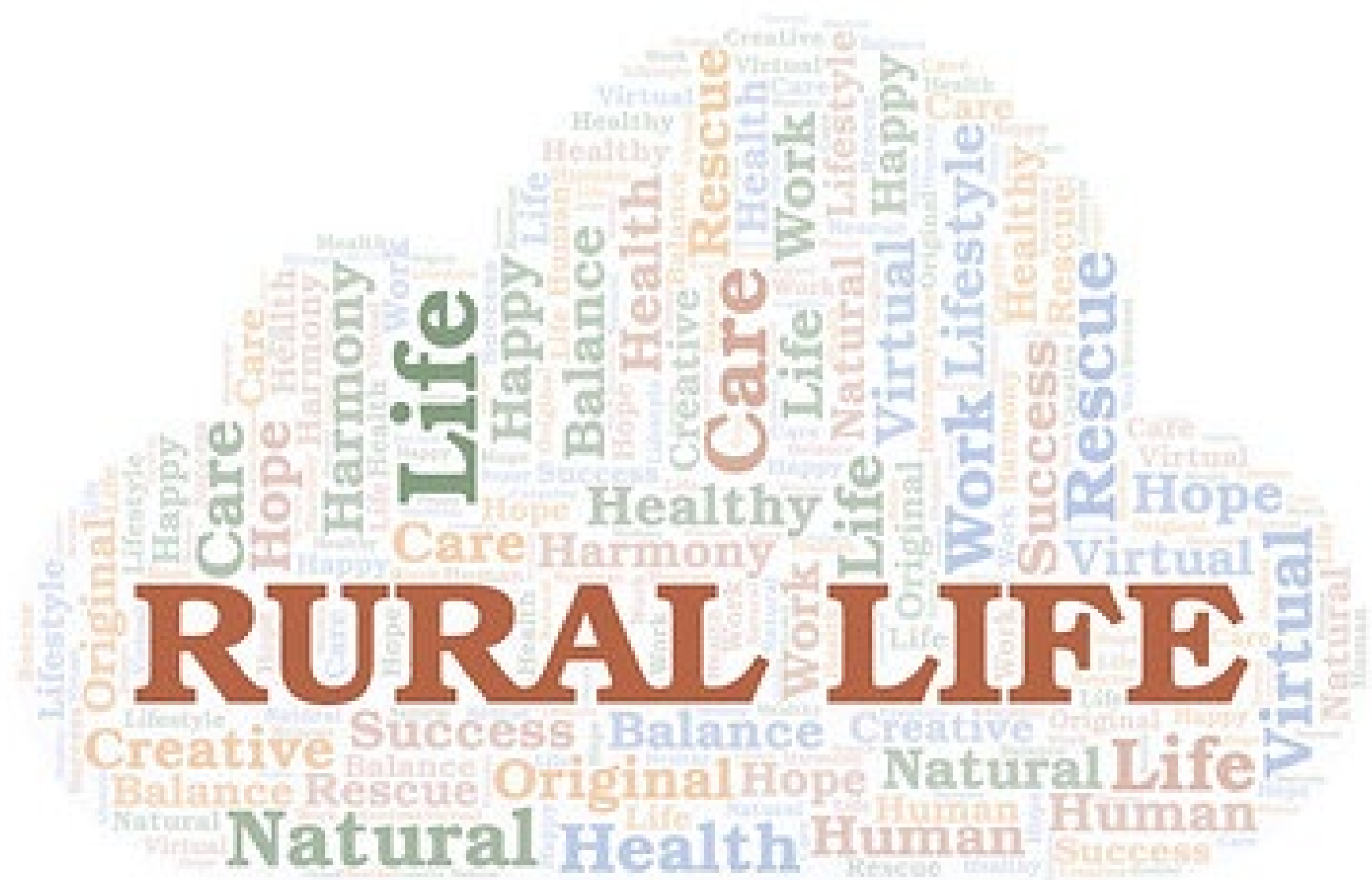


## Rural Health Disparities

ciated with working and living in groups experience significant health status when compared to the such as higher incidence of disease ectancies, and higher rates of include geographic isolation, lower aviors, limited access to healthcare unities. Rural residents are also less verage, and if they are poor, often

s, and foundations are working to overall well-being of rural rmation, and technical assistance to others work with policymakers to health and healthcare in rural

ontrol and Prevention's (CDC) [Health Series](#) examines rural aviors, chronic disease, mental th disparities. In addition to that [address rural health](#). CDC's 2021 [s: United States, 1999–2019](#) ) leading causes of death.





# RURAL HOSPITALS AT RISK OF CLOSING

## Millions of Americans No Longer Have Hospital Care in Their Community

Over the past decade, more than 100 rural hospitals have closed. As a result, the millions of Americans who live in those communities no longer have access to an emergency room, inpatient care, and many other hospital services that citizens in most of the rest of the country have.

closing have more debts than assets, or they do not have adequate net assets (i.e., assets other than buildings & equipment, minus debt) to offset their losses on patient services for more than a few years.

There are hospitals at risk of closing in almost every state. In over half the states, 25% or more of the rural hospitals are at risk of closing, and in 9 states, the majority of rural hospitals

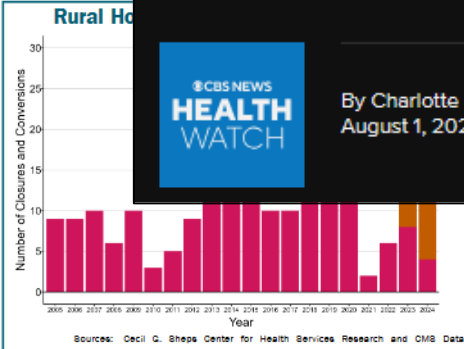
In addition, over 100 million Americans live in communities that are only a few miles from a rural hospital. Every year, more than 100 million Americans receive care in those communities from home in one of those rural hospitals.

HEALTHWATCH

# Small-town patients face big hurdles as rural hospitals cut cancer care



By Charlotte Huff  
August 1, 2024 / 5:00 AM EDT / KFF Health News



Rural Hospitals at Immediate Risk of Closing



United States Government Accountability Office

Report to the Ranking Member, Committee on Homeland Security and Governmental Affairs, United States Senate

December 2020

# RURAL HOSPITAL CLOSURES

## Affected Residents Had Reduced Access to Health Care Services

GAO-21-93

## Hundreds More Rural Hospitals Could Close in the Near Future

More than 700 rural hospitals – over 30% of all rural hospitals in the country – are at risk of closing because of the severe financial problems they are experiencing. Over half (36%)

# More Rural Hospitals Are on the Verge of Closing, Report Finds

— Private insurers are paying less than the cost of care, data show

by Joyce Frieden, Washington Editor, MedPage Today  
August 9, 2024



# Impact of Rural Health Disparities

Original Reports | Equity in Cancer Care PMID: 38560814

## Estimating the Impact of Rurality in Disparities in Cancer Mortality

Kelly M. Kenzik, MS, PhD<sup>1,2</sup> ; Elizabeth S. Davis, MSPH<sup>1</sup> ; Jeffrey A. Franks, MSPH<sup>3</sup> ; and Smita Bhatia, MD, MPH<sup>4,5</sup> 

DOI <https://doi.org/10.1200/OP.23.00626>

### ABSTRACT

**PURPOSE** Estimation of the independent effect of rurality on cancer mortality requires causal inference methodology and consideration of area-level socioeconomic status and rural designations.

**METHODS** Using SEER data, we identified key incident cancers diagnosed between 2000 and 2016 at age  $\geq 20$  years ( $N = 3,788,273$ ), examining a 20% random sample ( $n = 757,655$ ). Standardized competing risk and survival models estimated the association between rural residence, defined by Rural–Urban Continuum Codes, and cancer-specific and all-cause mortality, controlling for age at cancer diagnosis, sex, race/ethnicity, year of diagnosis, and Area Deprivation Index (ADI). We estimated the attributable fraction (AF) of rurality and high ADI (ADI > median) to the probability of mortality. Finally, we examined county measurement issues contributing to mortality rates discordant from hypothesized rates.

**RESULTS** The 5-year standardized failure probability for cancer mortality for rural patients was 33.9% versus 31.56% for urban. The AF for rural residence was 1.04% at year 1 (0.89% by year 5), the highest among local stage disease (Y1 2.1% to Y5 1.9%). The AF for high ADI was 3.33% in Y1 (2.87% in Y5), while the joint effect of rural residence and high ADI was 4.28% in Y1 (3.71% in Y5). Twenty-two percent of urban counties and 30% of rural were discordant. Among discordant urban counties, 30% were only considered urban because of adjacency to metro area. High ADI was associated with urban discordance and low ADI with rural discordance.

**CONCLUSION** Rural residence independently contributes to cancer mortality. The rural impact is the greatest among those with localized disease and in high deprivation areas. Rural–urban county designations may mask high-need urban counties, limiting eligibility to state and federal resources dedicated to rural areas.

### ACCOMPANYING CONTENT

 [Data Supplement](#)

Accepted February 14, 2024

Published April 1, 2024

JCO Oncol Pract 20:993-1002



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[View Online Article](#)

Original Reports | Care Delivery PMID: 38394477

## Exploring Demographic Differences and Outcomes in Early-Onset Colorectal Cancer

Beas Siromoni, MS<sup>1</sup>; Adrienne Groman, MS<sup>2</sup>; Kanak Parmar, MD<sup>3</sup>; Sarbajit Mukherjee, MD, MS<sup>2</sup> ; and Deepak Vadehra, DO<sup>2</sup> 

DOI <https://doi.org/10.1200/OP.23.00671>

### ABSTRACT


**PURPOSE** Early-onset colorectal cancer (EOCRC), defined as CRC diagnosed before age 50 years, has increased significantly worldwide. The majority of EO CRCs do not appear to be driven by genetic factors and may be influenced by environmental factors. We hypothesized that sociodemographic disparities exist in EO CRC. The purpose was of the study was to examine the geographic disparities in patients with EO CRC.

**METHODS** We retrospectively examined the SEER database from 1976 to 2016 to examine the geographic disparities in EO CRC. A total of 73,378 patients with EO CRC were included in the analysis. We performed univariate and multivariable analyses to evaluate overall survival (OS) and disease-specific survival (DSS). Sociodemographic factors, including the location of residence (metropolitan areas [MA] or rural areas [RA]), sex, race, insurance status, and marital status, were included in the statistical analysis.

**RESULTS** The incidence and mortality rates were consistently higher in RA versus MA during the study period. Multivariable analysis showed that patients living in RA had worse OS (hazard ratio [HR], 1.14;  $P < .01$ ) and DSS (HR, 1.15;  $P < .001$ ) compared with those living in MA. Similarly, non-Hispanic Black ethnicity and uninsured patients had significantly worse survival when compared with non-Hispanic White and insured patients, respectively. Married status showed better survival outcomes.

**CONCLUSION** Patients with EO CRC living in RA have worse outcomes. Understanding the mechanisms behind such socioeconomic disparities is important so that future studies can reduce these disparities.

### ACCOMPANYING CONTENT

 [Appendix](#)

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JCO Oncol Pract 20:1075-1080

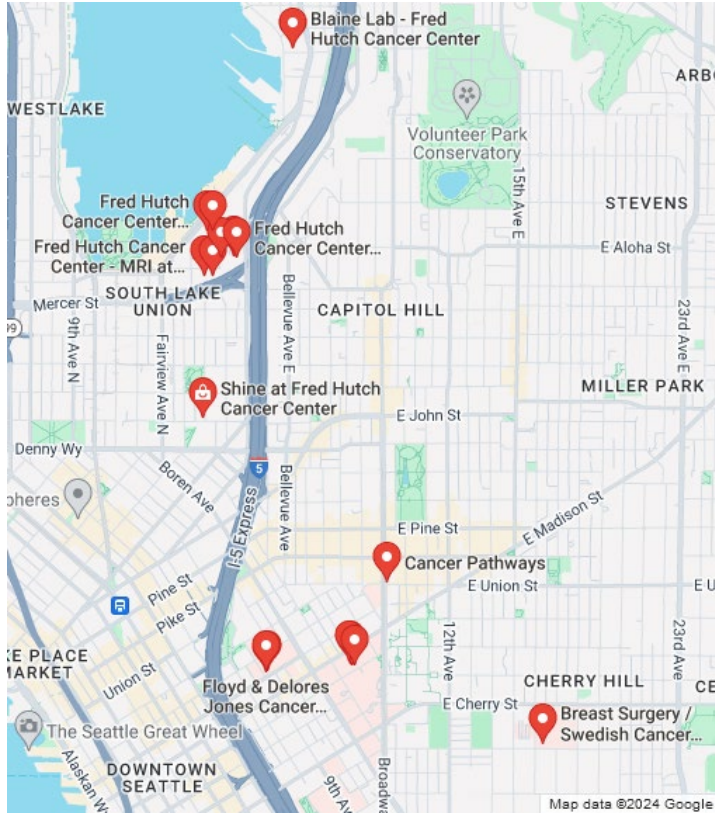
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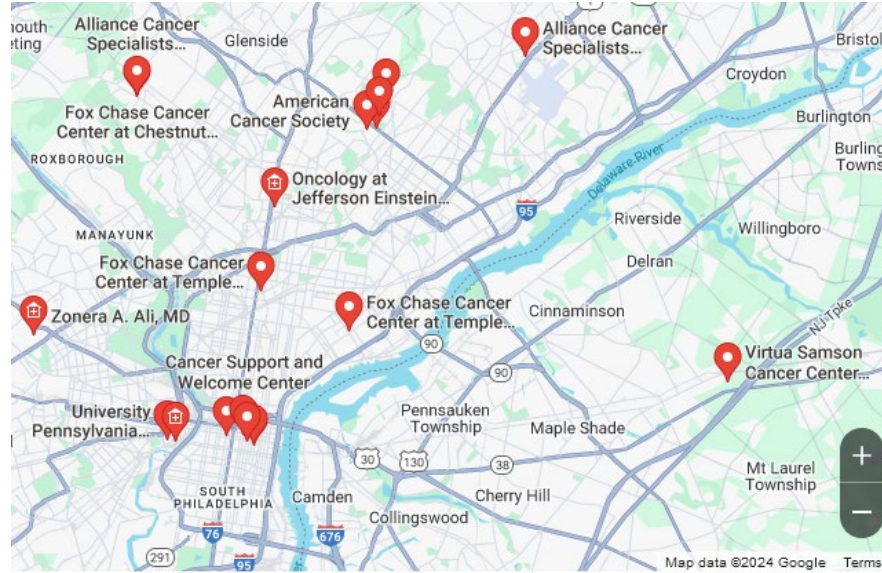
[View Online Article](#)



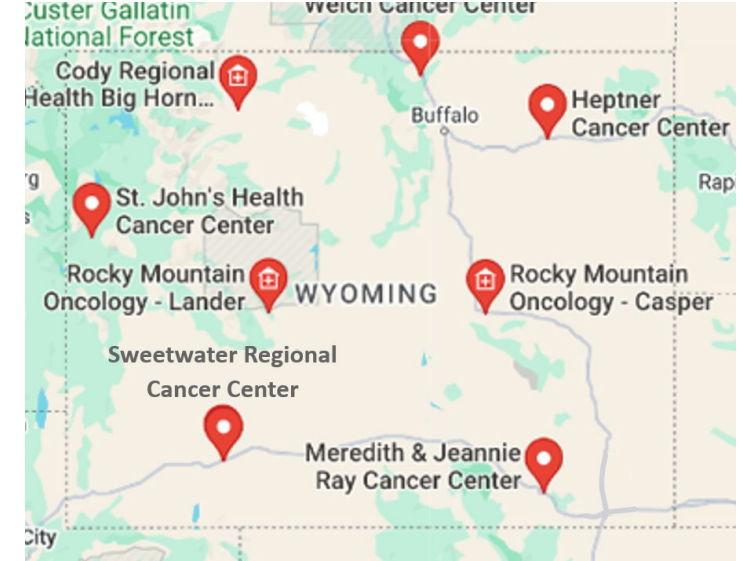
# Cancer Center Distribution



Seattle, WA

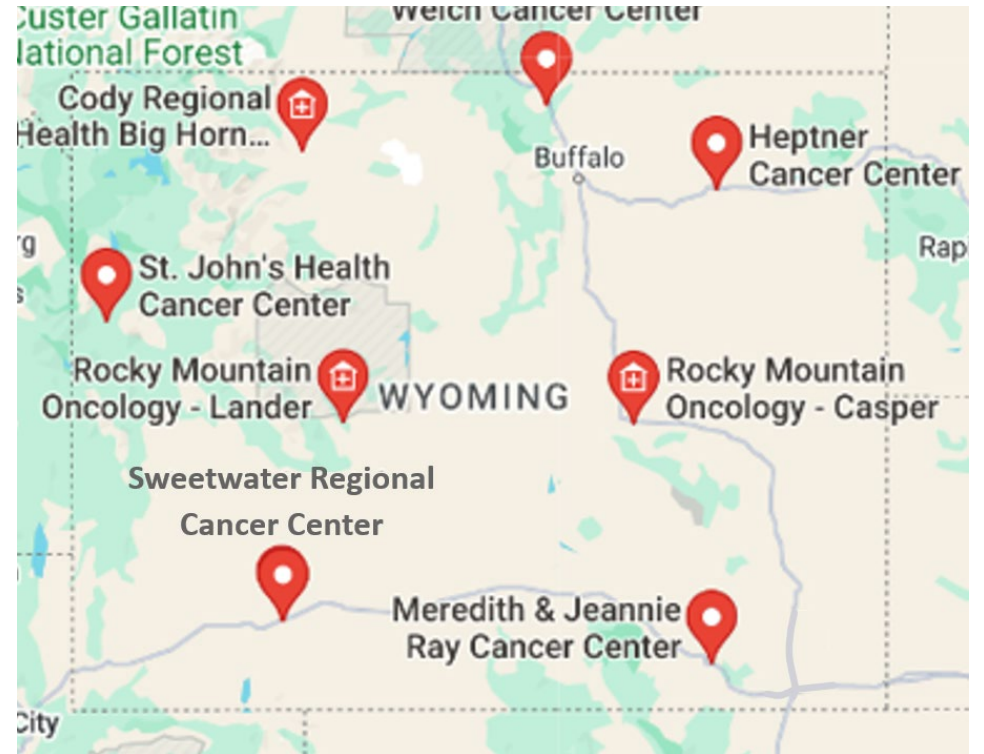


Philadelphia, PA



Wyoming

# The State of Wyoming





# Rural Location Challenges

  **NATIONAL WEATHER SERVICE** 10/18/2024  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HOME FORECAST PAST WEATHER SAFETY INFORMATION EDUCATION NEWS SEARCH ABOUT

Local forecast by "City, St" or ZIP code  
Enter location ...   
[Location Help](#)

**News Headlines**

- [Mild Through Thursday, Then Turning Cooler Friday and Saturday, Precipitation Chances Increase for Thursday Through Saturday.](#)

**Hazardous Travel This Morning. Many Roads Closed Due to Strong Winds and Blowing Snow.** **Cheyenne, WY**  
Weather Forecast Office

[Weather.gov](#) > [Cheyenne, WY](#) > Hazardous Travel This Morning. Many Roads Closed Due to Strong Winds and Blowing Snow.

[Current Hazards](#) [Current Conditions](#) [Radar](#) [Forecasts](#) [Rivers and Lakes](#) [Climate and Past Weather](#) [Local Programs](#)

  
Overcast  
**40°F**

**Strong Winds and Blowing Snow Impacting Travel in Southeast Wyoming This Morning**







FedEx Service Alerts

## FedEx Express National Service Disruption: Severe Winter Weather

Wednesday, January 17, 2024

FedEx Express has experienced substantial disruptions at continuing severe winter weather. A high volume of shipments and contingency plans have been activated to minimize the Disruption has been issued. Shipments with a delivery completion January 17 may be delayed, with potential delays continuing

The following FedEx Express services are most likely to be Priority Overnight, Standard Overnight, Express Saver, 2-Day Express Freight, and Express shipments in-bound to t



CenturyLink

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Sign In

## CenturyLink Service Outage Resolved

Hello,

Your CenturyLink services should now be restored.

If you are still unable to connect to the internet due to an outage, be sure to power cycle all devices (such as modems, routers, firewalls, etc.) by unplugging the power supply, waiting a moment, and then reconnecting the power. Once your DSL light is solid green, wait for a flashing green internet light and try to access a website.

If you are still experiencing an interruption to your service, please contact us for further assistance.

Business customer support - <https://CenturyLink.com/bizcontact>

Residential customer support - <https://CenturyLink.com/contact>

# Clinical trials

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- Improve patient outcomes, perhaps due to standardization of care or many eyes on the pt
- Should be representative of all the patients in the nation but are not

original reports

## Persistent Disparity: Socioeconomic Deprivation and Cancer Outcomes in Patients Treated in Clinical Trials

Joseph M. Unger, PhD<sup>1,2</sup>; Anna B. Moseley, MS<sup>1,2</sup>; Christabel K. Cheung, PhD<sup>3</sup>; Raymond U. Osarogiagbon, MD<sup>4</sup>; Banu Symington, MD<sup>5</sup>; Scott D. Ramsey, MD, PhD<sup>2</sup>; and Dawn L. Hershman, MD<sup>6</sup>

PMID: 33729825

abstract

**PURPOSE** Patients with cancer living in socioeconomically disadvantaged areas have worse cancer outcomes. The association between socioeconomic deprivation and outcomes among patients with cancer participating in clinical trials has not been systematically examined.

**METHODS** We examined survival outcomes for patients enrolled in phase III and large phase II clinical trials for major cancers conducted by the SWOG Cancer Research Network from 1985 to 2012. Socioeconomic deprivation was measured using trial participants' residential zip codes linked to the Area Deprivation Index (ADI). Five-year overall survival, progression-free survival, and cancer-specific survival were examined using Cox regression frailty models, adjusting for age, sex, and race, and separately for insurance status, prognostic risk, and rural or urban residency.

**RESULTS** We examined 41,109 patients from 55 trials comprising 24 cancer histology and stage-specific cohorts. Compared with trial participants in the most affluent areas (ADI, 0%-20%), trial participants from areas with the highest socioeconomic deprivation (ADI, 80%-100%) had worse overall (hazard ratio [HR] = 1.28, 95% CI, 1.20 to 1.37,  $P < .001$ ), progression-free (HR = 1.20, 95% CI, 1.13 to 1.28,  $P < .001$ ), and cancer-specific survival (HR = 1.27, 95% CI, 1.18 to 1.37,  $P < .001$ ). The results were similar after adjusting for insurance status, prognostic risk, and rural or urban residency. There was a continuous increase in risk of all outcomes as the ADI quintile increased.

**CONCLUSION** In patients with cancer with access to protocol-directed care in clinical trials, high area-level socioeconomic deprivation was associated with worse survival. Future research should examine whether the etiology of this residual disparity is related to reduced access to supportive care or postprotocol therapy and/or to differences in health status not reflected by protocol selection criteria.

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# Movement Towards Solutions

## Washington Rural Palliative Care Initiative



The **Washington Rural Palliative Care Initiative (WRPCI)** is an effort to better serve patients with serious illness in rural communities. This public-private partnership is led by the Washington State Office of Rural Health at the state Department of Health involving over 24 organizations.

This work aims to assist rural health systems and communities to integrate palliative care in multiple settings, such as emergency department, inpatient, skilled rehabilitation, home health, hospice, primary care, and long-term care.

<https://waportal.org/partners/washington-rural-palliative-care-initiative>

Opinion

### VIEWPOINT

## Advancing Genomic Cancer Medicine in Rural and Underserved States

**Jens Rueter, MD**  
The Jackson Laboratory, Augusta, Maine.

**Edison T. Liu, MD**  
The Jackson Laboratory for Genomic Medicine, Farmington, Connecticut.  
JAMA Oncology

2024 Vol 10 No. 9

**In the evolving landscape** of oncology, the integration of powerful genomic technologies into practice has ushered in a new era of precision cancer medicine. Complex genomic information such as mutational analyses, transcriptional signatures, and polygenic risk scores have become key diagnostics guiding therapeutic decisions and management of inherited cancer risk. However, the expertise to interpret these data for clinical decision-making remains constrained and is a significant challenge for community oncologists, especially those in rural regions and in medically underserved areas. While physical access to these tests is readily available, poor access to interpretive expertise has become the key limiting factor. These conditions have resulted in a low level of confidence assessing genomic information and a perceived lack of access to targeted therapies among community oncologists.<sup>1</sup>

The Jackson Laboratory is a major research institution in advanced genetics and genomics headquartered in Maine, a rural sparsely populated state. In 2015, we began to explore how we could parlay our technologic and educational expertise to enhance the state of genomic cancer medicine in Maine. We developed a community-based experiential learning model for raising the standards for genomic cancer medicine across an entire sector. The core of this model is the Maine Cancer Genomics

institution problem of inadequate access to the necessary range of domain experts and to overcome the limitations of standard continuing medical education (CME) modules. Most community-directed educational strategies use a didactic approach that has been useful in advancing quality control in the practice of medicine. However, the advanced management of complex medical disorders will increasingly require experiential learning based on hands-on problem-solving.<sup>4</sup> Genomic interpretation in cancer management falls in this category. Understanding this, we crafted a continuous learning strategy that would fit within the usual workflow of community oncologists.

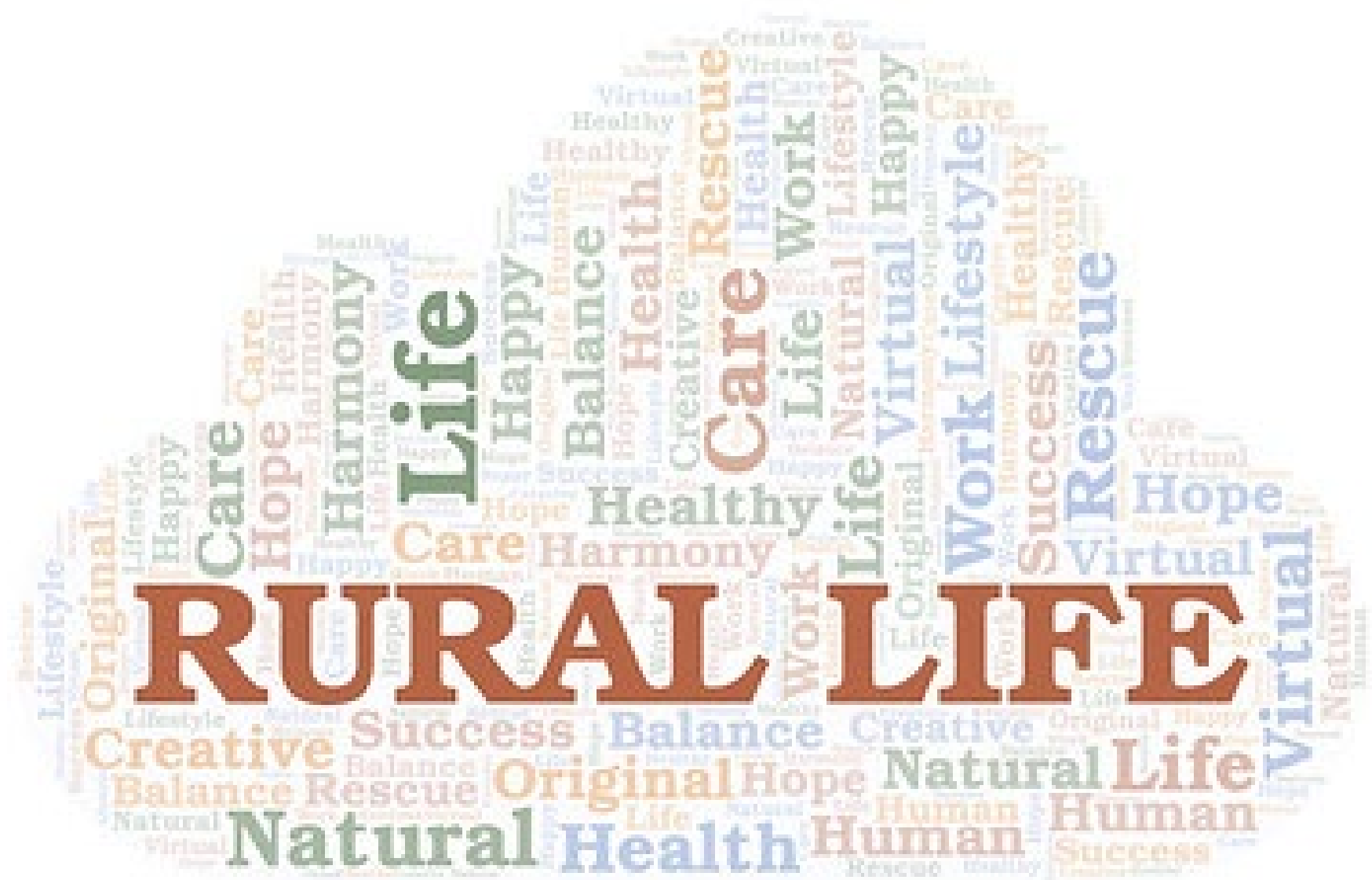
The GTB sessions, which offer CME credit, are held at least once a week using a hybrid in-person/online format. They are centrally organized by a coordinator at The Jackson Laboratory. Community oncologists from around the state submit challenging genomic diagnostic cases for discussion with peer physicians and genetic/genomic PhD and PharmD experts. For each case discussed, a consensus recommendation is provided in a written report for clinical purposes such as insurance justification for medications.

Participating oncologists have stated that the GTBs are uniquely valuable to them and have greatly improved their ability to analyze complex genomic

# SOLUTIONS

## Fix What You Can Fix

- Manpower thru exposure
- Expand telehealth/telephone coverage
- National licensure credentialing for telehealth
- Decentralize clinical trials so John Smith can participate from his home in WY
- Realistic hospital reimbursement
- Universal healthcare



# Rural medicine is in danger

<https://www.kevinmd.com/2024/10/why-rural-americas-health-care-crisis-is-getting-worse-and-what-it-means-for-retirees-podcast.html>

I would like to thank the technical  
and artistic help of Lacey Reddick  
Clinical Trials Facilitator



The image shows the exterior of a modern hospital building. The building has a multi-story design with a mix of beige and orange-brown panels. A prominent feature is a large, dark-colored overhang or canopy over the entrance, supported by two thick, square pillars made of stacked stone. The ground in front of the building is landscaped with low-lying green and yellow shrubs. In the background, there are signs for "ONCOLOGY PARKING ONLY" and a stone wall with text that reads "CANCER CENTER'S PULMONARY REHABILITATION SERVICES".

# Thank you!

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