ECHO IDAHO

Cancer Survivorship

Idaho's Cancer Survivors: Insights and Needs

January 14, 2026

Christopher J. Johnson, MPH ▪ Bozena M Morawski, MPH, PhD

Epidemiologists and Co-Principal Investigators

Cancer Data Registry of Idaho, Idaho Hospital Association

University of Idaho
School of Health and Medical Professions

Project ECHO

Acknowledgment and Disclaimer

- *This project has been funded in whole or in part with Federal funds from the National Cancer Institute, National Institutes of Health, Department of Health and Human Services, under Contract No. HHSN261201800006I and the Centers for Disease Control and Prevention, Department of Health and Human Services, under Cooperative Agreement NU58DP007160.*

- *The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention or the National Cancer Institute.*

University of Idaho
School of Health and Medical Professions

Project ECHO

Learning Objectives

01

Understand the burden of cancer in Idaho.

02

Understand specific characteristics of and challenges experienced by Idaho's cancer survivors.

03

Learn sources of population-level cancer survivorship data.

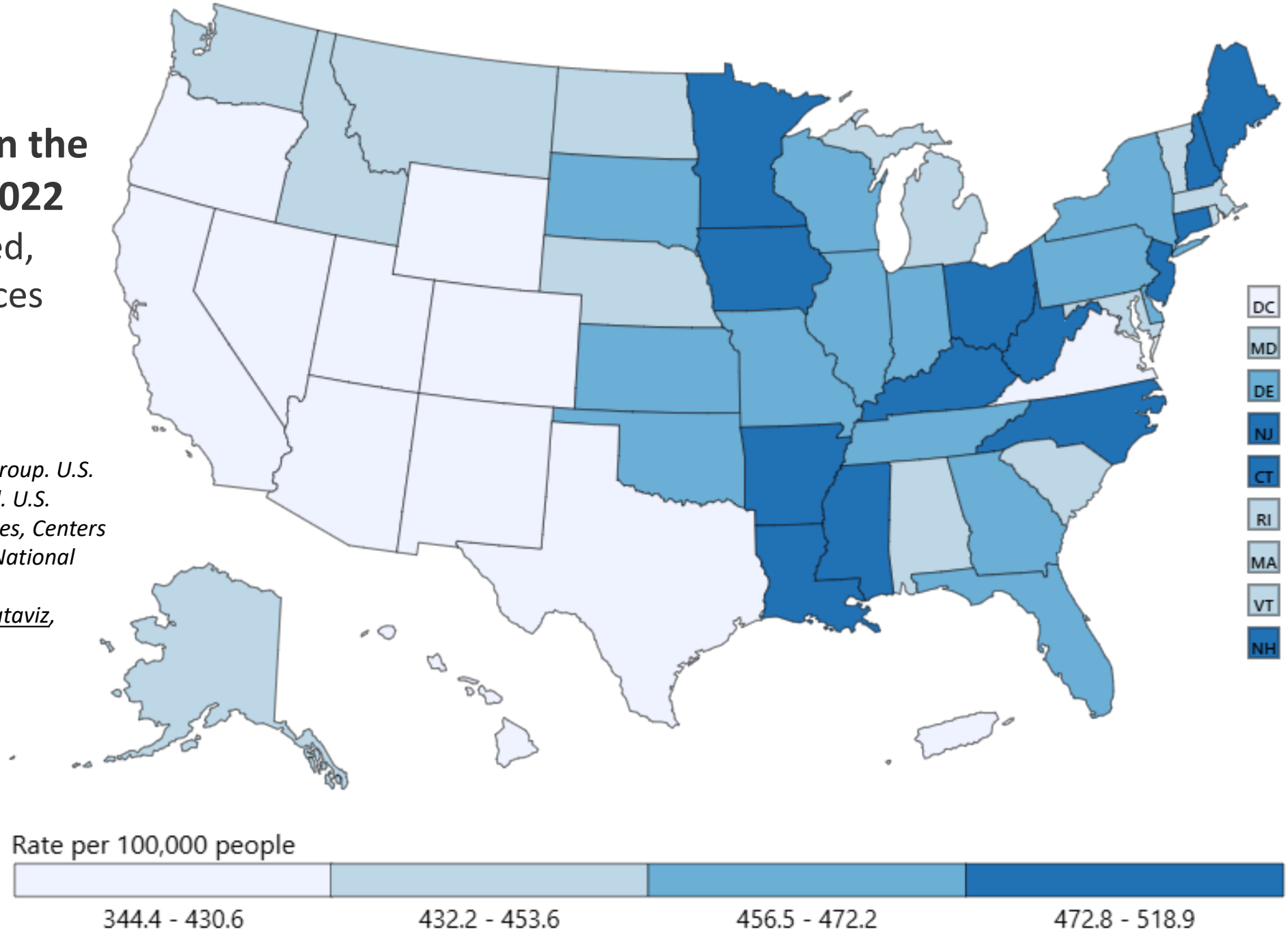
University of Idaho
School of Health and Medical Professions

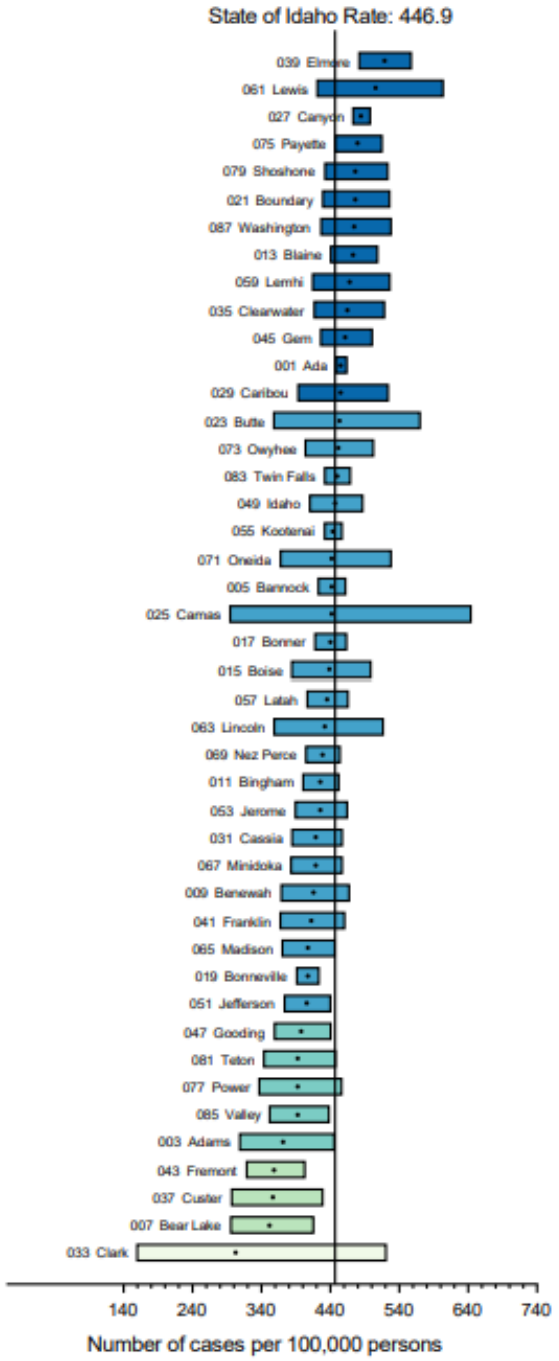
Project ECHO

Rate of New Cancers in the United States, 2018–2022

All Cancer Sites Combined, Male and Female, All Races and Ethnicities

Source - U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute;https://www.cdc.gov/cancer/dataviz, released in June 2025.



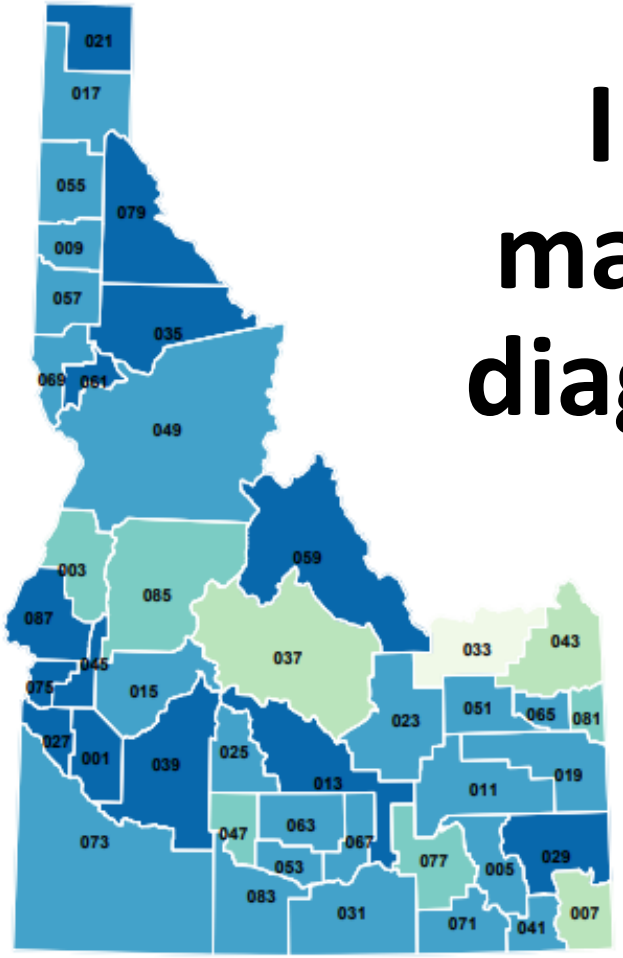


Age-Adjusted Incidence Rates

All Sites

Both Males and Females

State of Idaho, by County, 2019–2023



In 2023, over 10,500+ malignant tumors were diagnosed among Idaho residents.

Cancer Data Registry of Idaho.
Rates age-adjusted to the 2000 U.S. population. U.S. FIPS codes label counties.
Colors denote rate clustering. Width of bars indicate 95% confidence intervals.

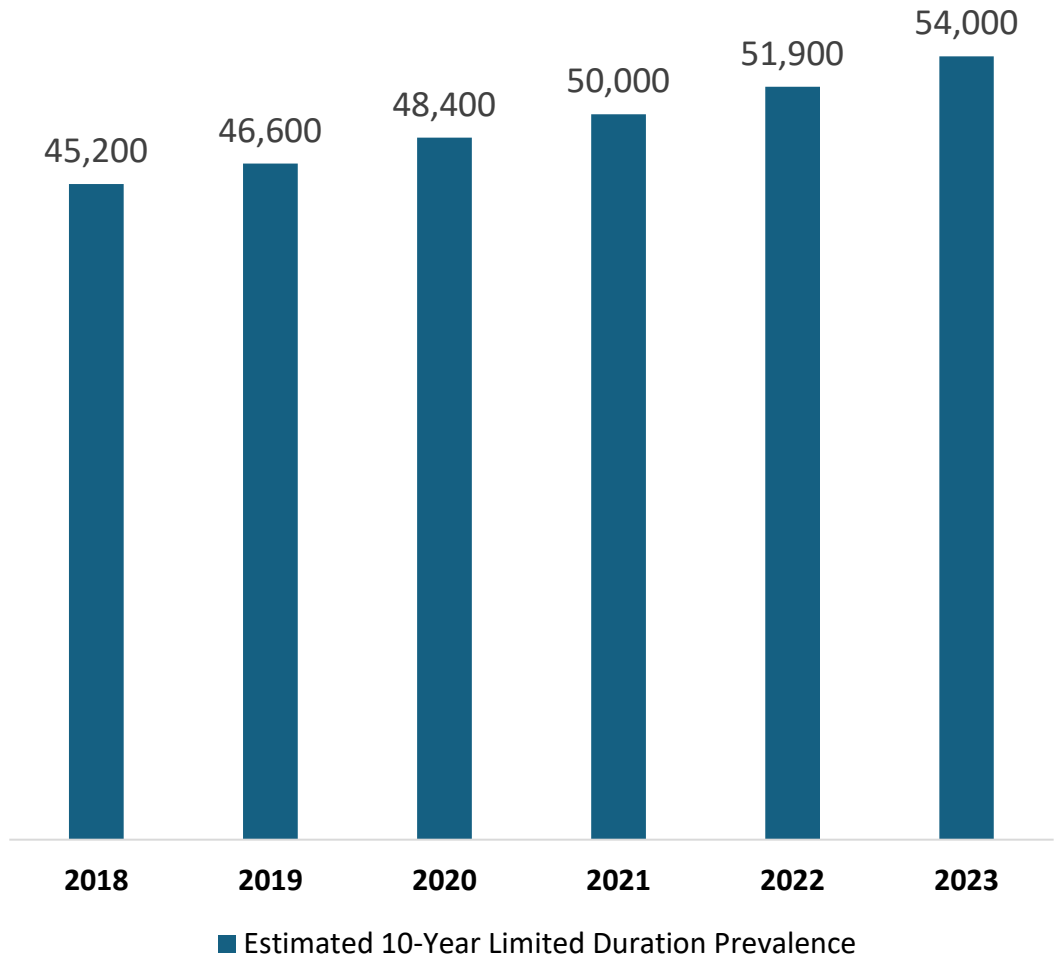
University of Idaho
School of Health and Medical Professions

Project ECHO

Cancer survivors living in Idaho

- Number of cancer survivors living in Idaho has increased by 23% since 2018:
  - Increasing Idaho population
  - Increasing cancer survival

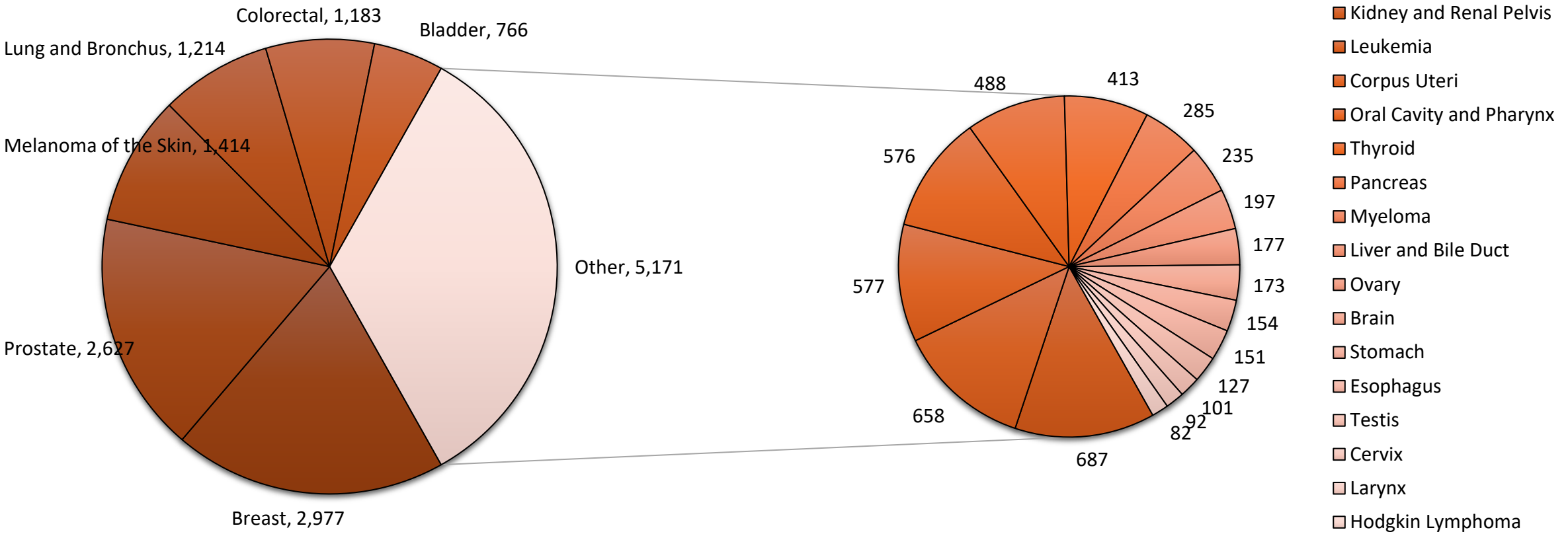
- In 2023, 1 in 36 Idaho residents estimated to be living with a cancer diagnosis received in the past 10 years.



University of Idaho
School of Health and Medical Professions

Project ECHO

Over 16,000 Idahoans living with a cancer diagnosis received in the past 2 years.*



* July 1, 2023 limited duration prevalence estimate.

University of Idaho School of Health and Medical Professions

Project ECHO

Where to find these data?

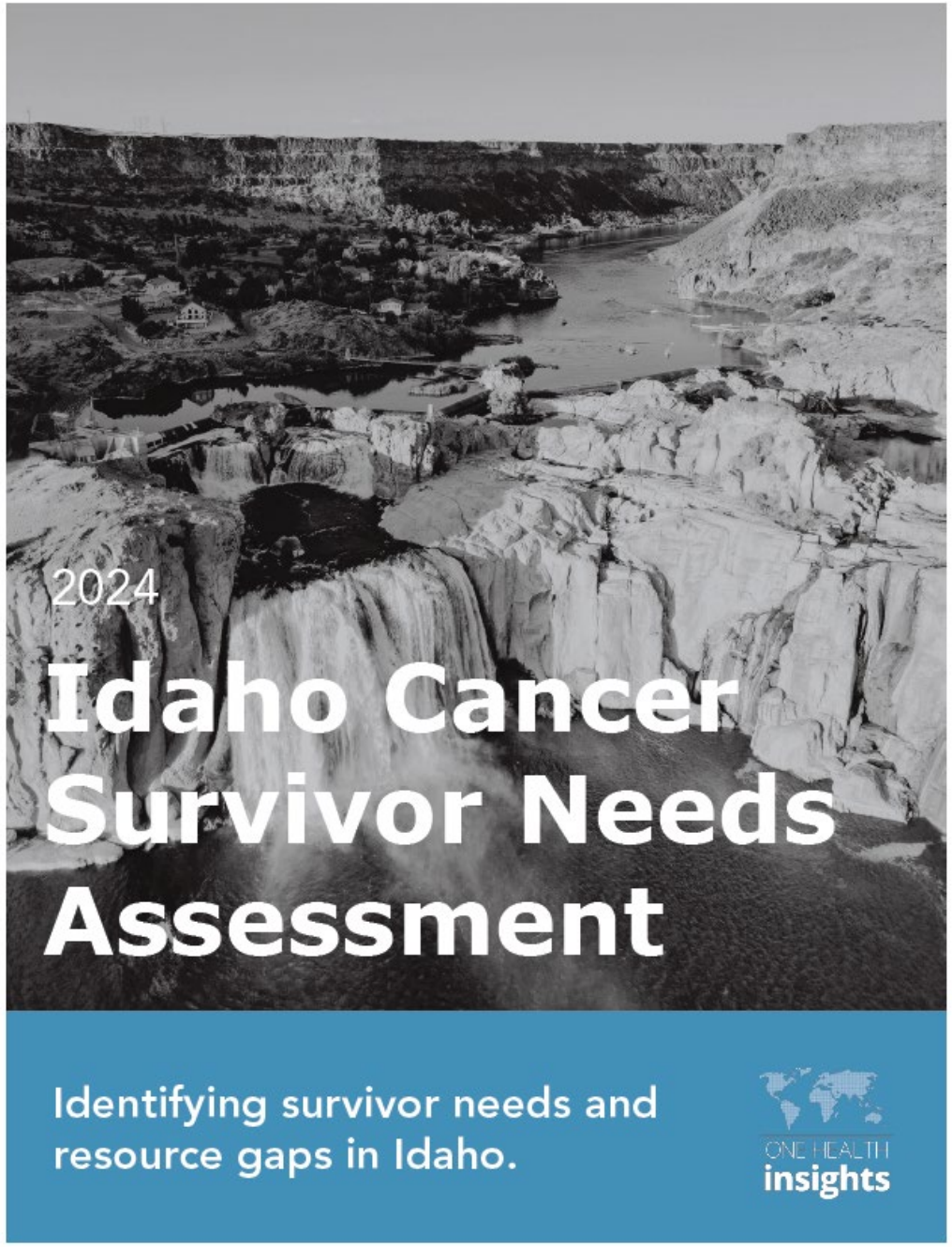
- Cancer Data Registry of Idaho (CDRI)
  - Program of the Idaho Hospital Association since 1969;
  - Contracted with State of Idaho to run the state's population-based central cancer registry since 1971.
- CDRI collects data on all cancers diagnosed among Idaho-resident patients – even those treated out of state – and non-residents diagnosed/treated for cancer in Idaho.
- CDRI collects extensive information characterizing reportable tumors and associated therapy, patient demographics, and long-term vital status.

For more information about the Cancer Data Registry of Idaho, contact your presenters:

Bozena Morawski: bmorawski@teamiha.org

Christopher Johnson: cjohnson@teamiha.org

What is the experience of Idaho's cancer survivors?



From the 2024 Idaho Cancer Survivor Needs Assessment:

“

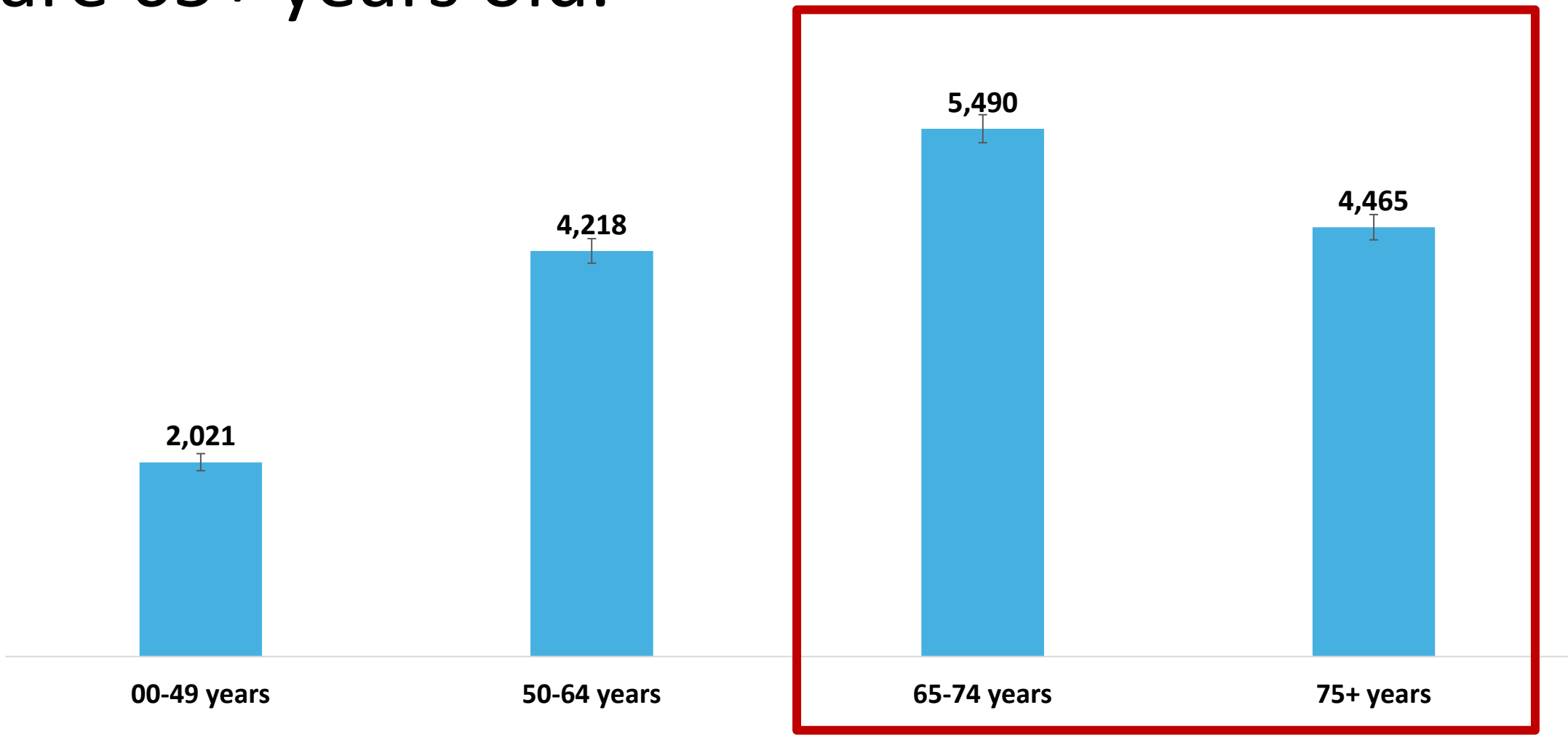
- *Mental health was a top concern for cancer survivors.*
- *Survivors struggle with the financial burden of survivorship-and resources can be hard to find.*
- *A strong support network makes navigating survivorship easier.*
- *Not all providers share the same understanding of resources available to cancer survivors.*
- *Each concern faced by survivors has the potential to impact other areas of well-being.*

”

University of Idaho School of Health and Medical Professions

Project ECHO

2 in 3 cancer survivors living in Idaho are 65+ years old.

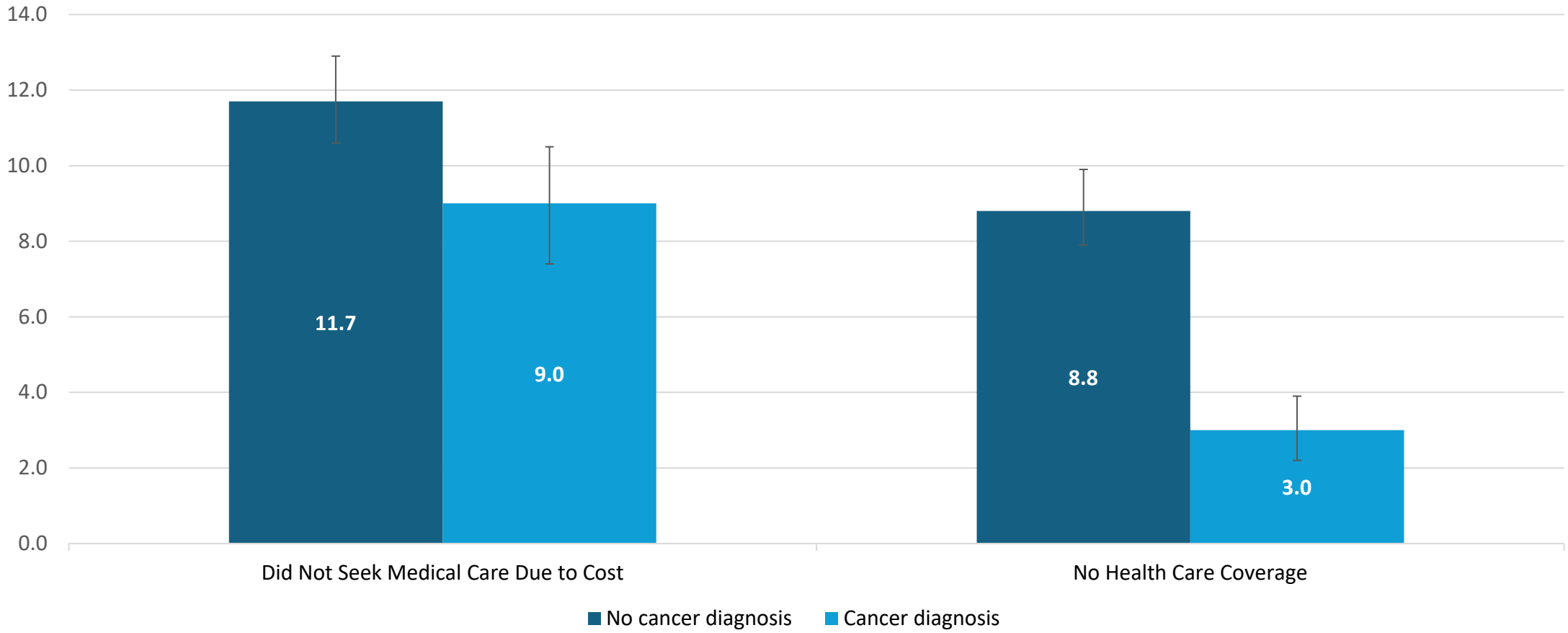


* As of July 1, 2023 and among Idahoans diagnosed within the past two years. Age categories reflect age at estimated prevalence, not age at diagnosis.

University of Idaho
School of Health and Medical Professions

Project ECHO

Nearly 1 in 10 cancer survivors did not seek needed medical care due to cost.

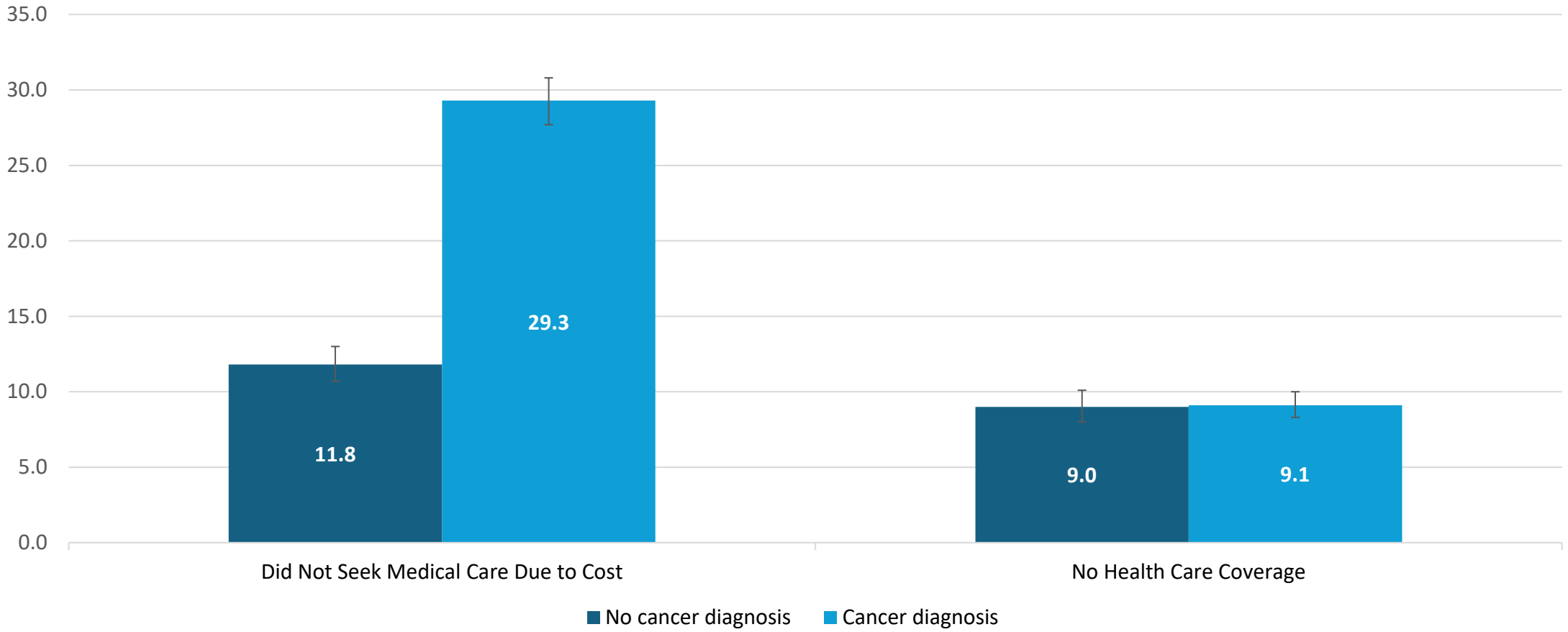


BRFSS, 2022. **Crude** prevalence among Idaho adults ever diagnosed versus never diagnosed with cancer.

University of Idaho
School of Health and Medical Professions

Project ECHO

Survivors are 2.5x more likely to not seek needed medical care due to cost than non-cancer survivors.

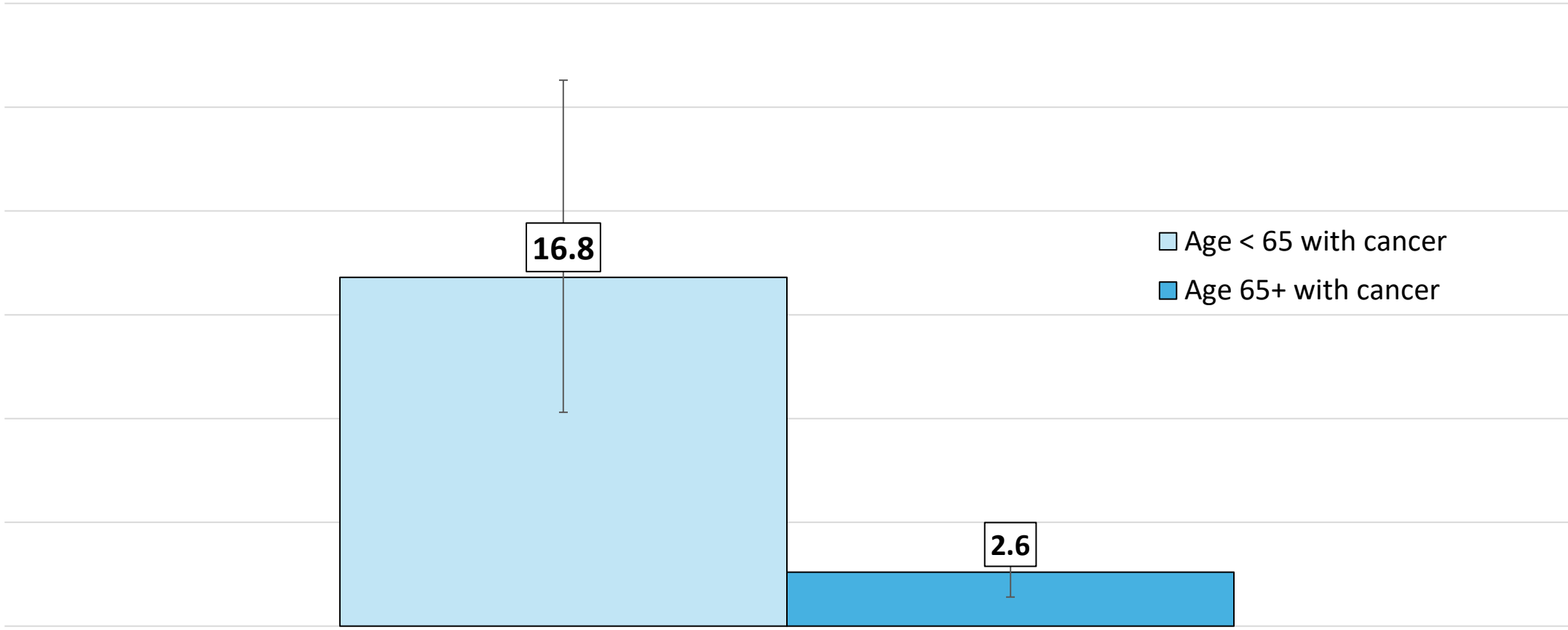


BRFSS, 2022. **Age-adjusted** prevalence among Idaho adults ever diagnosed versus never diagnosed with cancer.

University of Idaho School of Health and Medical Professions

Project ECHO

Younger patients were 6x more likely to not seek needed medical care due to cost



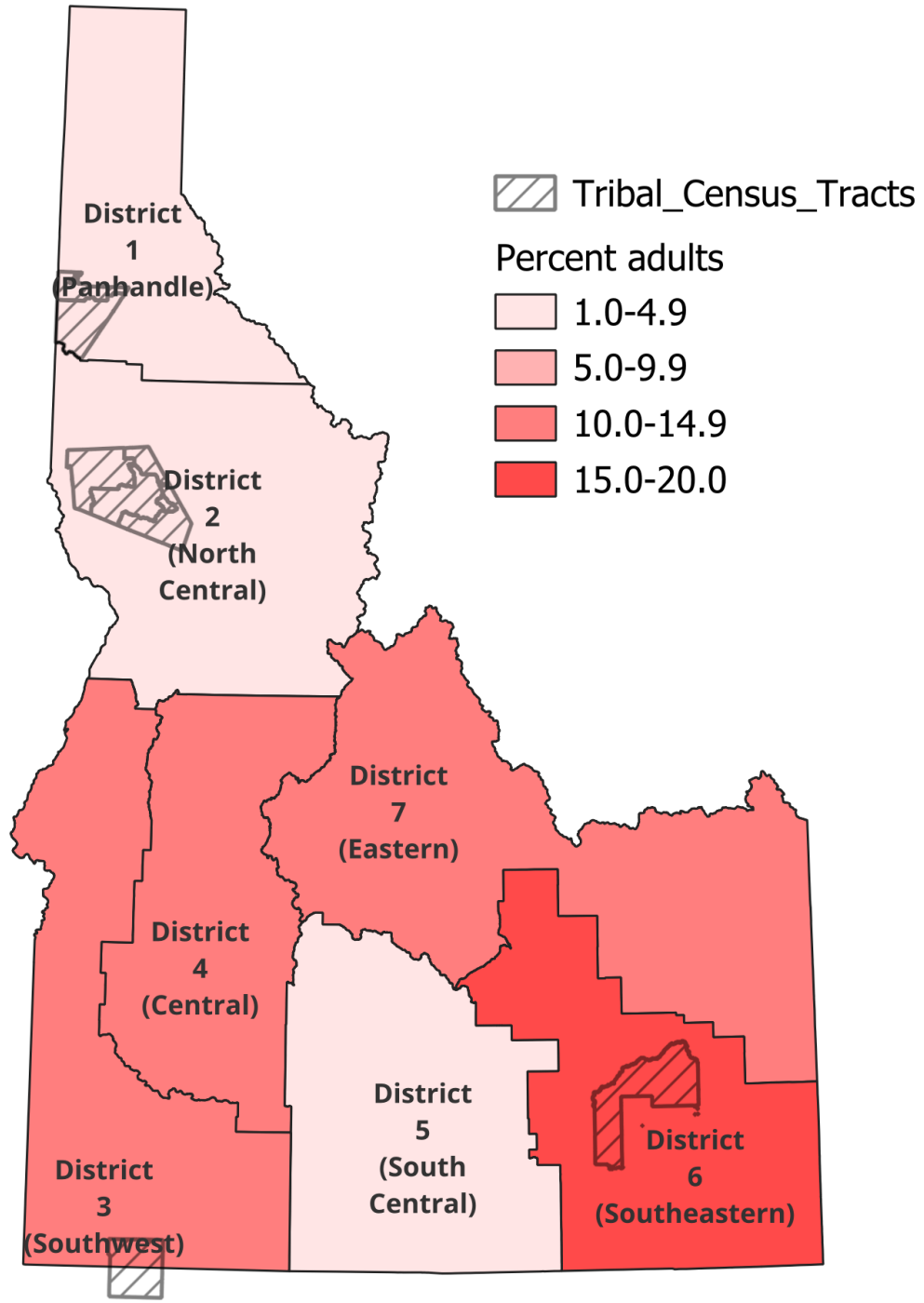
BRFSS, 2022. **Crude** prevalence among Idaho adults ever diagnosed with cancer.

University of Idaho
School of Health and Medical Professions

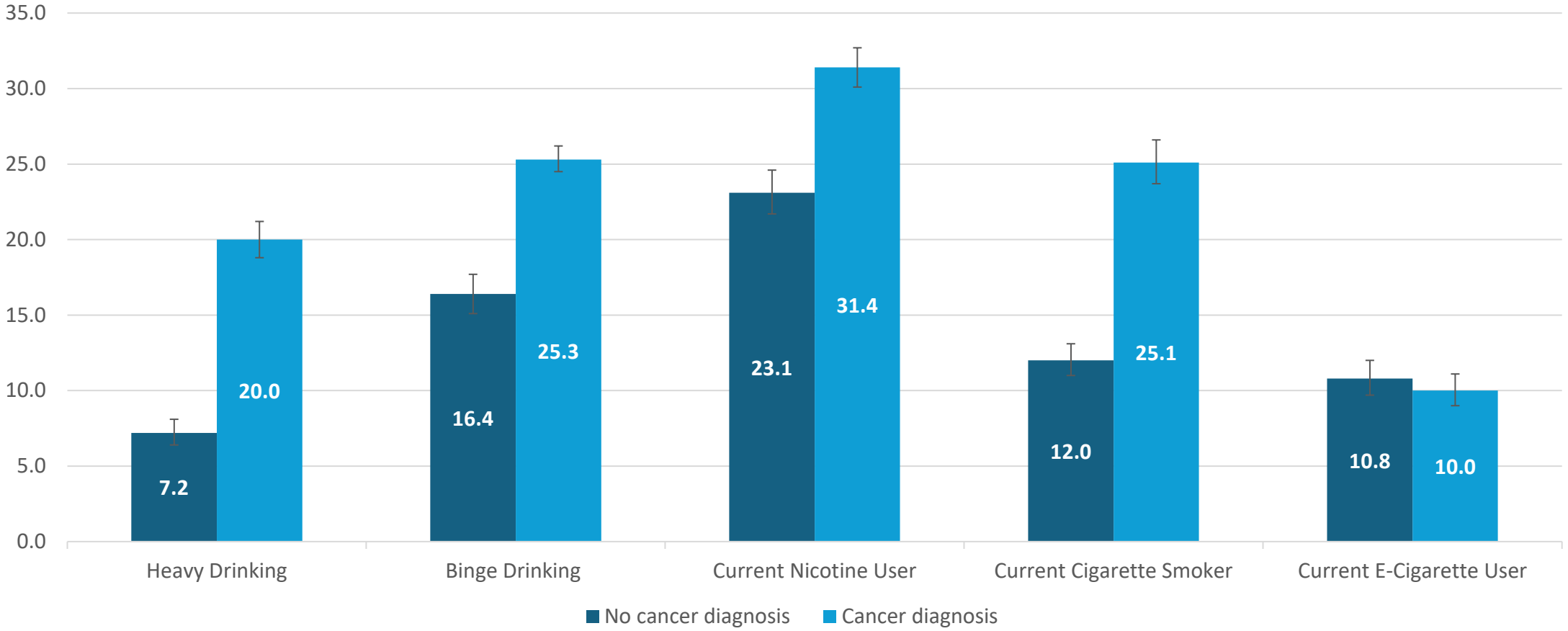
Project ECHO

Prevalence of adults with a cancer diagnosis that did not seek needed medical care due to cost (BRFSS, 2022)

- **Crude** prevalence among Idaho adults ever diagnosed with cancer.



Idaho cancer survivors more likely to abuse alcohol and use tobacco products than those without cancer.

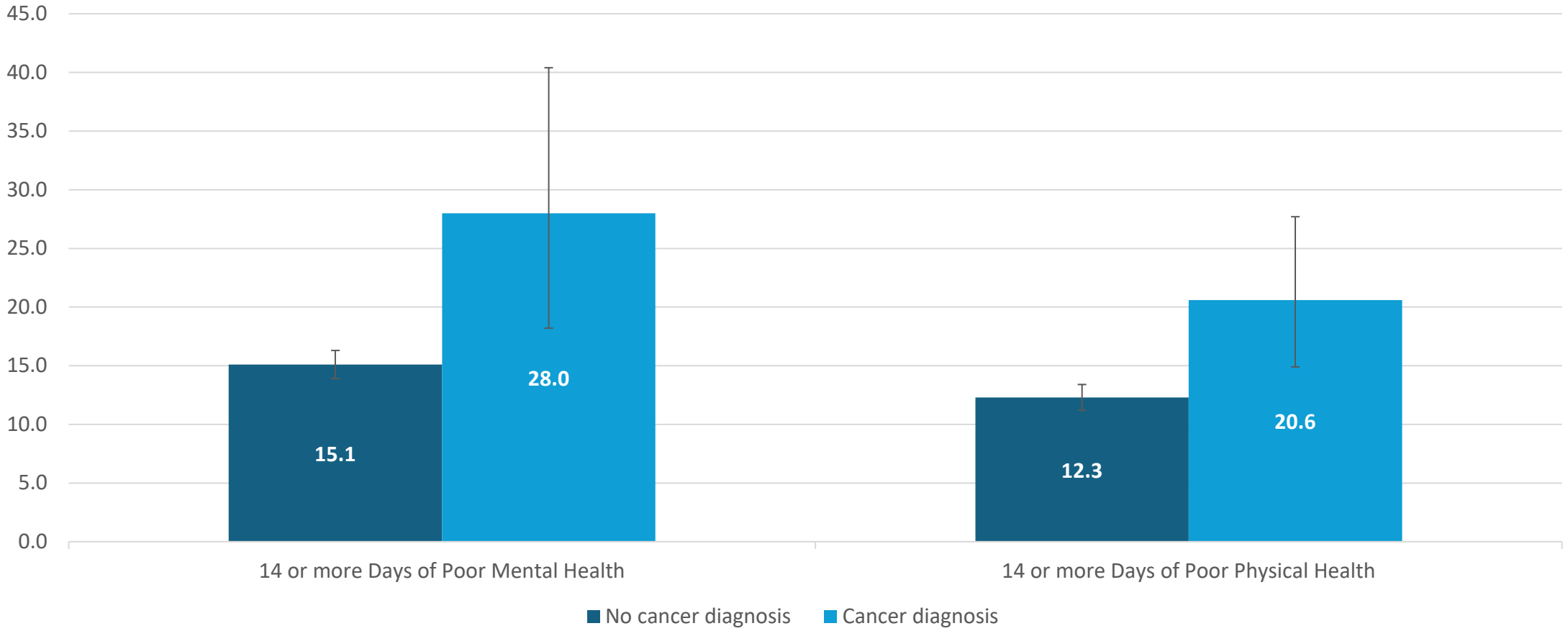


BRFSS, 2022. **Age-adjusted** prevalence among Idaho adults ever diagnosed versus never diagnosed with cancer.

University of Idaho School of Health and Medical Professions

Project ECHO

Idaho cancer survivors more likely to report poor mental health and poor physical health than those without cancer.



BRFSS, 2022. **Age-adjusted** prevalence among Idaho adults ever diagnosed versus never diagnosed with cancer.

University of Idaho
School of Health and Medical Professions

Project ECHO

Where to find these data?

- Idaho Behavioral Risk Factor Surveillance System (BRFSS) at Idaho Department of Health and Welfare
- BRFSS conducts telephone surveys to collect data on health-related risk behaviors, chronic health conditions, health-care access, and use of preventive services among U.S. residents.
- National Centers for Disease Control and Prevention program, administered at the state level

For more information about Idaho BRFSS, contact:

Christopher Murphy, Director Idaho BRFSS: christopher.murphy@dhw.idaho.gov

Jonas Frankel-Bricker, Principal Research Analyst: Jonas.FrankelBricker@dhw.idaho.gov

Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century

Anne Case[1] and Angus Deaton[1]

Woodrow Wilson School of Public and International Affairs and Department of Economics, Princeton University, Princeton, NJ 08544

Contributed by Angus Deaton, September 17, 2015 (sent for review August 22, 2015; reviewed by David Cutler, Jon Skinner, and David Weir)

This paper documents a marked increase in the all-cause mortality of middle-aged white non-Hispanic men and women in the United States between 1999 and 2013. This change reversed decades of progress in mortality and was unique to the United States; no other rich country saw a similar turnaround. The midlife mortality reversal was confined to white non-Hispanics; black non-Hispanics and Hispanics at midlife, and those aged 65 and above in every racial and ethnic group, continued to see mortality rates fall. This increase for whites was largely accounted for by increasing death rates from drug and alcohol poisonings, suicide, and chronic liver diseases and cirrhosis. Although all education groups saw increases in mortality from suicide and poisonings, and an overall increase in external cause mortality, those with less education saw the most marked increases. Rising midlife mortality rates of white non-Hispanics were paralleled by increases in midlife morbidity. Self-reported declines in health, mental health, and ability to conduct activities of daily living, and increases in chronic pain and inability to work, as well as clinically measured deteriorations in liver function, all point to growing distress in this population. We comment on potential economic causes and consequences of this deterioration.

midlife mortality | morbidity | US white non-Hispanics

There has been a remarkable long-term decline in mortality rates in the United States, a decline in which middle-aged and older adults have fully participated (1–3). Between 1970 and 2013, a combination of behavioral change, prevention, and treatment (4, 5) brought down mortality rates for those aged 45–54 by 44%. Parallel improvements were seen in other rich countries (2). Improvements in health also brought declines in morbidity, even among the increasingly long-lived elderly (6–9).

These reductions in mortality and morbidity have made lives longer and better, and there is a general and well-based presumption that these improvements will continue. This paper raises questions about that presumption for white Americans in midlife, even as mortality and morbidity continue to fall among the elderly.

This paper documents a marked deterioration in the morbidity and mortality of middle-aged white non-Hispanics in the United States after 1998. General deterioration in midlife morbidity among whites has received limited comment (10, 11), but the increase in all-cause midlife mortality that we describe has not been previously highlighted. For example, it does not appear in the regular mortality and health reports issued by the CDC (12), perhaps because its documentation requires disaggregation by age and race. Beyond that, the extent to which the episode is unusual requires historical context, as well as comparison with other rich countries over the same period.

Increasing mortality in middle-aged whites was matched by increasing morbidity. When seen side by side with the mortality increase, declines in self-reported health and mental health, increased reports of pain, and greater difficulties with daily living show increasing distress among whites in midlife after the late 1990s. We comment on potential economic causes and consequences of this deterioration.

Midlife Mortality

Fig. 1 shows age 45–54 mortality rates for US white non-Hispanics (USW, in red), US Hispanics (USH, in blue), and six rich industrialized comparison countries: France (FRA), Germany (GER), the United Kingdom (UK), Canada (CAN), Australia (AUS), and Sweden (SWE). The comparison is similar for other Organisation for Economic Co-operation and Development countries.

Fig. 1 shows a cessation and reversal of the decline in midlife mortality for US white non-Hispanics after 1998. From 1978 to 1998, the mortality rate for US whites aged 45–54 fell by 2% per year on average, which matched the average rate of decline in the six countries shown, and the average over all other industrialized countries. After 1998, other rich countries' mortality rates continued to decline by 2% a year. In contrast, US white non-Hispanic mortality rose by half a percent a year. No other rich country saw a similar turnaround. The mortality reversal was confined to white non-Hispanics; Hispanic Americans had mortality declines indistinguishable from the British (1.8% per year), and black non-Hispanic mortality for ages 45–54 declined by 2.6% per year over the period.

For deaths before 1989, information on Hispanic origin is not available, but we can calculate lives lost among all whites. For those aged 45–54, if the white mortality rate had held at its 1998 value, 96,000 deaths would have been avoided from 1999 to 2013, 7,000 in 2013 alone. If it had continued to fall at its previous (1979–1998) rate of decline of 1.8% per year, 488,500 deaths would have been avoided in the period 1999–2013, 54,000 in 2013. (*Supporting Information* provides details on calculations.)

This turnaround, as of 2014, is specific to midlife. All-cause mortality rates for white non-Hispanics aged 65–74 continued to fall at 2% per year from 1999 to 2013; there were similar declines in all other racial and ethnic groups aged 65–74. However, the mortality decline for white non-Hispanics aged 55–59 also slowed, declining only 0.5% per year over this period.

Significance

Midlife increases in suicides and drug poisonings have been previously noted. However, that these upward trends were persistent and large enough to drive up all-cause midlife mortality has, to our knowledge, been overlooked. If the white mortality rate for ages 45–54 had held at their 1998 value, 96,000 deaths would have been avoided from 1999–2013, 7,000 in 2013 alone. If it had continued to decline at its previous (1979–1998) rate, half a million deaths would have been avoided in the period 1999–2013, comparable to lives lost in the US AIDS epidemic through mid-2015. Concurrent declines in self-reported health, mental health, and ability to work, increased reports of pain, and deteriorating measures of liver function all point to increasing midlife distress.

Author contributions: A.C. and A.D. designed research, performed research, analyzed data, and wrote the paper.

Reviewers: D.C., Harvard University; J.S., Dartmouth College; and D.W., Institute for Social Research.

The authors declare no conflict of interest.

Freely available online through the PNAS open access option.

See Commentary on page 15006.

[1]To whom correspondence may be addressed. Email: accase@princeton.edu or Deaton@princeton.edu.

This article contains supporting information online at www.pnas.org/lookup/suppl/doi:10.1073/pnas.1518393112/-/DCSupplemental.

Deaths of Despair

- Drug and alcohol poisoning
- Intentional self-harm resulting in death (suicide)
- Chronic liver diseases and cirrhosis

University of Idaho
School of Health and Medical Professions

Project ECHO

Background

- A diagnosis of cancer can elicit significant psychological distress, including symptoms of anxiety, depression, and post-traumatic stress disorder.
- Psychological distress may be linked to deaths of despair among cancer patients.
- Little research published on this topic.

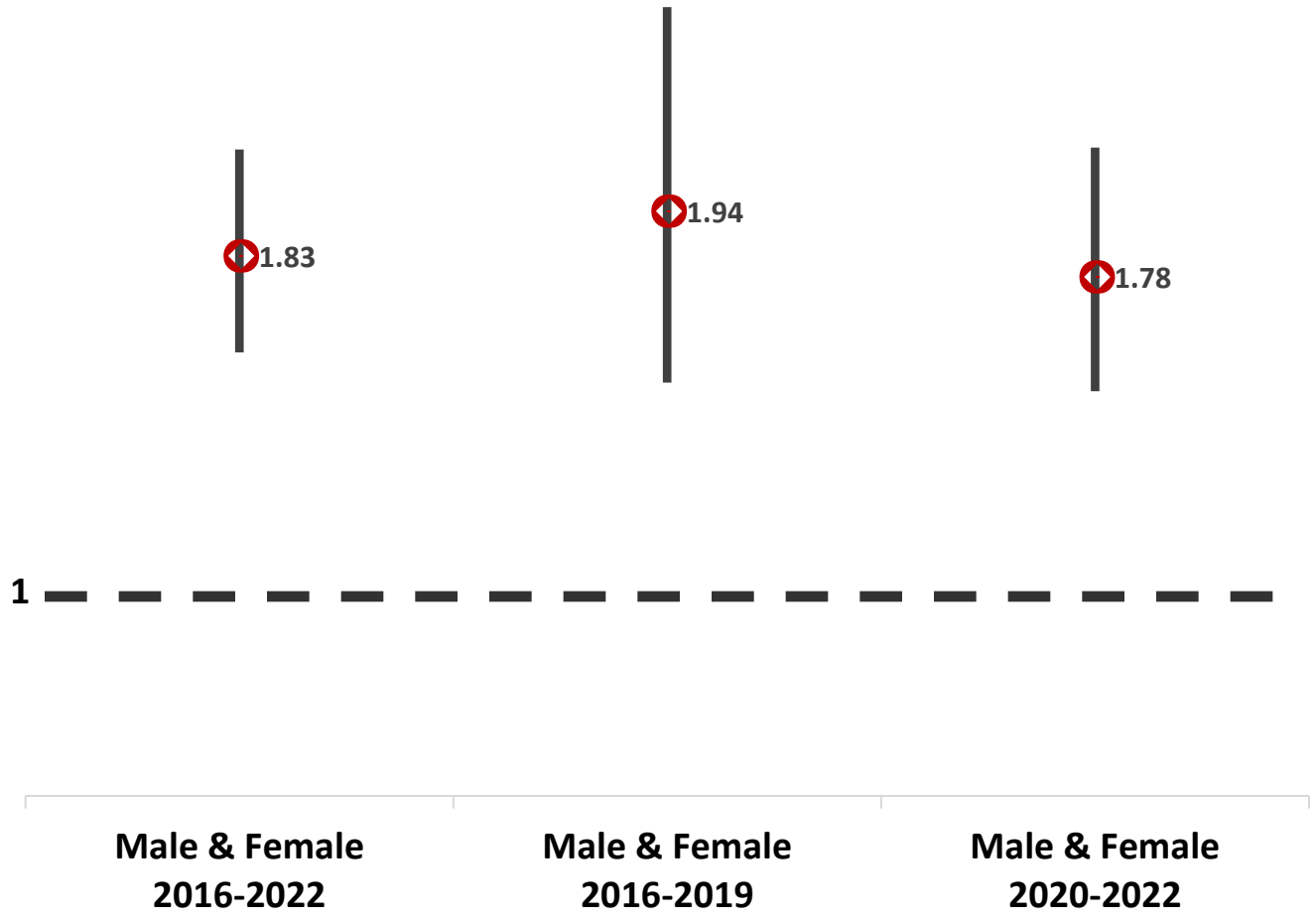
Are Idaho's cancer survivors dying of deaths of despair at higher rates than their cancer-free peers?

Methods

- Included Idaho residents diagnosed with primary tumor during 2016–2022
- Identified deaths of despair for cancer patients and the overall Idaho population:
  - **Overdose: X40–X459, Y10–Y159, Y45–Y459, Y47–Y479, Y49–Y499**
  - **Suicide: X60–X849, Y870**
  - **Alcoholic liver disease/cirrhosis: K70–K709, K73–K749**
- Calculated standardized mortality ratios (SMR) for Idaho cancer patients compared to all Idahoans.
  - Included pre-COVID-19 and COVID-19 periods.

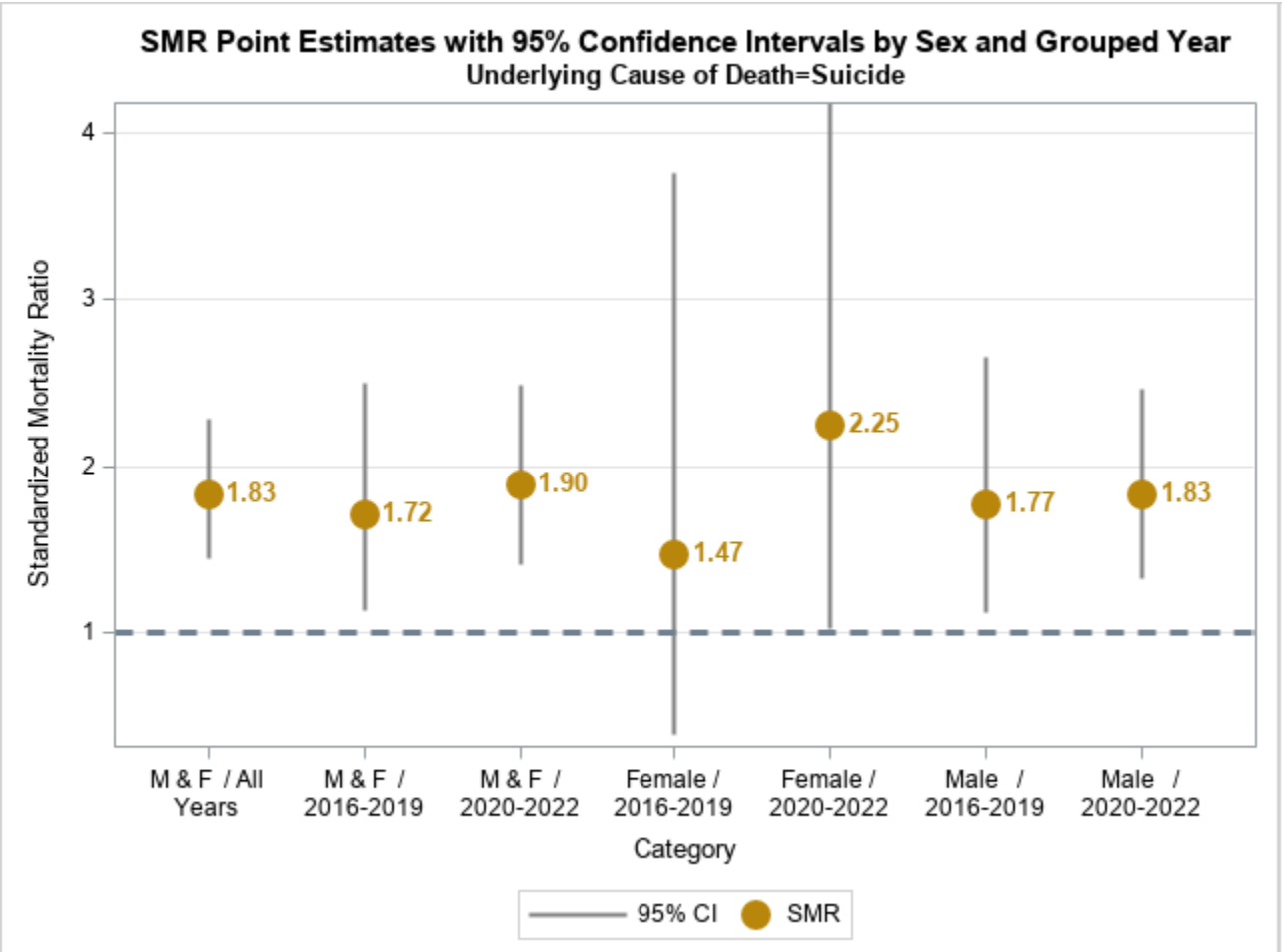
Idaho's cancer survivors significantly more likely to die of deaths of despair than their fellow Idahoans.

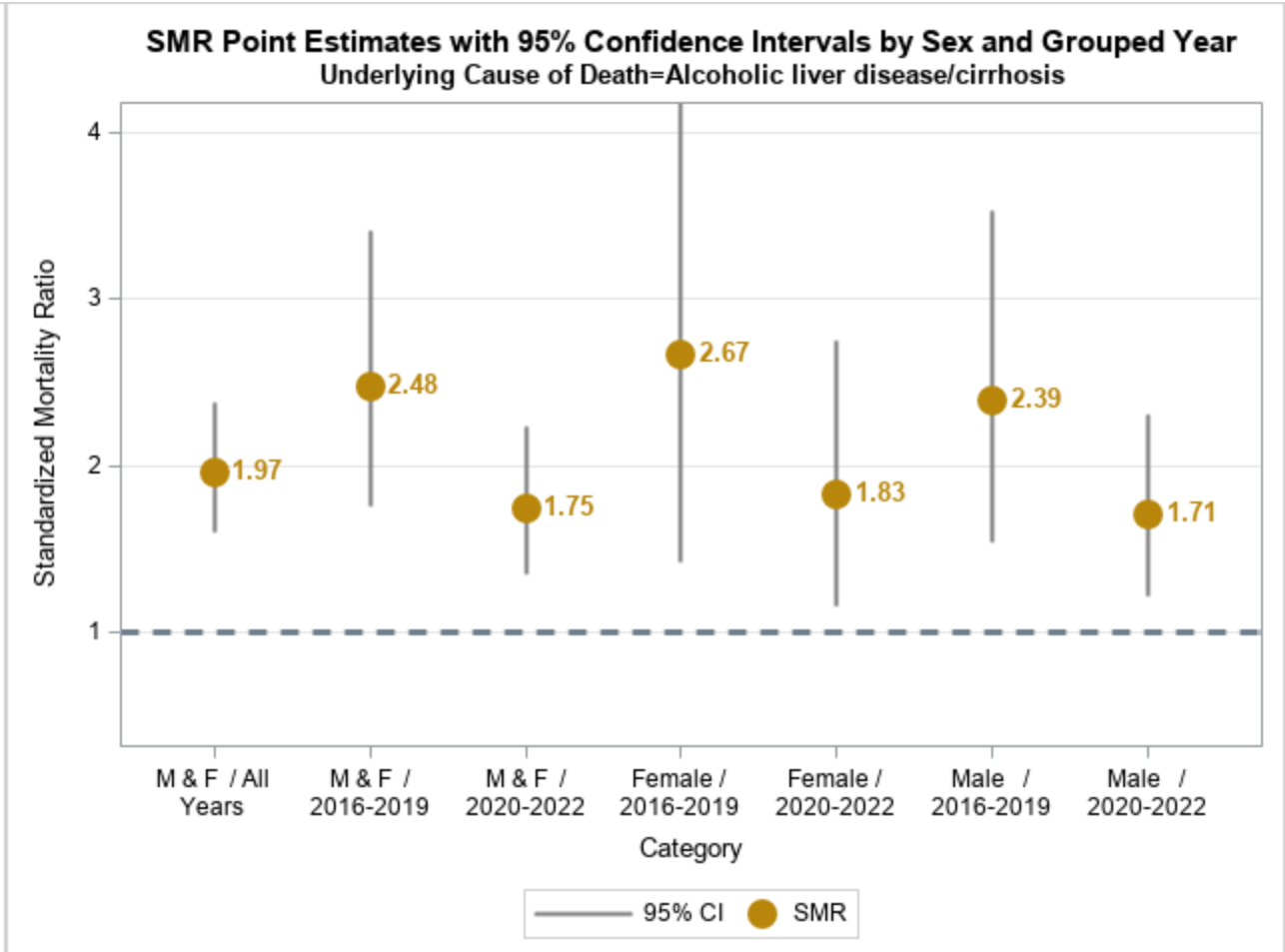
Standardized Deaths of Despair Mortality Ratios (95% Confidence Intervals) among Idahoans Diagnosed with Cancer, 2016–2022



University of Idaho School of Health and Medical Professions

Project ECHO


SMR Point Estimates with 95% Confidence Intervals by Sex and Grouped Year
Underlying Cause of Death=Suicide
Standardized Mortality Ratio
4
3
2
1
1.83
1.72
1.90
1.47
2.25
1.77
1.83
M & F / All Years
M & F / 2016-2019
M & F / 2020-2022
Female / 2016-2019
Female / 2020-2022
Male / 2016-2019
Male / 2020-2022
Category
95% CI
SMR


SMR Point Estimates with 95% Confidence Intervals by Sex and Grouped Year
Underlying Cause of Death=Alcoholic liver disease/cirrhosis
Standardized Mortality Ratio
4
3
2
1
1.97
2.48
1.75
2.67
1.83
2.39
1.71
M & F / All Years
M & F / 2016-2019
M & F / 2020-2022
Female / 2016-2019
Female / 2020-2022
Male / 2016-2019
Male / 2020-2022
Category
95% CI
SMR

Key Points

- Idaho's cancer survivor population is growing and living longer with unique needs.
- Idaho's cancer survivors:
  - Experience financial hardship.
  - Disproportionately experience cost-related difficulty in accessing needed medical care.
  - May benefit from increased tobacco cessation and alcohol reduction efforts.
  - Experience significant mental health challenges.

Thank you.

Bozena Morawski:

bmorawski@teamiha.org

Christopher Johnson:

cjohnson@teamiha.org

References

- Johnson CJ, Morawski BM, Rycroft RK. Cancer in Idaho – 2023. Boise, ID: Cancer Data Registry of Idaho; December 2025. Available here: https://idcancer.org/pdfs/annual-reports/Cancer_in_Idaho_2023.pdf
- 2024 Idaho Cancer Survivor Needs Assessment. October 2025. Available here: https://cme.shamp.uidaho.edu/sites/default/files/media/2025-10/2024%20Idaho%20Cancer%20Survivor%20Needs%20Assessment.pdf
- Case A, Deaton A. Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century. Proc Natl Acad Sci U S A. 2015 Dec 8;112(49):15078-83. doi: 10.1073/pnas.1518393112. Epub 2015 Nov 2.
- Schafer EJ, Johnson CJ, Moraes FY, Han X, Zhao J, Jemal A. Association between Medicaid Expansion and 5-Year Survival among Individuals Diagnosed with Cancer. Cancer Discov 2025; https://doi.org/10.1158/2159-8290.CD-25-1244