# 2026-2030 NEVADA CANCER PLAN
# CROSS-CUTTING ISSUES

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NEVADA CANCER COALITION

NEVADA DIVISION of PUBLIC and BEHAVIORAL HEALTH

AS THEY SAY IN ST. OLAF:

"HELDERBERLDERFLER GEN-NURSERBLERGEN" (NO DISCLOSURES)

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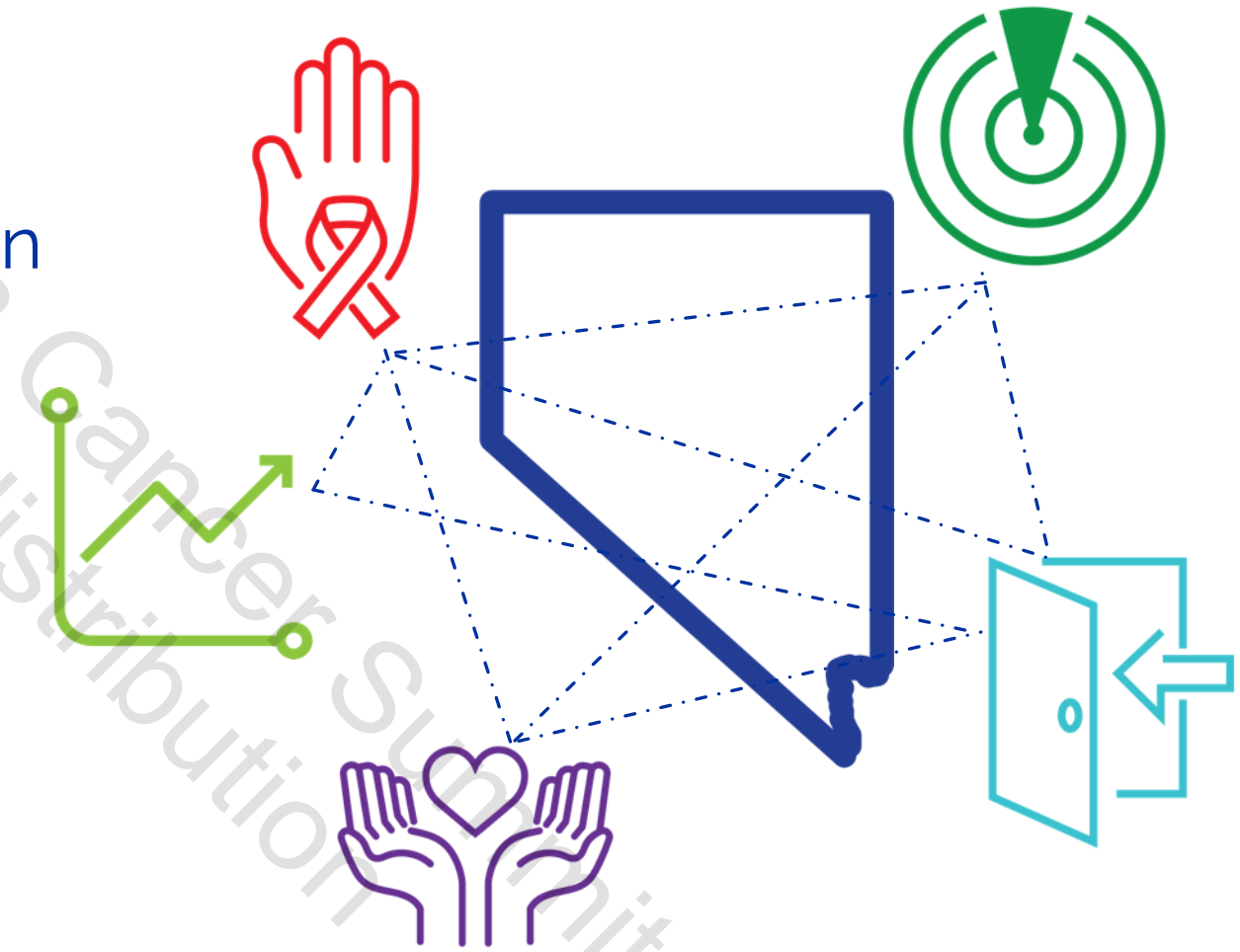
# 2026-2030 NEVADA CANCER PLAN

What's inside:

- ✓Progress from the current plan
- ✓Nevada's cancer data
- ✓**Cross-cutting issues**
- ✓Goals and objectives
- ✓Looking ahead



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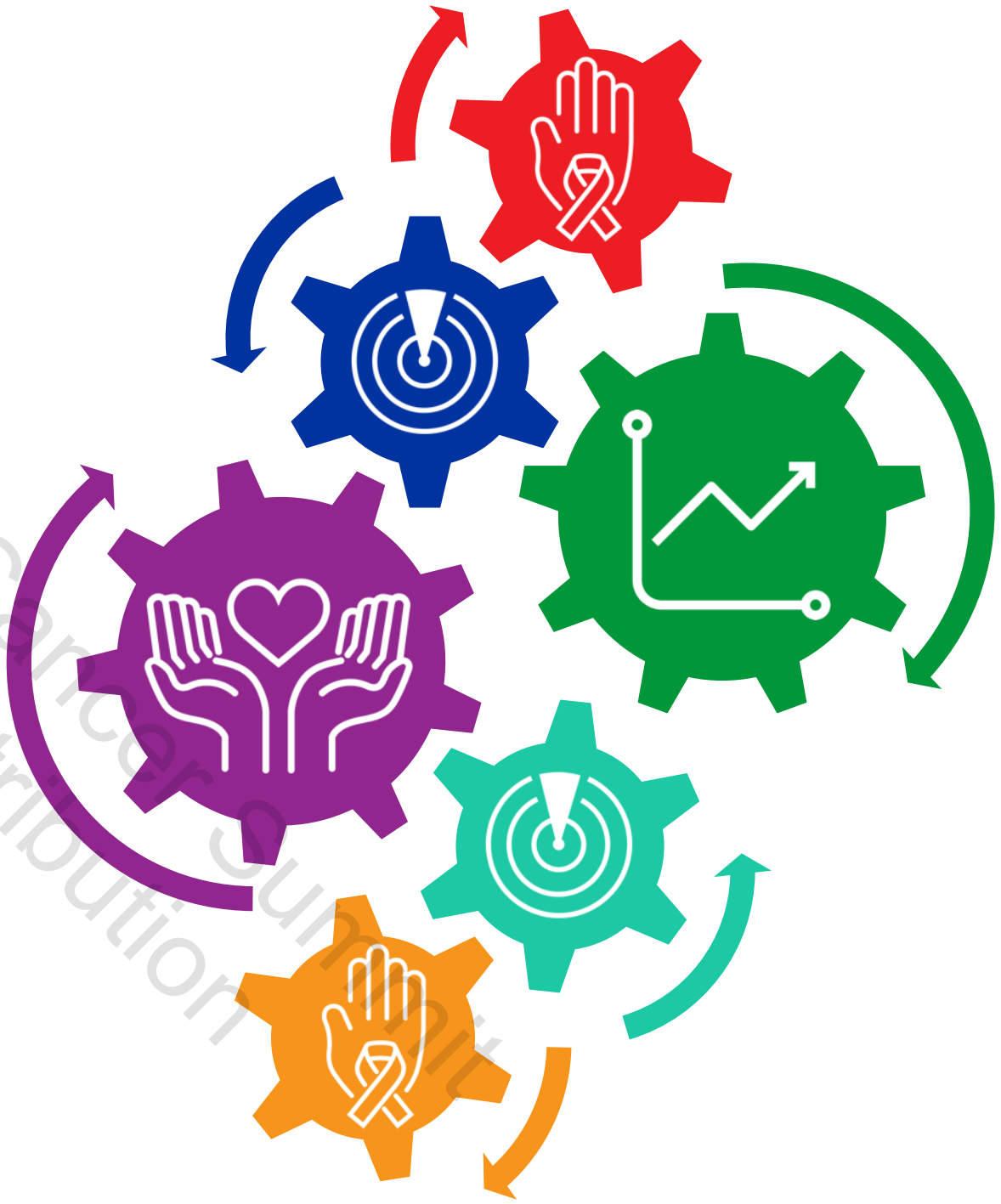
# PLAN PRIORITIES

- ✓ Prevention
- ✓ Screening and Early Detection
- ✓ Diagnosis and Treatment
- ✓ Survivorship and Palliative Care
- ✓ Childhood and AYA Cancers
- ✓ Genetics
- ✓ Data and Surveillance
- ✓ Clinical Trials and Research



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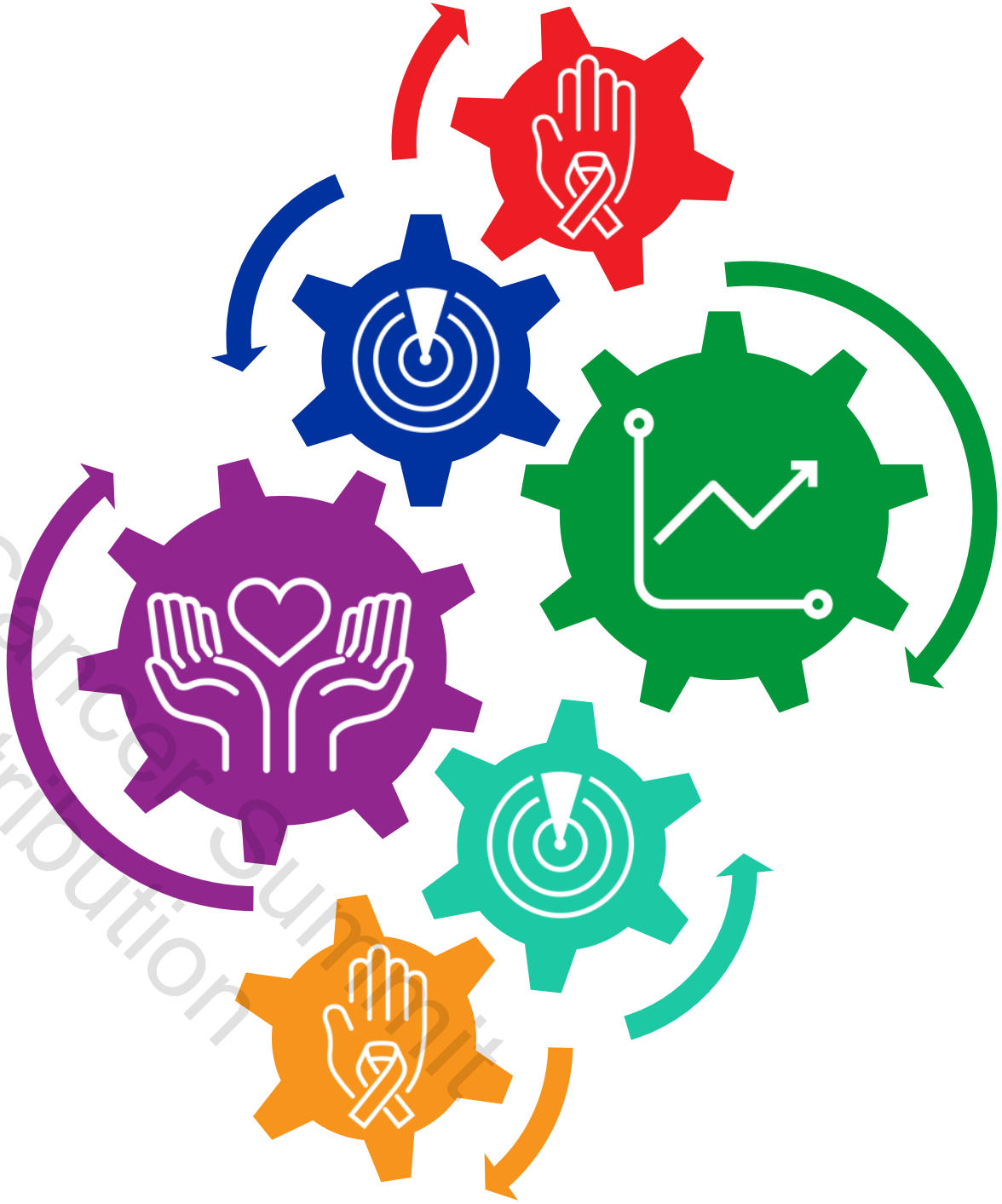
# TODAY'S GOAL:

BRAINSTORM HOW CROSS-CUTTING ISSUES AFFECT CANCER CONTROL IN NEVADA



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# CROSS-CUTTING ISSUES

Survey respondents said:

- ✓ Health equity and racial disparities
- ✓ Environmental factors
- ✓ Access to healthcare
- ✓ Social determinants of health

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# HEALTH EQUITY / RACIAL DISPARITIES

- ✓ Providers of color
- ✓ Representation in research
- ✓ Biological factors
- ✓ Insurance coverage barriers
- ✓ Implicit bias
- ✓ … what else?

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# ENVIRONMENTAL FACTORS

- ✓ Radon exposure
- ✓ Secondhand smoke
- ✓ Environmental chemicals
- ✓ UV radiation
- ✓ Wildfire smoke & air pollution
- ✓ Climate change


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# ACCESS TO HEALTHCARE

- ✓ Transportation
- ✓ Insurance status
- ✓ Network adequacy
- ✓ Number of providers
- ✓ Health literacy
- ✓ Health policies
- ✓ Affordability
- ✓ Clinic hours

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# SOCIAL DETERMINANTS OF HEALTH

*Social determinants may contribute to up to 70% of cancer cases and significantly increase the risk of death.**

- ✓ Health literacy
- ✓ Housing & food security
- ✓ Access to outdoors and activity
- ✓ Race and ethnicity
- ✓ Social connectedness
- ✓ Income
- ✓ Geography
- ✓ Health behaviors
- ✓ Sexual orientation and gender identity
- ✓ PACES: positive and adverse childhood events

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Yu Z, Yang X, Guo Y, Bian J and Wu Y (2022) Assessing the Documentation of Social Determinants of Health for Lung Cancer Patients in Clinical Narratives. *Front. Public Health* 10:778463. doi: 10.3389/fpubh.2022.778463

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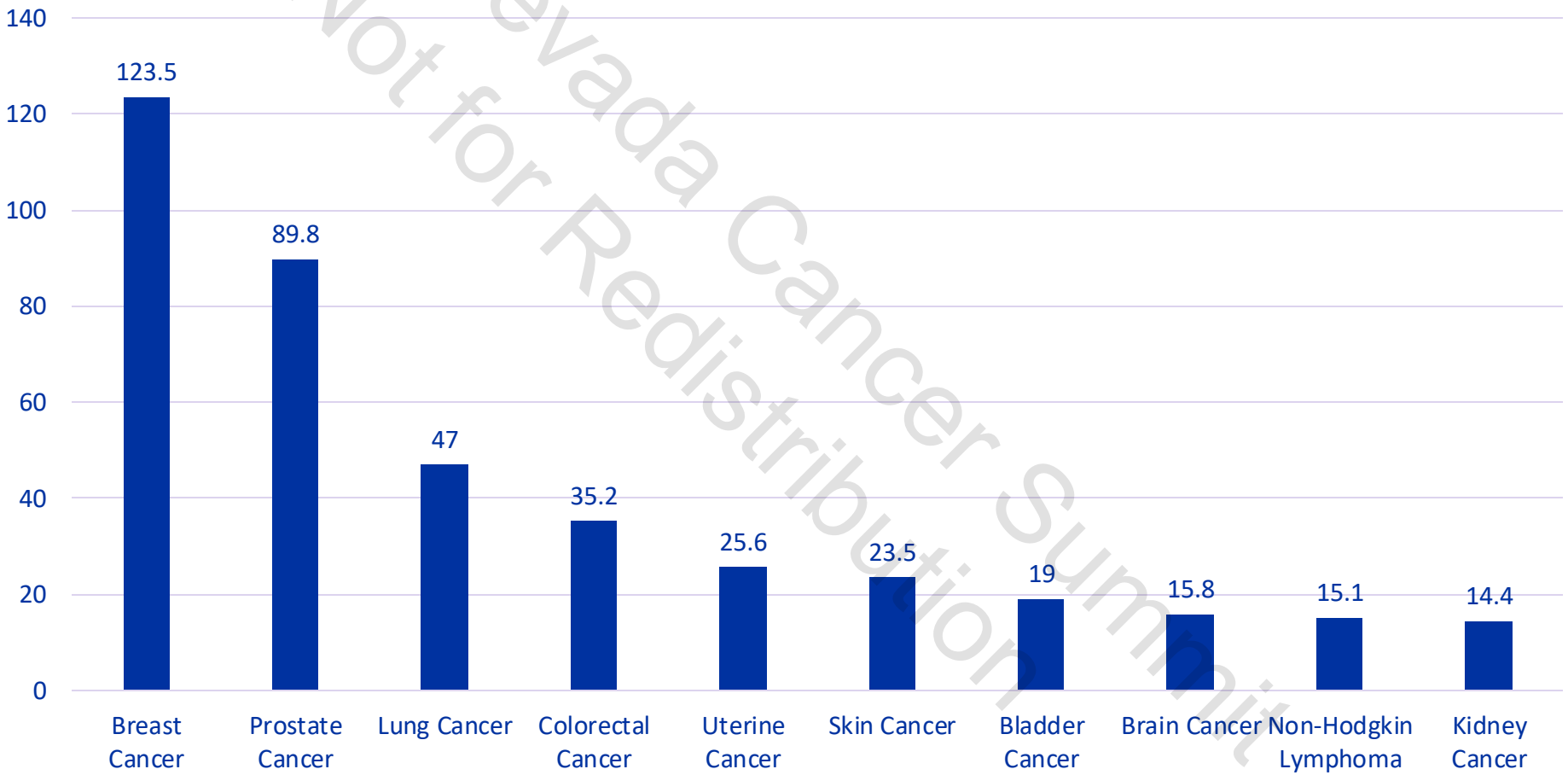
# TOP TEN CANCERS BY INCIDENCE

*Rates per 100,000, 2017-2021. Source: Nevada Central Cancer Registry*

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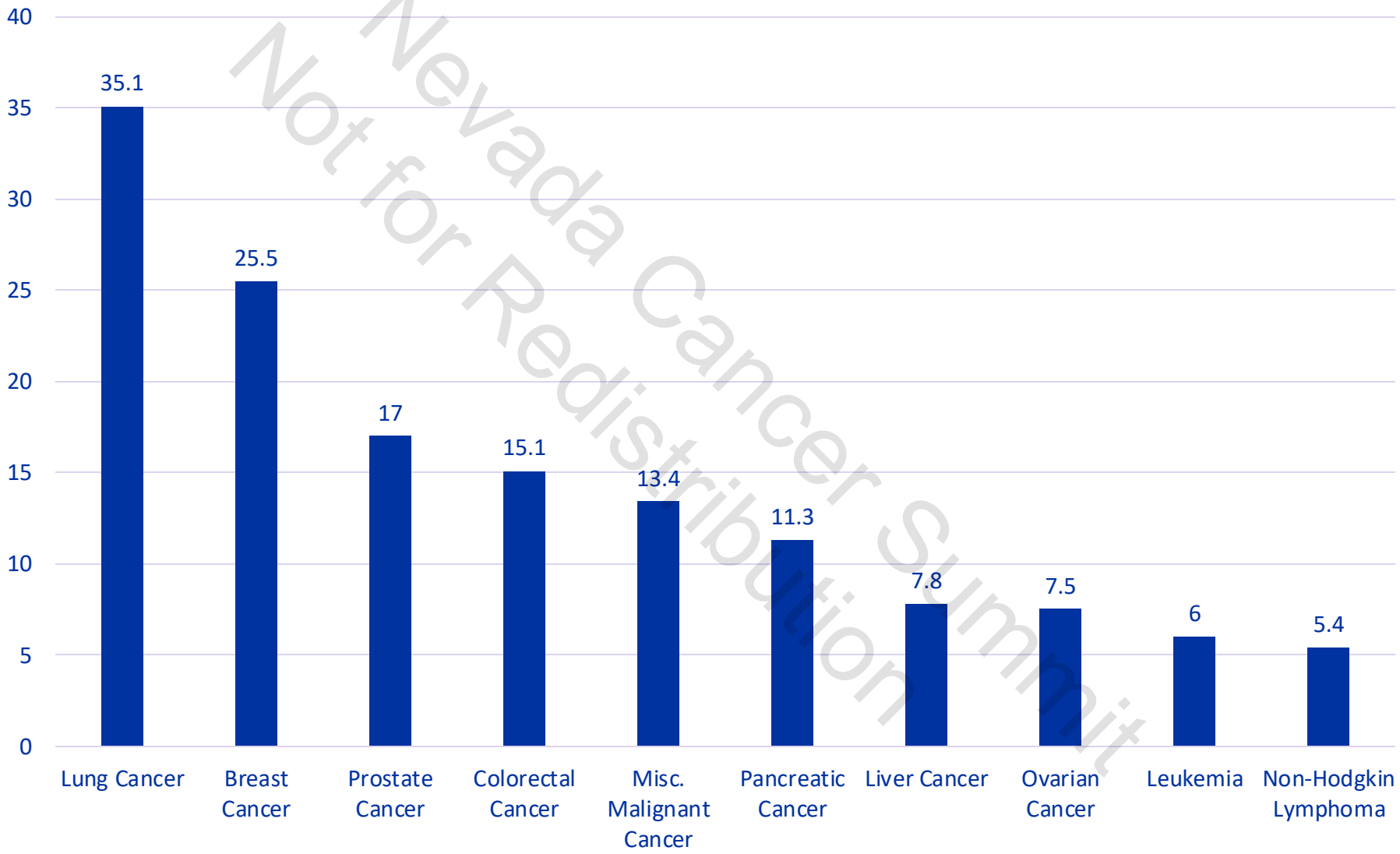
# TOP 10 CANCERS BY MORTALITY

*Rates per 100,000, 2017-2021. Source: Nevada Central Cancer Registry*

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# HEALTH BEHAVIORS:
## SCREENING

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### Nevada Colorectal Cancer Screening

Percentage up-to-date with colorectal cancer screening per USPSTF guidelines.

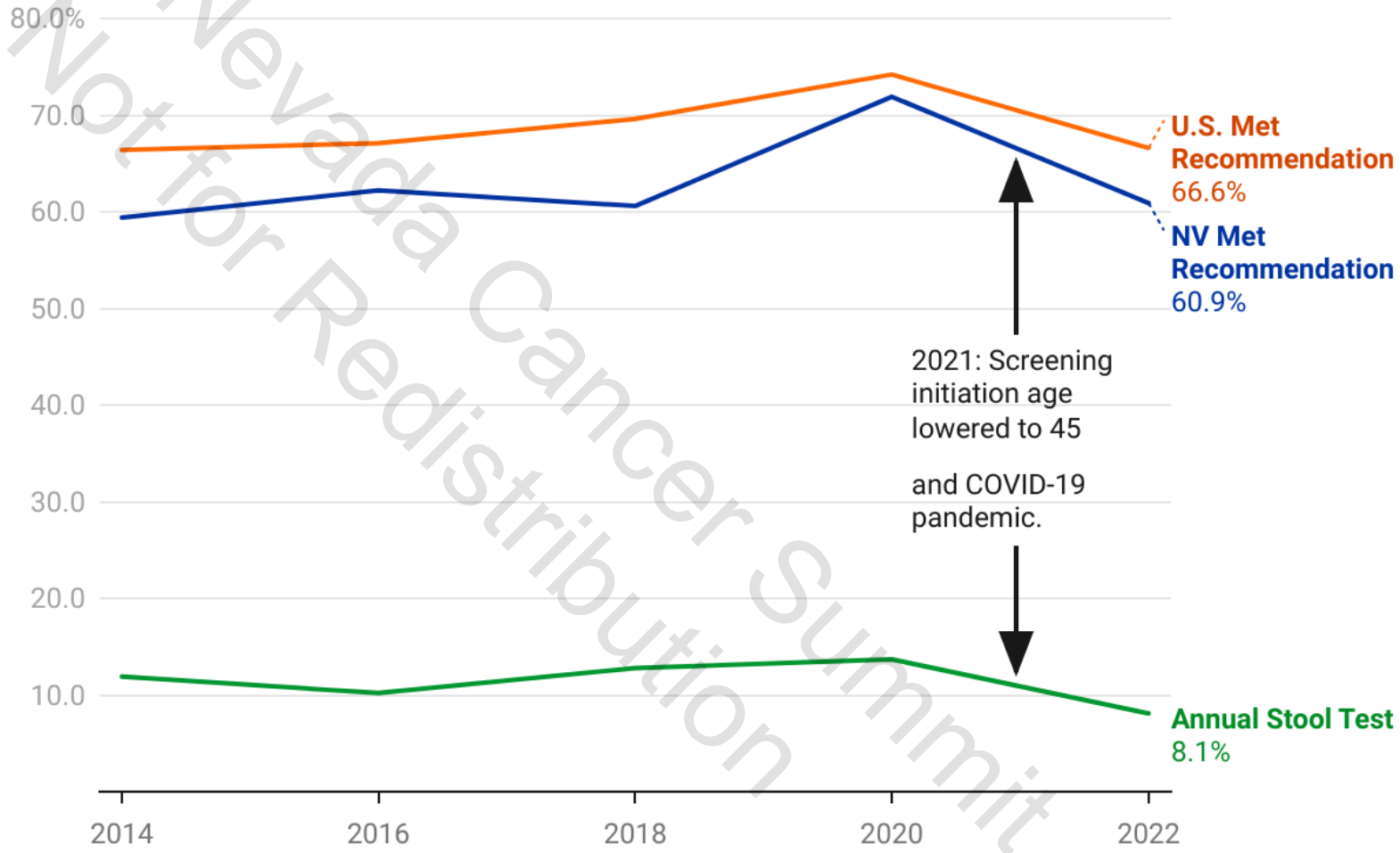


Chart: Nevada Cancer Coalition • Source: BRFSS • Created with Datawrapper

# HEALTH BEHAVIORS:
## SCREENING

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### Nevada Breast Cancer Screening

Percentage of women 40+ who received a mammogram within the last 2 years.*

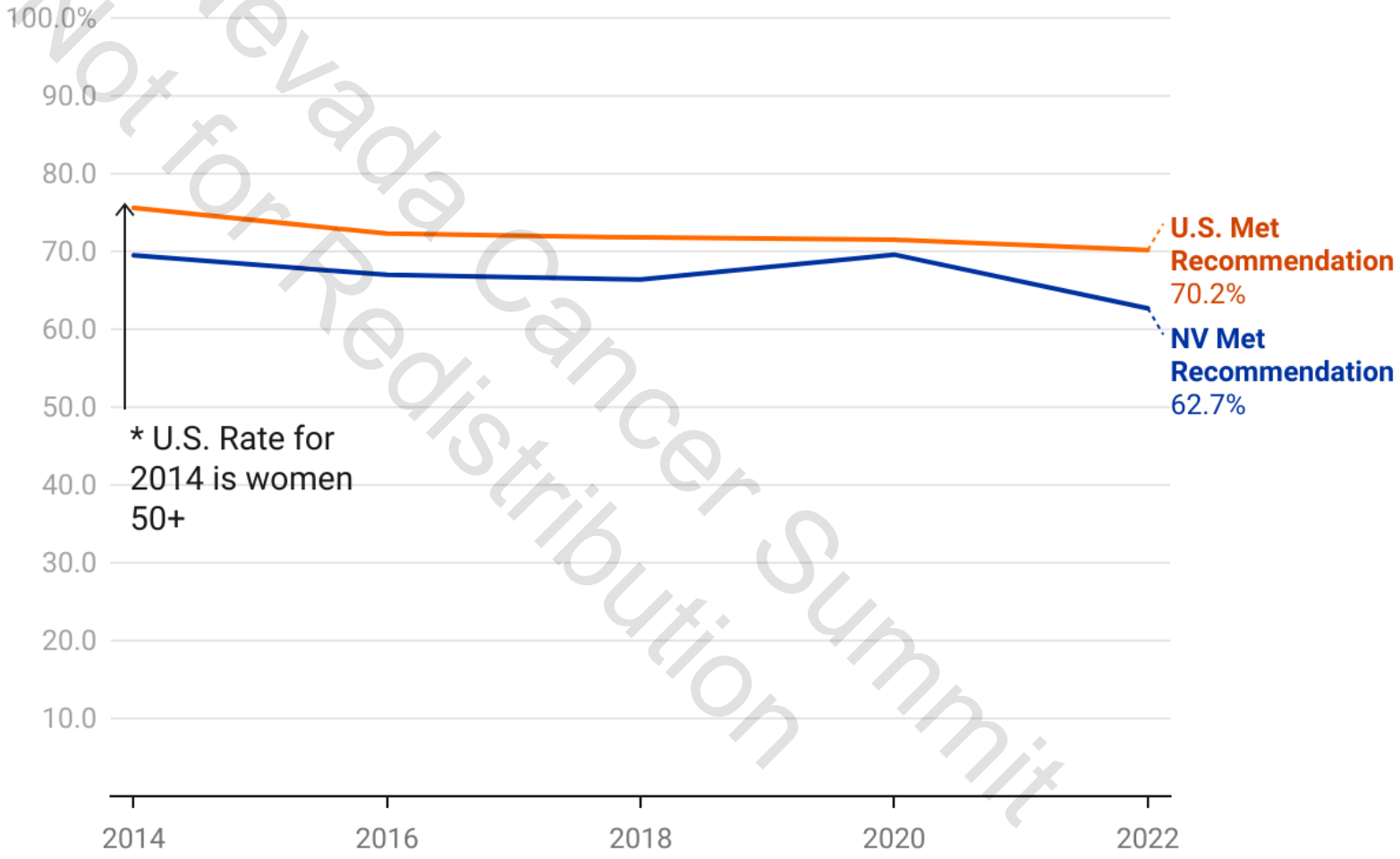


Chart: Nevada Cancer Coalition • Source: BRFSS • Created with Datawrapper

# HEALTH BEHAVIORS:
## SCREENING

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### Nevada Cervical Cancer Screening

Percentage of women 21-65 who have had a Pap test in the past 3 years.

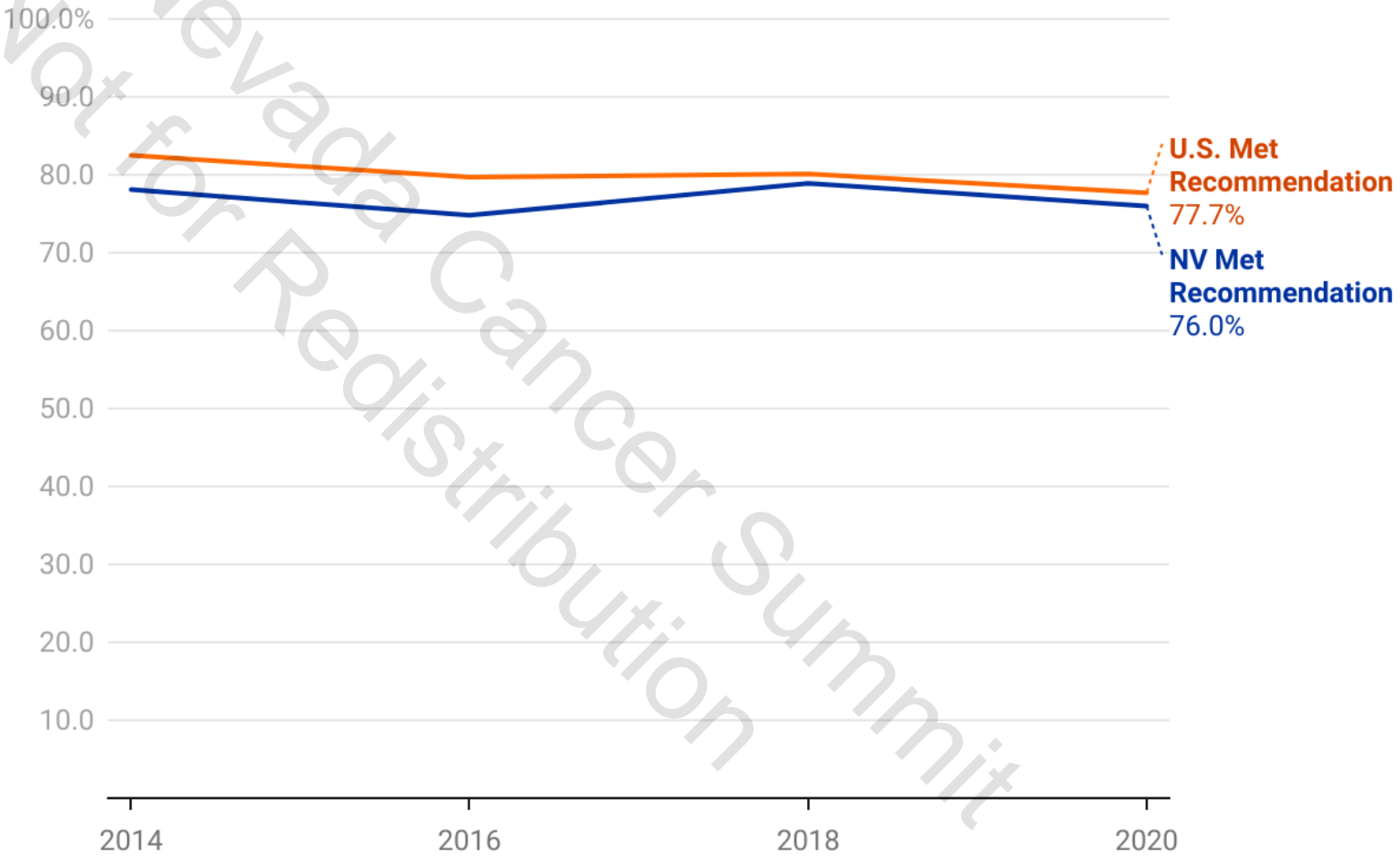


Chart: Nevada Cancer Coalition • Source: BRFSS • Created with Datawrapper

# HEALTH BEHAVIORS:
## SCREENING

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### Nevada Prostate Cancer Screening

Percentage of men 40+ who have had a PSA test in the past 2 years.

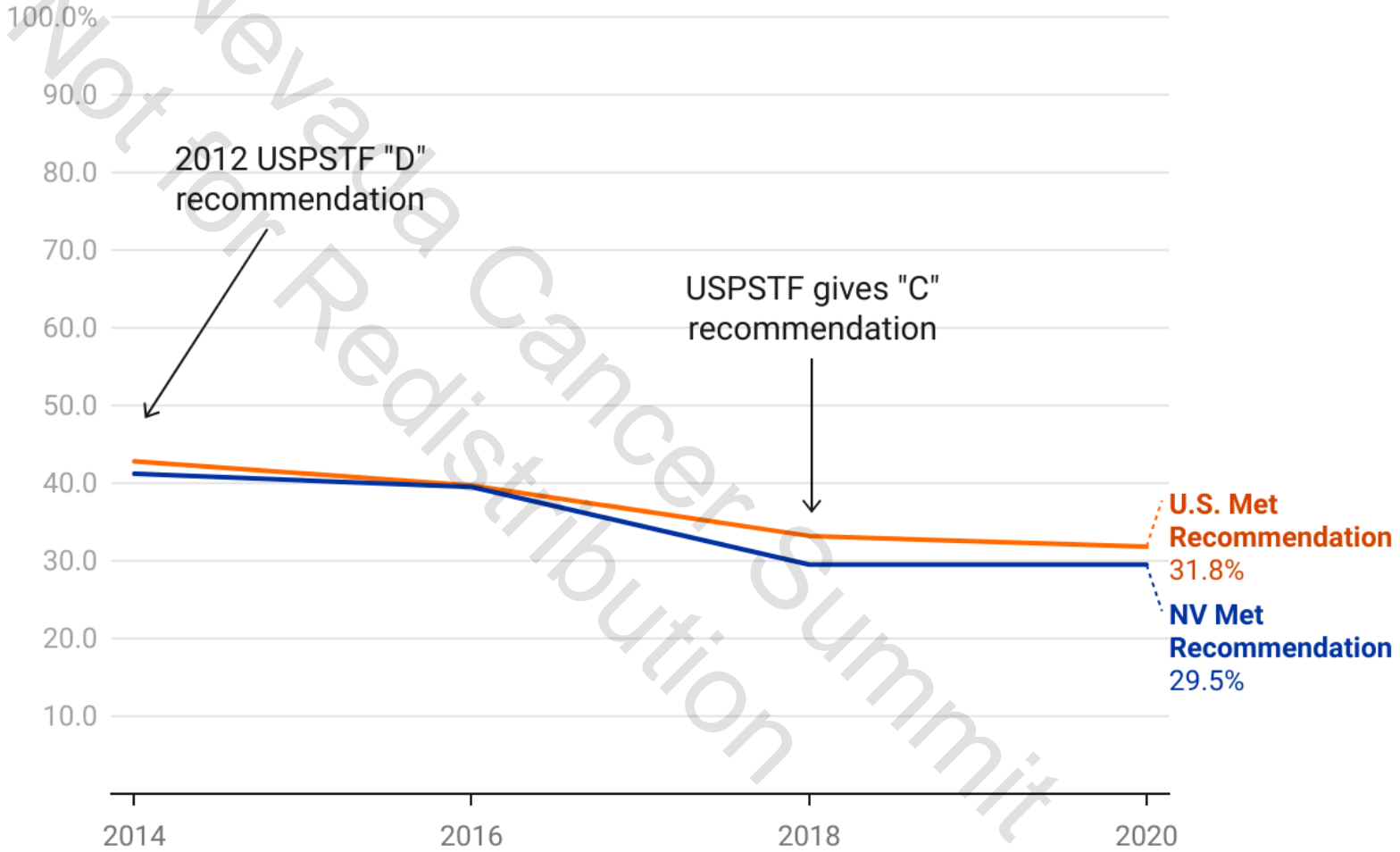


Chart: Nevada Cancer Coalition • Source: BRFSS • Created with Datawrapper

# HEALTH BEHAVIORS:
## LUNG SCREENING

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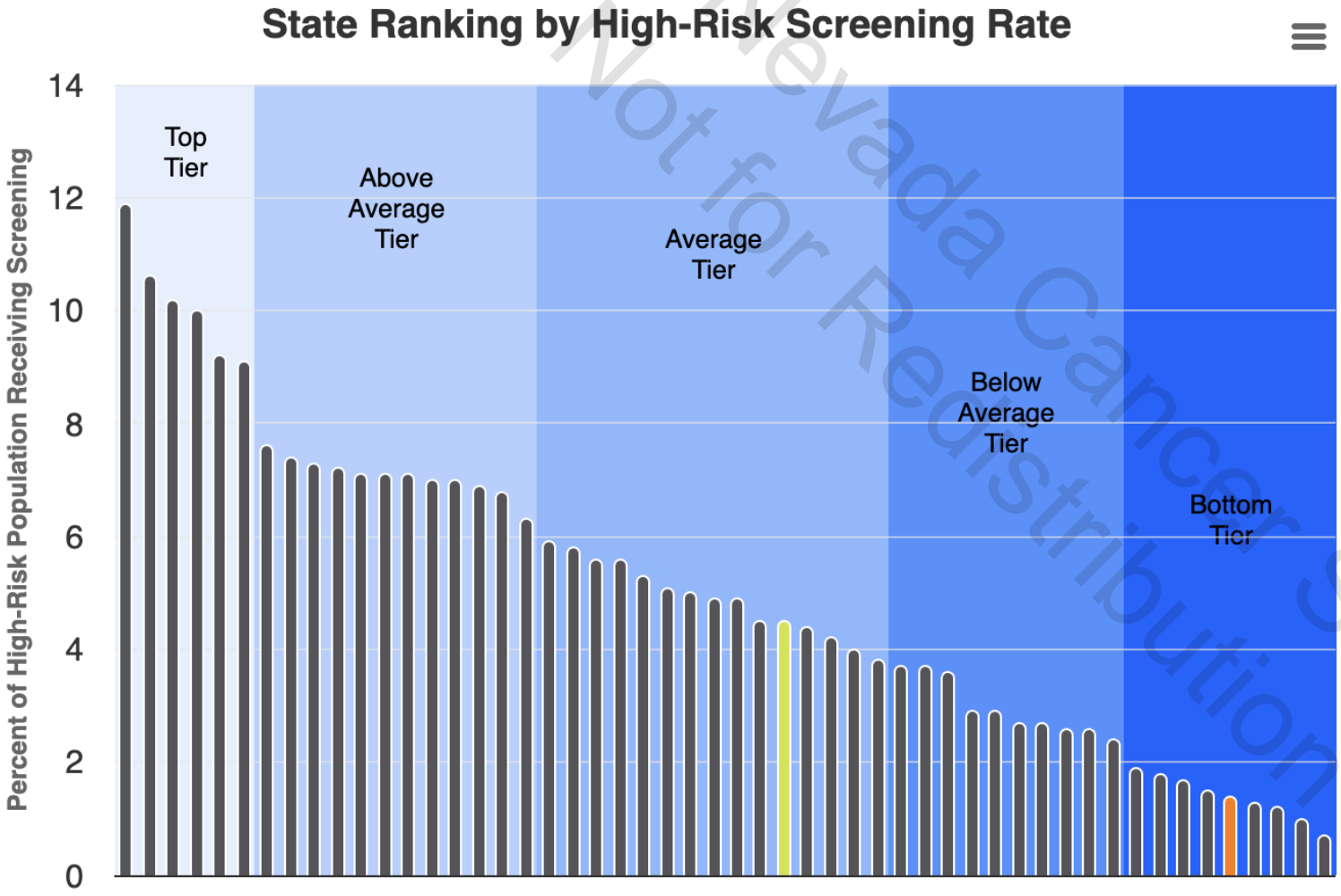
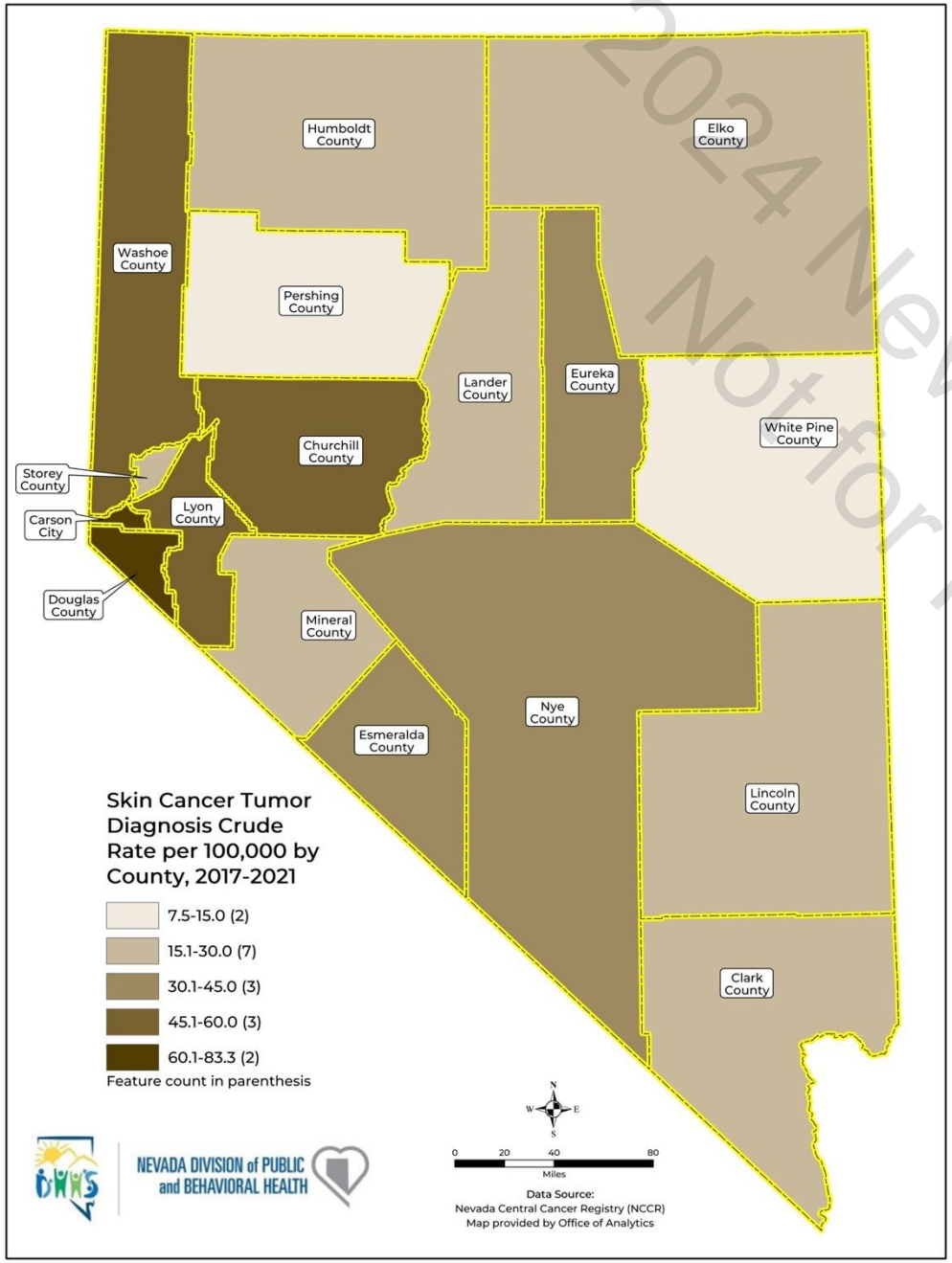


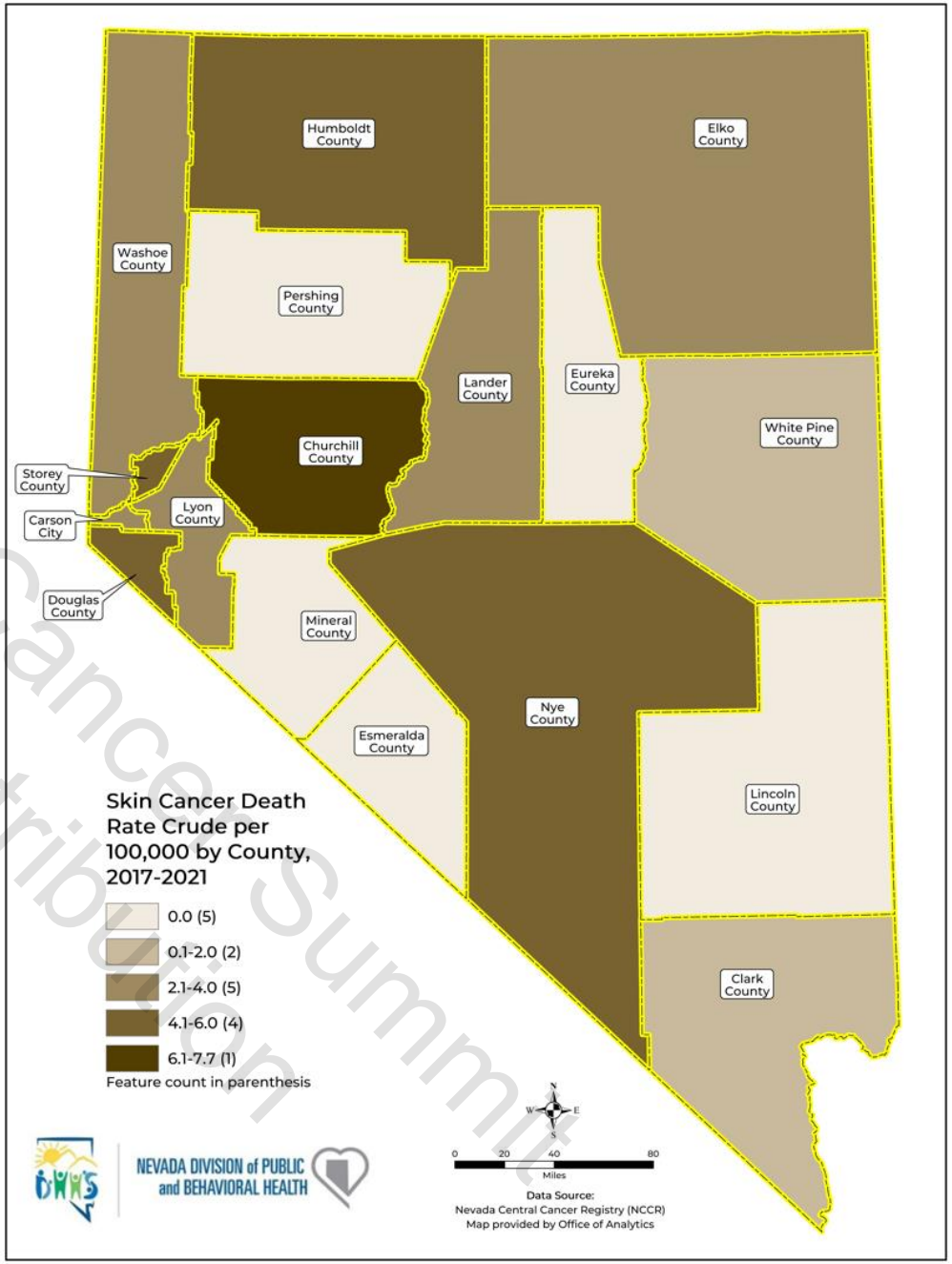

**Screening for High Risk:**

- In Nevada, **1.4%** of those at high risk were screened, which was **significantly lower** than the national rate of 4.5%.
- It ranks **47th** among all states, placing it in the **bottom tier**.
- Actual screening rates may be higher in states with large, regional managed care providers that did not share screening data.

*#1 Mass = 11.9%*
*#50 Calif. - 0.7%*

2023 State of Lung Cancer, American Lung Association

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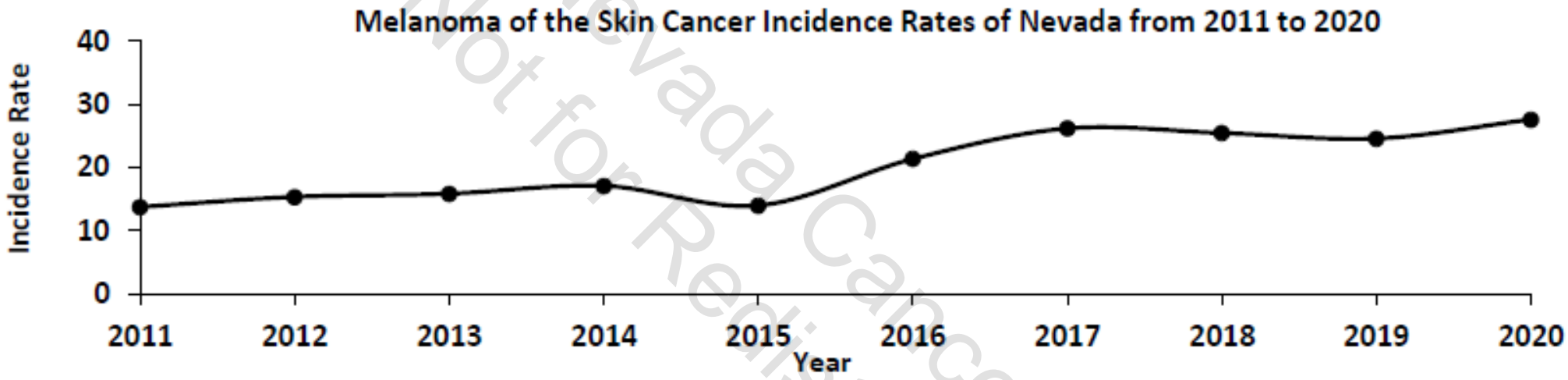
# SKIN CANCER INCIDENCE RATES




Source: Nevada Central Cancer Registry

*Percent may not equal to 100% due to rounding. Due to cases with unknown sex, Male and Female columns may not add up to the Total column.

**Rates per 100,000 population were calculated using population projections from the Nevada State Demographer vintage 2021 data. Rates are based on birth sex.

†Other counties include Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye, Pershing, Storey, and White Pine.

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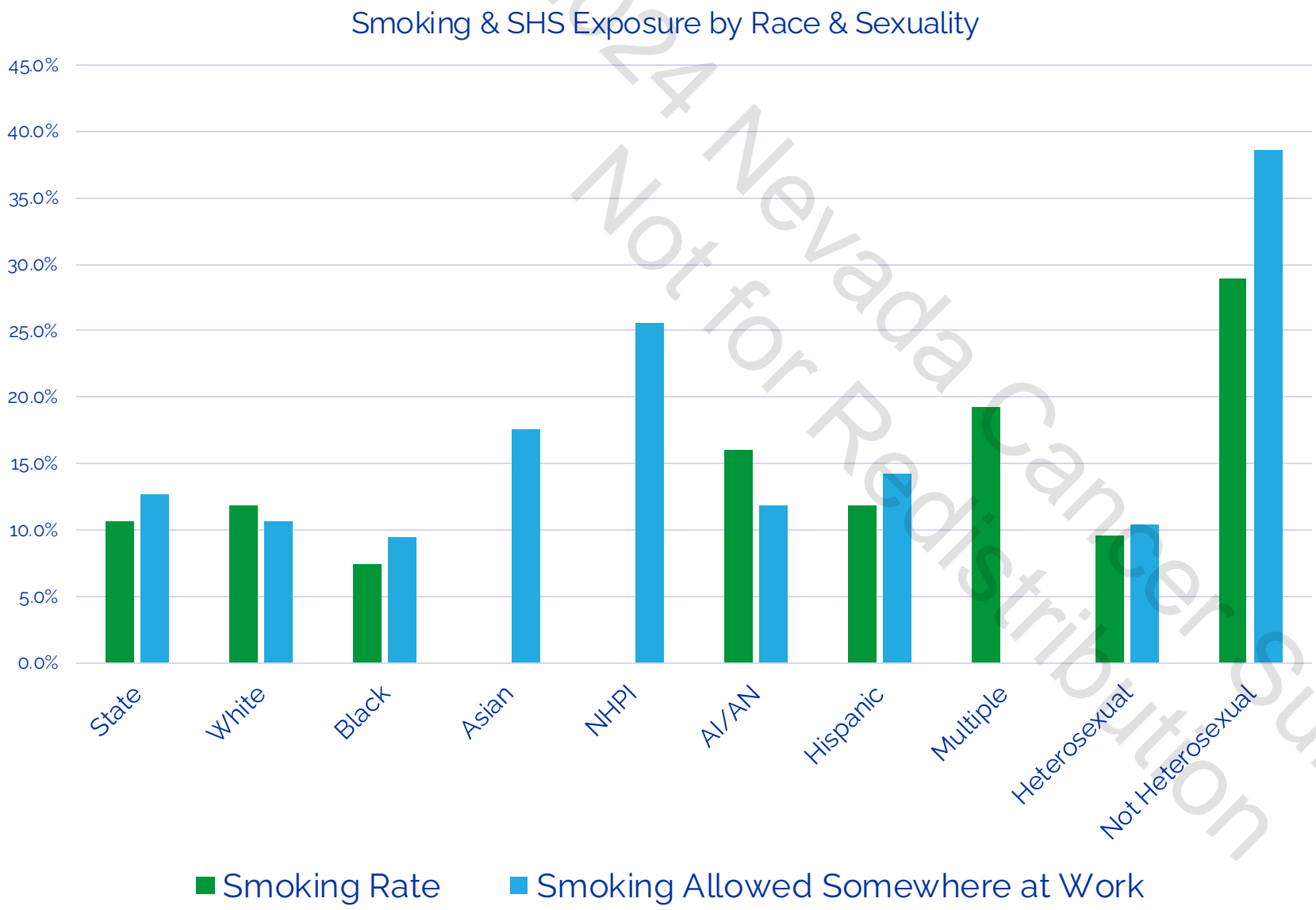


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# ENVIRONMENT, SDOH AND HEALTH EQUITY: SMOKING & EXPOSURE TO SECONDHAND SMOKE

*More than 160,000 Nevadans work in casinos where secondhand smoke is present, and that is a low estimate.*

# SEXUAL ORIENTATION: SMOKING & EXPOSURE TO SECONDHAND SMOKE

Non-heterosexual Nevadans are 3X more likely to smoke Menthol tobacco than heterosexuals

✓ **46.6% vs. 15.6%**

Non-heterosexual Nevadans are more than twice as likely to attempt to quit tobacco than heterosexuals

✓ **90% vs. 37.8%**

Non-heterosexual Nevadans are more likely to have smoking allowed in some areas of their workplace than heterosexuals

✓ **38.6% vs. 10.4%**

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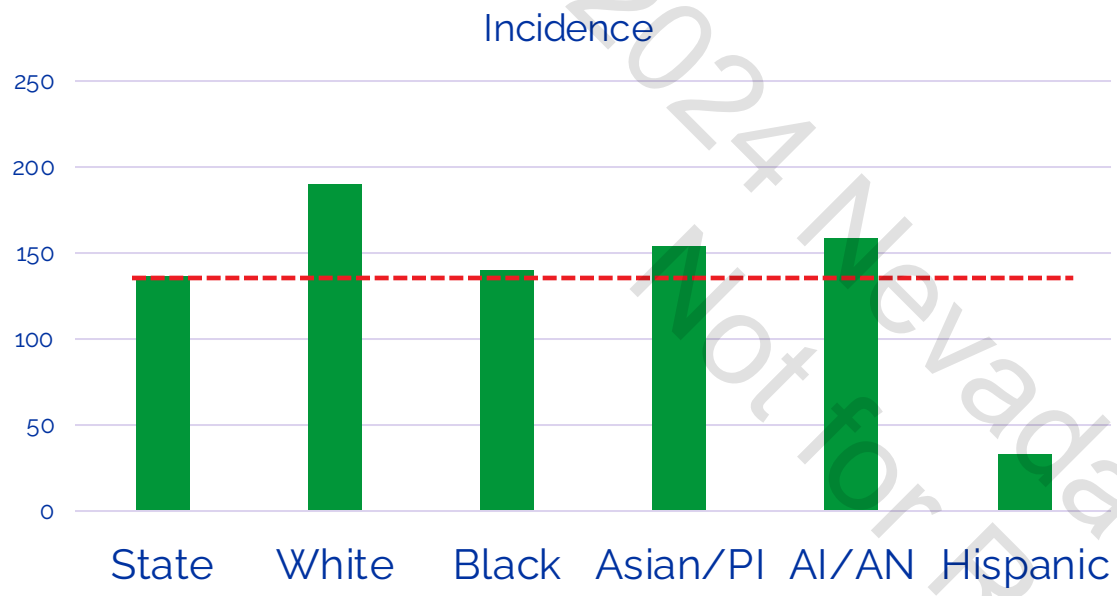
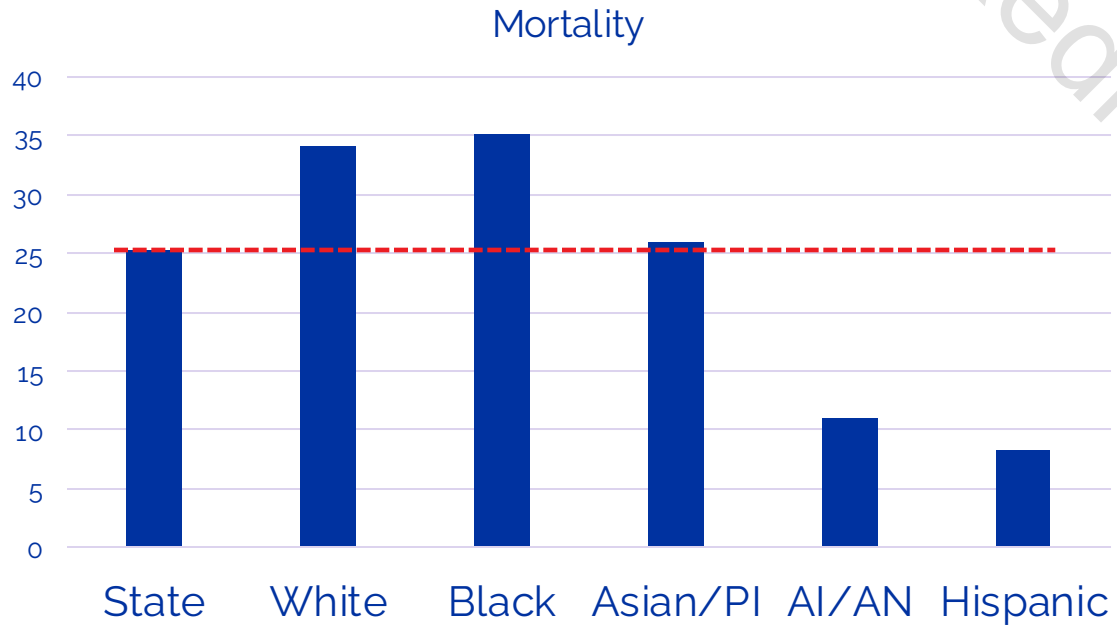
2022 Nevada Adult Tobacco Survey




# RACE/ETHNICITY : BREAST CANCER

*Crude rates per 100,000, 2021/2022*

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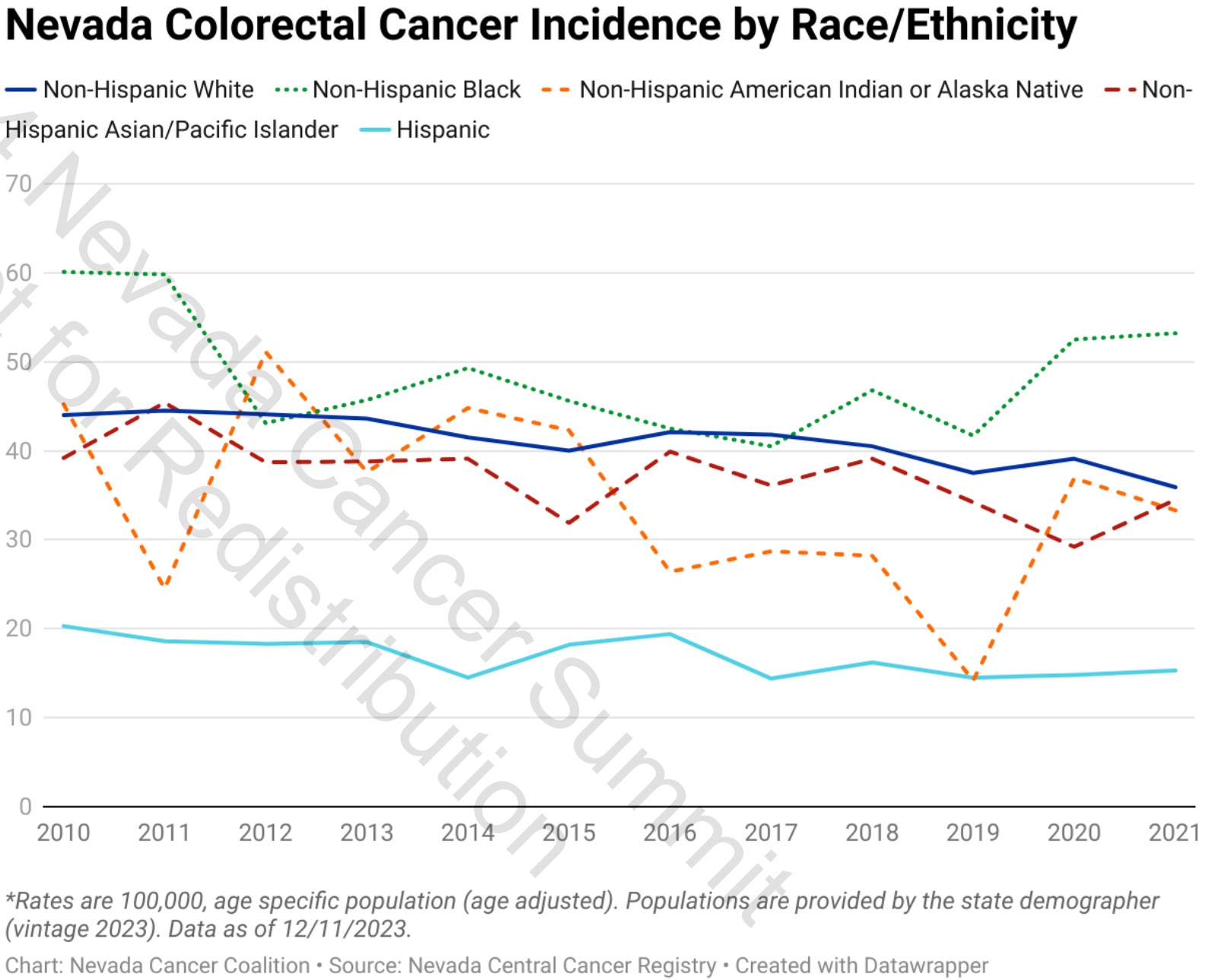
Nevada Cancer Incidence and Mortality Dashboard

# RACE/ETHNICITY:
# COLON CANCER

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# RACE/ETHNICITY:
# COLON CANCER

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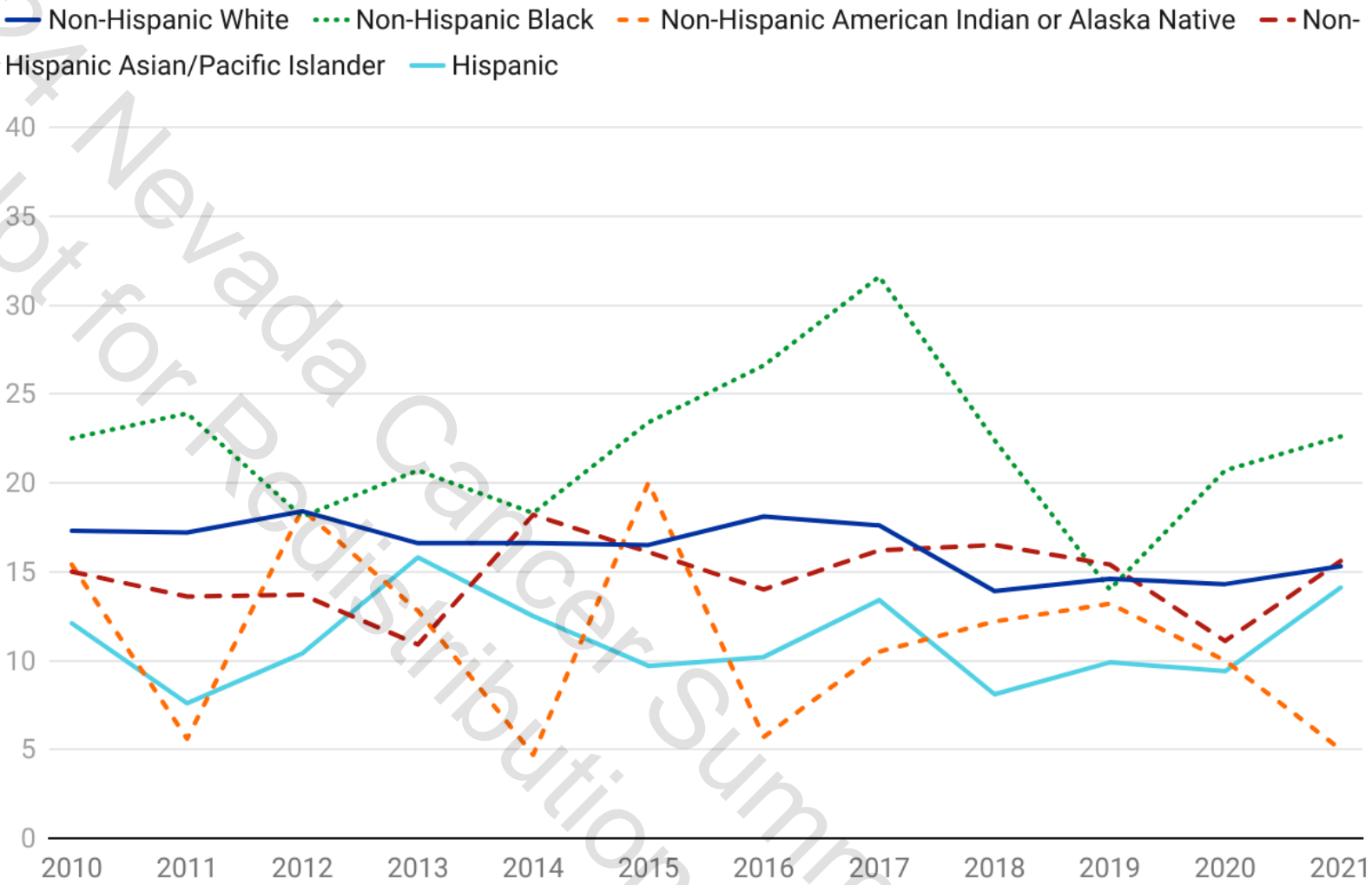
## Nevada Colorectal Cancer Mortality by Race/Ethnicity




**Rates are 100,000, age specific population (age adjusted). Populations are provided by the state demographer (vintage 2023). Data as of 12/11/2023.*

Chart: Nevada Cancer Coalition • Source: Nevada Central Cancer Registry • Created with Datawrapper

# ACCESS TO CARE:
# HEALTH WORKFORCE

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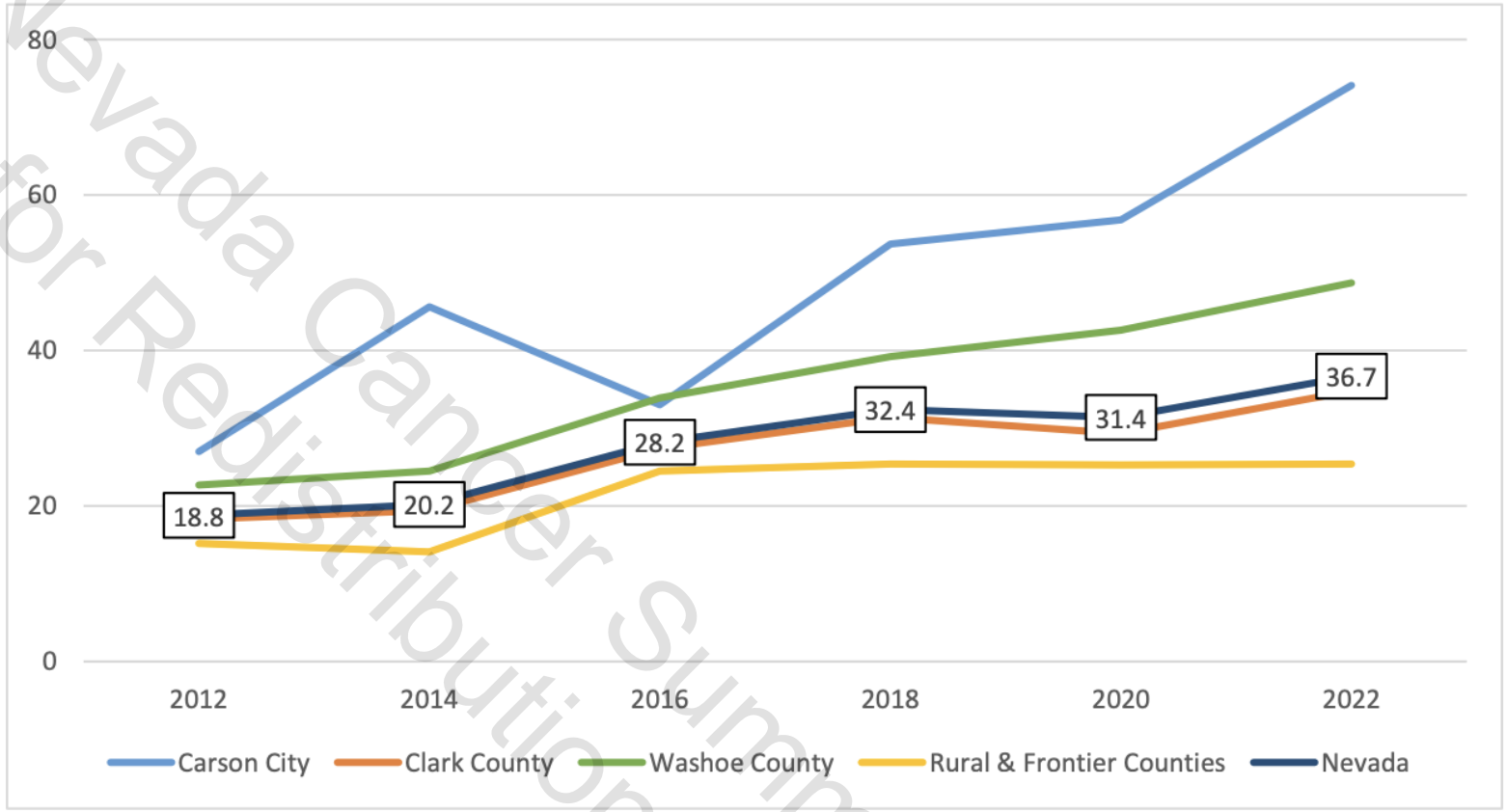
**Figure 27b: Licensed Physician Assistants (PAs) per 100,000 Population in Nevada – 2012 to 2022**




Source: Nevada Instant Atlas (2023) utilizing unpublished data from the Nevada State Board of Medical Examiners and the Nevada State Board of Osteopathic Medicine.

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## HEALTH WORKFORCE

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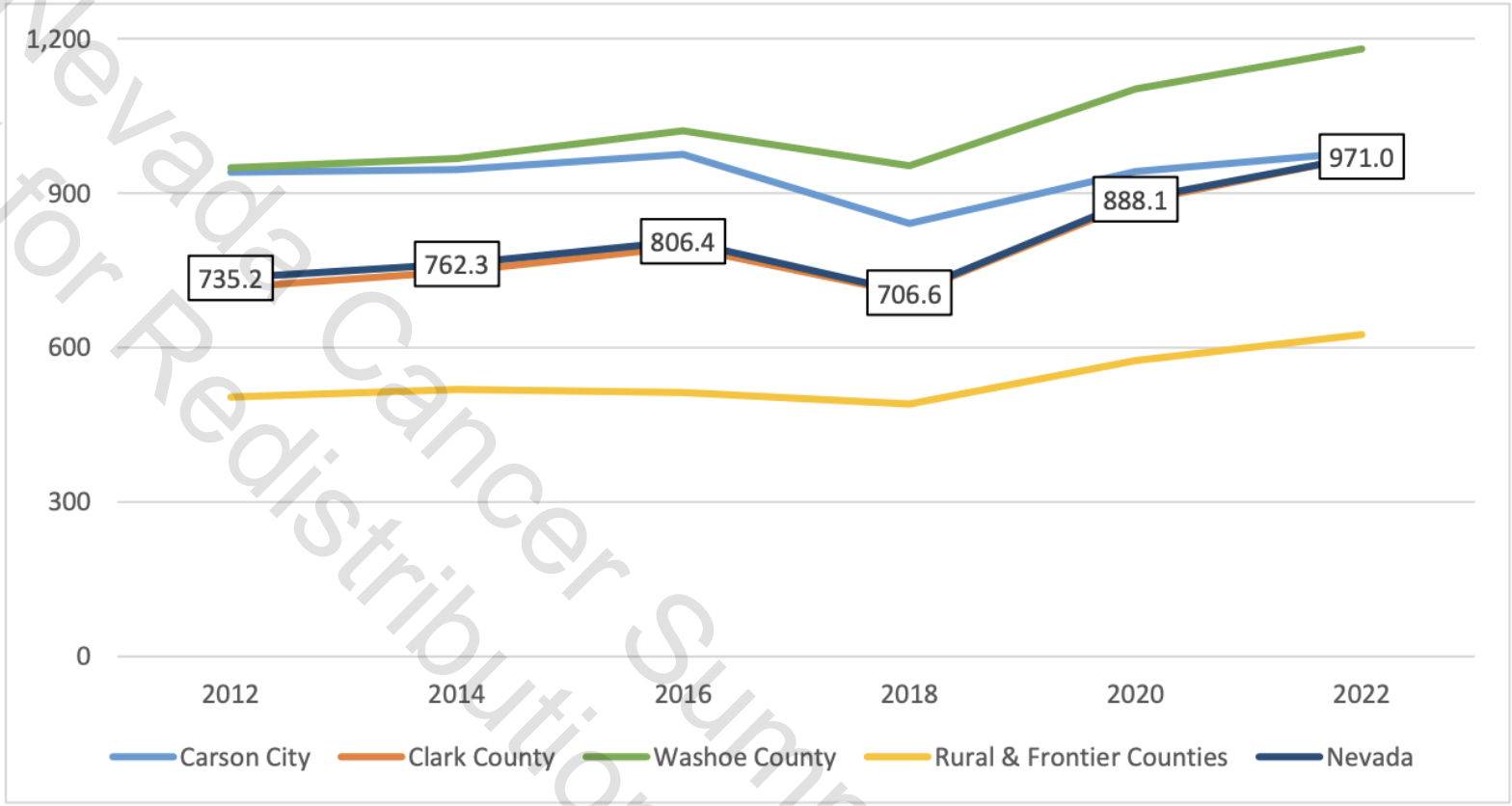
**Figure 33b: Licensed Registered Nurses (RNs) per 100,000 Population in Nevada – 2012 to 2022**




Source: Nevada Instant Atlas (2023) utilizing unpublished data from the Nevada State Board of Nursing.

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# HEALTH WORKFORCE

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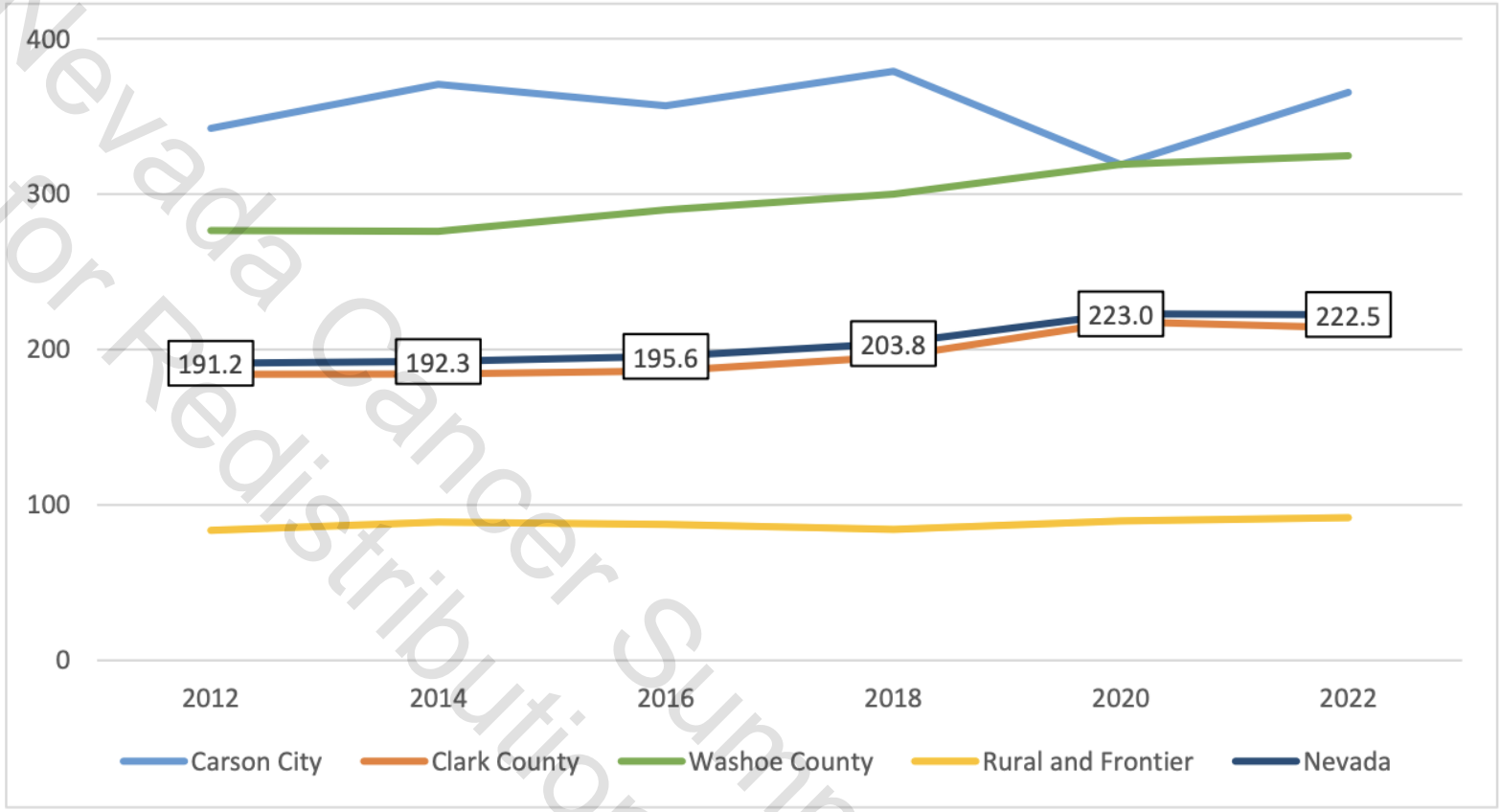
**Figure 28b: Licensed Physicians (MDs and DOs) per 100,000 Population in Nevada – 2012 to 2022**




Source: Nevada Instant Atlas (2023) utilizing unpublished data from the Nevada State Board of Medical Examiners and the Nevada State Board of Osteopathic Medicine.

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## HEALTH WORKFORCE

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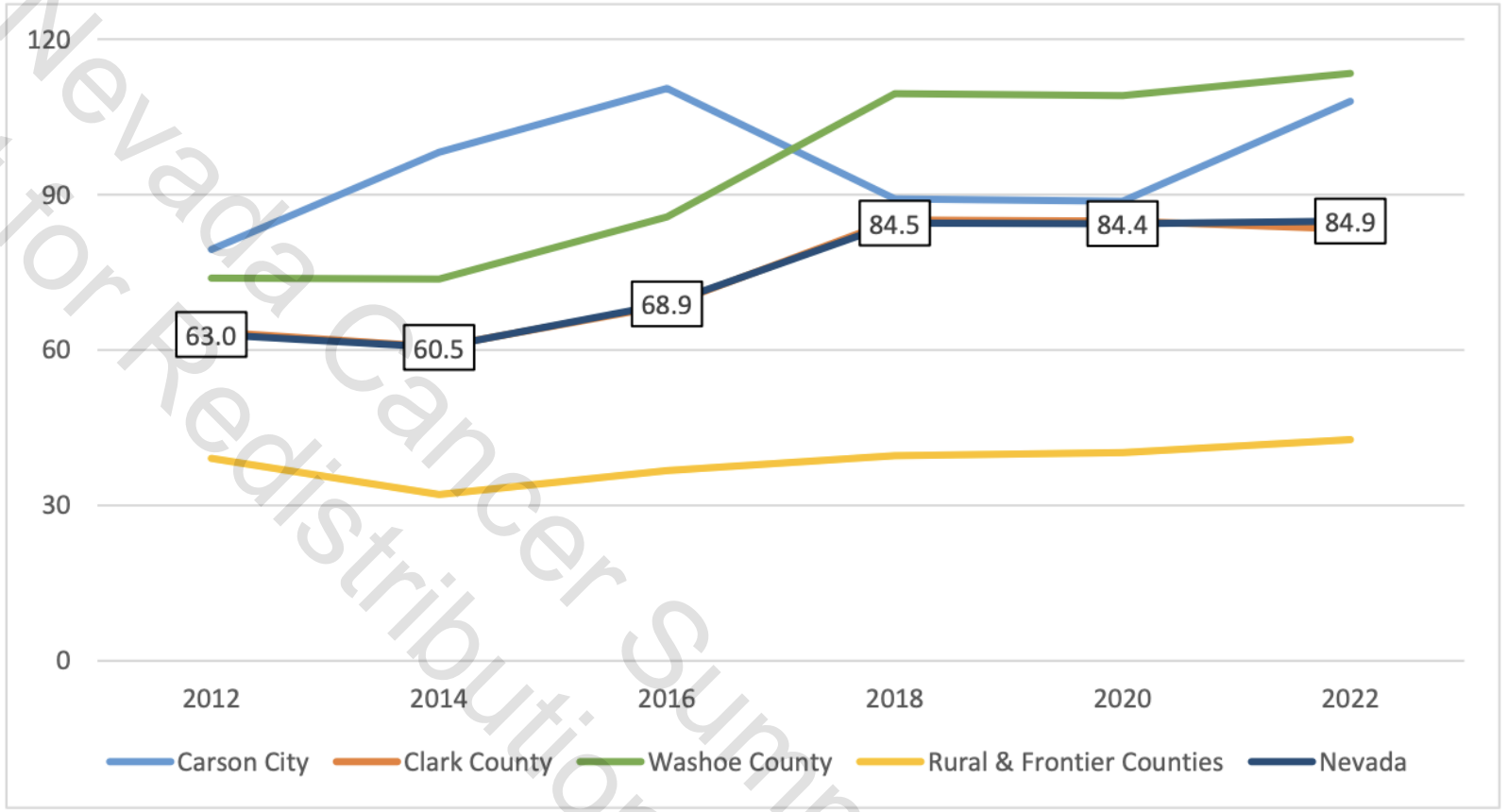
**Figure 30b: Licensed Primary Care Physicians (MDs and DOs) per 100,000 Population in Nevada – 2012 to 2022**




Source: Nevada Instant Atlas (2023) utilizing unpublished data from the Nevada State Board of Medical Examiners and the Nevada State Board of Osteopathic Medicine

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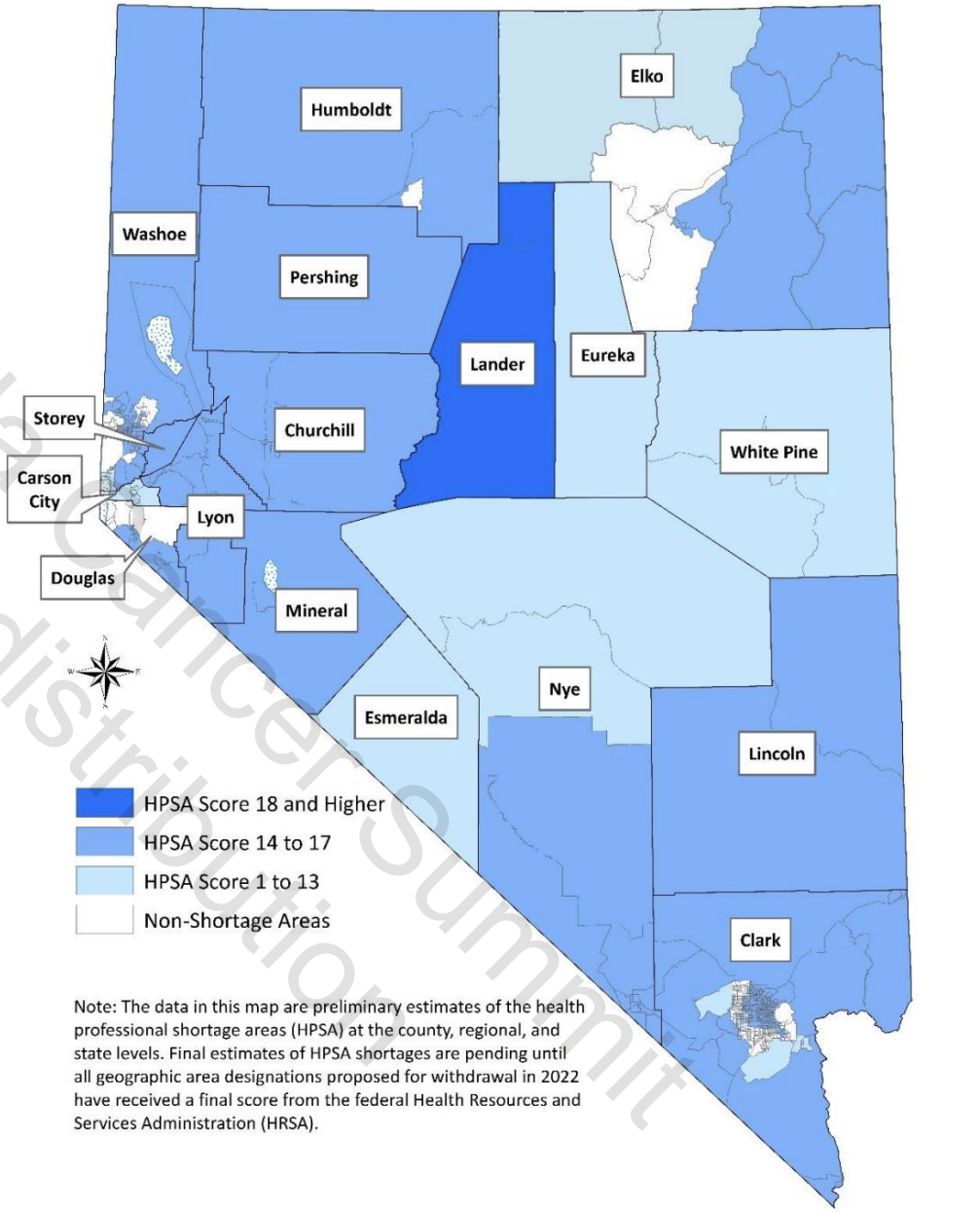
**Figure 71: Primary Medical Care Health Professional Shortage Areas (HPSAs) in Nevada – 2023**



# ACCESS TO CARE:
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**Figure 37: Licensed Health Professionals per 100,000 Population in Nevada – 2022**

| Licensed Health Professionals | Number of Licensed Health Professionals per 100,000 Population | | | | |
|---|---|---|---|---|---|
| | Carson City | Clark | Washoe | Rural and Frontier | Nevada |
| **Physicians and Physicians Assistants** | | | | | |
| Allopathic Physicians (MDs) | 323 | 177 | 298 | 71 | 188 |
| Osteopathic Physicians (DOs) | 46 | 37 | 33 | 21 | 34 |
| Primary Care Physicians (MDs and DOs) | 108 | 83 | 113 | 43 | 85 |
| Physician Assistants (PAs) | 74 | 35 | 49 | 25 | 37 |
| **Nursing** | | | | | |
| Advanced Practitioners of Nursing (APNs) | 86 | 89 | 115 | 44 | 89 |
| Registered Nurses (RNs) | 980 | 972 | 1,180 | 625 | 971 |
| Licensed Practical Nurses (LPNs) | 76 | 122 | 73 | 78 | 110 |
| Certified Registered Nurse Anesthetists (CRNAs) | 5 | 4 | 3 | 6 | 4 |
| **Oral Health** | | | | | |
| Dentists | 84 | 59 | 69 | 30 | 58 |
| Dental Hygienists | 61 | 36 | 72 | 43 | 43 |
| **Mental and Behavioral Health** | | | | | |
| Alcohol, Drug and Gambling Counselors | 61 | 20 | 40 | 30 | 25 |
| Clinical Professional Counselors | 11 | 15 | 17 | 6 | 15 |
| Licensed Clinical Social Workers (LCSWs) | 58 | 38 | 65 | 32 | 42 |
| Marriage and Family Therapists (MFTs) | 43 | 27 | 63 | 11 | 32 |
| Psychiatrists (MDs & DOs) | 9 | 9 | 17 | 1 | 9 |
| Psychologists | 44 | 12 | 33 | 4 | 15 |
| **Allied Health and Other Health Professions** | | | | | |
| Chiropractors | 34 | 20 | 29 | 16 | 21 |
| Clinical/Medical Lab Technologists | 34 | 44 | 40 | 19 | 42 |
| Clinical/Medical Lab Technicians | 29 | 25 | 63 | 21 | 30 |
| Dietitians | 17 | 18 | 29 | 11 | 19 |
| Occupational Therapists (OTs) | 21 | 32 | 69 | 16 | 36 |
| Opticians | 28 | 10 | 13 | 3 | 11 |
| Optometrists | 31 | 13 | 20 | 12 | 14 |
| Paramedics | 38 | 79 | 81 | 60 | 77 |
| Pharmacists | 80 | 83 | 91 | 46 | 81 |
| Physical Therapists (PTs) | 49 | 51 | 79 | 40 | 54 |
| Podiatrists | 7 | 4 | 4 | 2 | 4 |
| Respiratory Therapists (RTs) | 16 | 44 | 29 | 13 | 38 |
| Speech-Language Pathologists | 36 | 23 | 63 | 14 | 29 |
| Social Workers (LSWs) | 85 | 24 | 76 | 33 | 34 |

Source: Nevada Instant Atlas (2023) utilizing unpublished data from multiple licensing boards. Note: Figures shaded in red are below the state average for each occupation.

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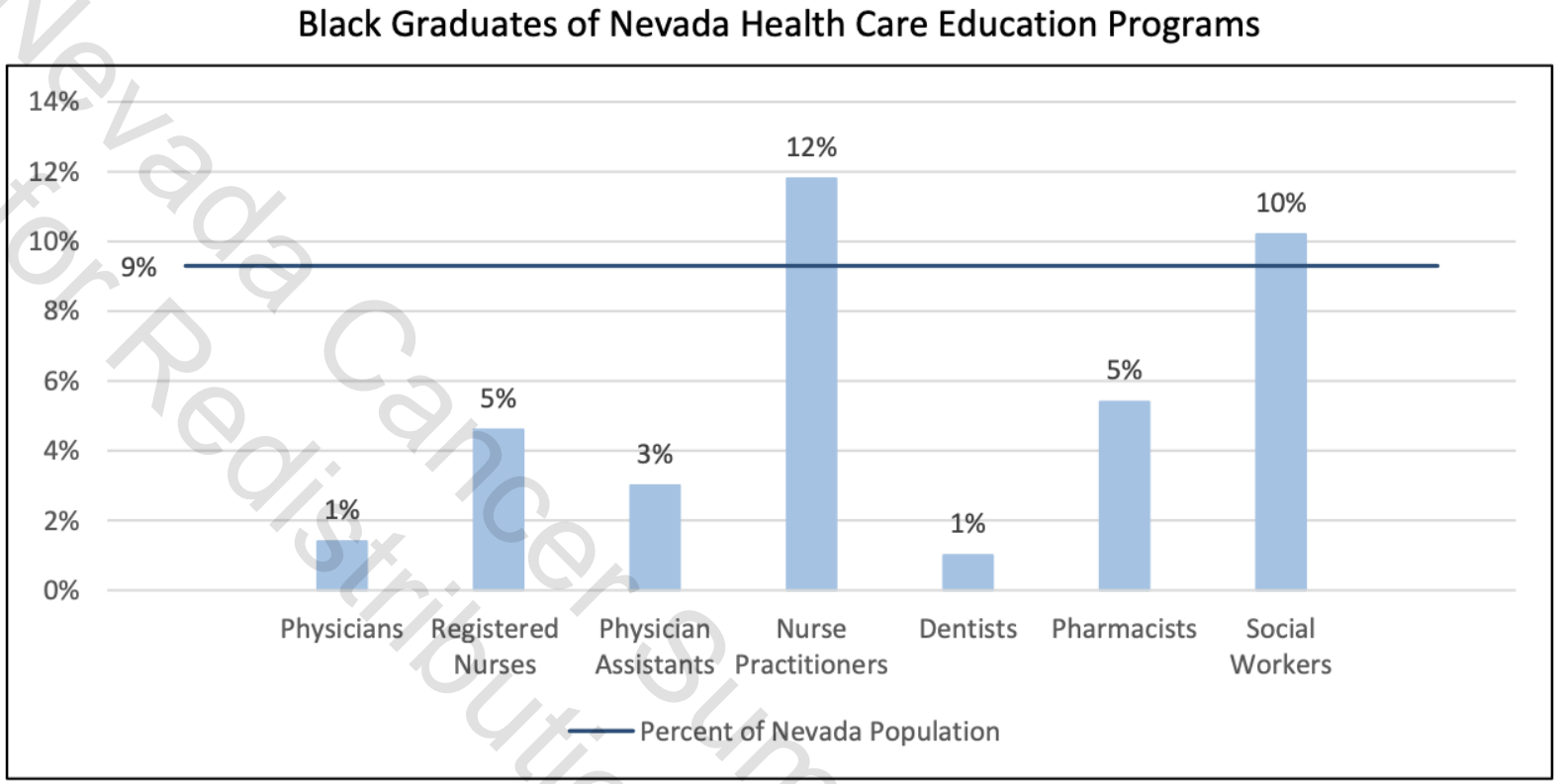
## HEALTH WORKFORCE

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# **ACCESS TO CARE:** HEALTH WORKFORCE

Additional jobs needed to meet the national average:

- ✓ **13** genetic counselors
- ✓ **474** social workers
- ✓ **384** internal and family medicine physicians
- ✓ **165** surgeons
- ✓ **591** radiologic technicians

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# **ACCESS TO CARE:** HEALTH CARE USAGE

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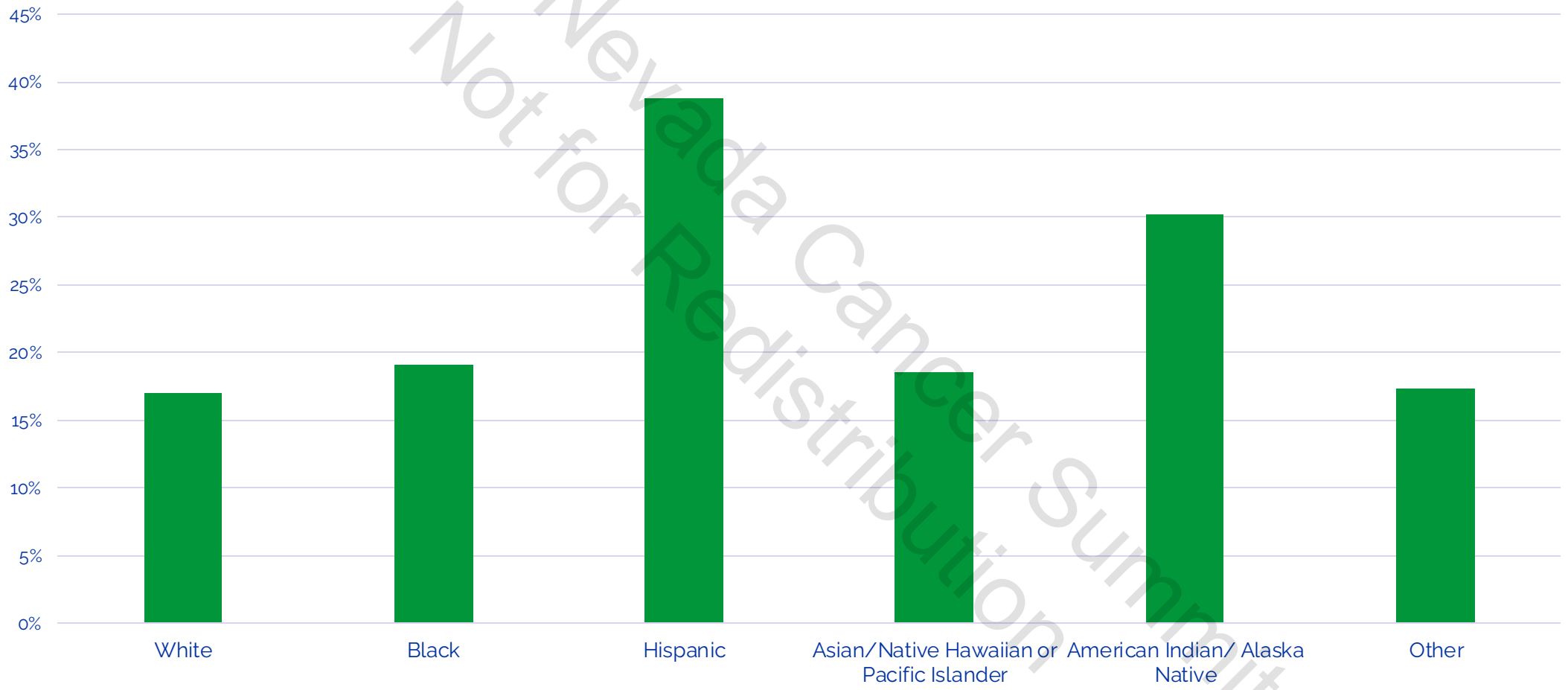
## Adults Who Report Not Having a Personal Doctor/Health Care Provider, by Race/Ethnicity, 2022




KFF analysis of the Centers for Disease Control and Prevention (CDC)'s 2013-2022 Behavioral Risk Factor Surveillance System (BRFSS).

# **ACCESS TO CARE:** HEALTH CARE USAGE

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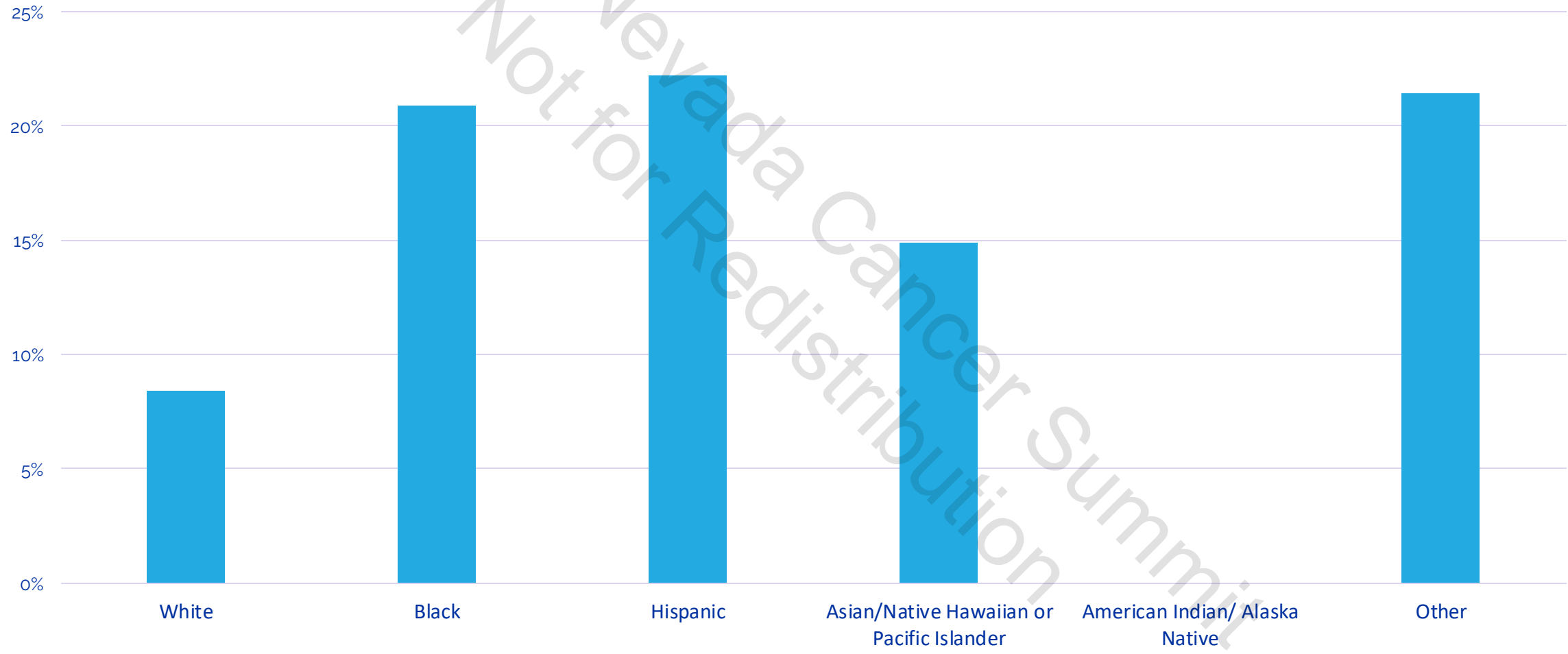
## Adults Who Report Not Seeing a Doctor in the Past 12 Months Because of Cost by Race/Ethnicity




KFF analysis of the Centers for Disease Control and Prevention (CDC)'s 2013-2022 Behavioral Risk Factor Surveillance System (BRFSS).

# **ACCESS TO CARE:**
# HEALTH INSURANCE

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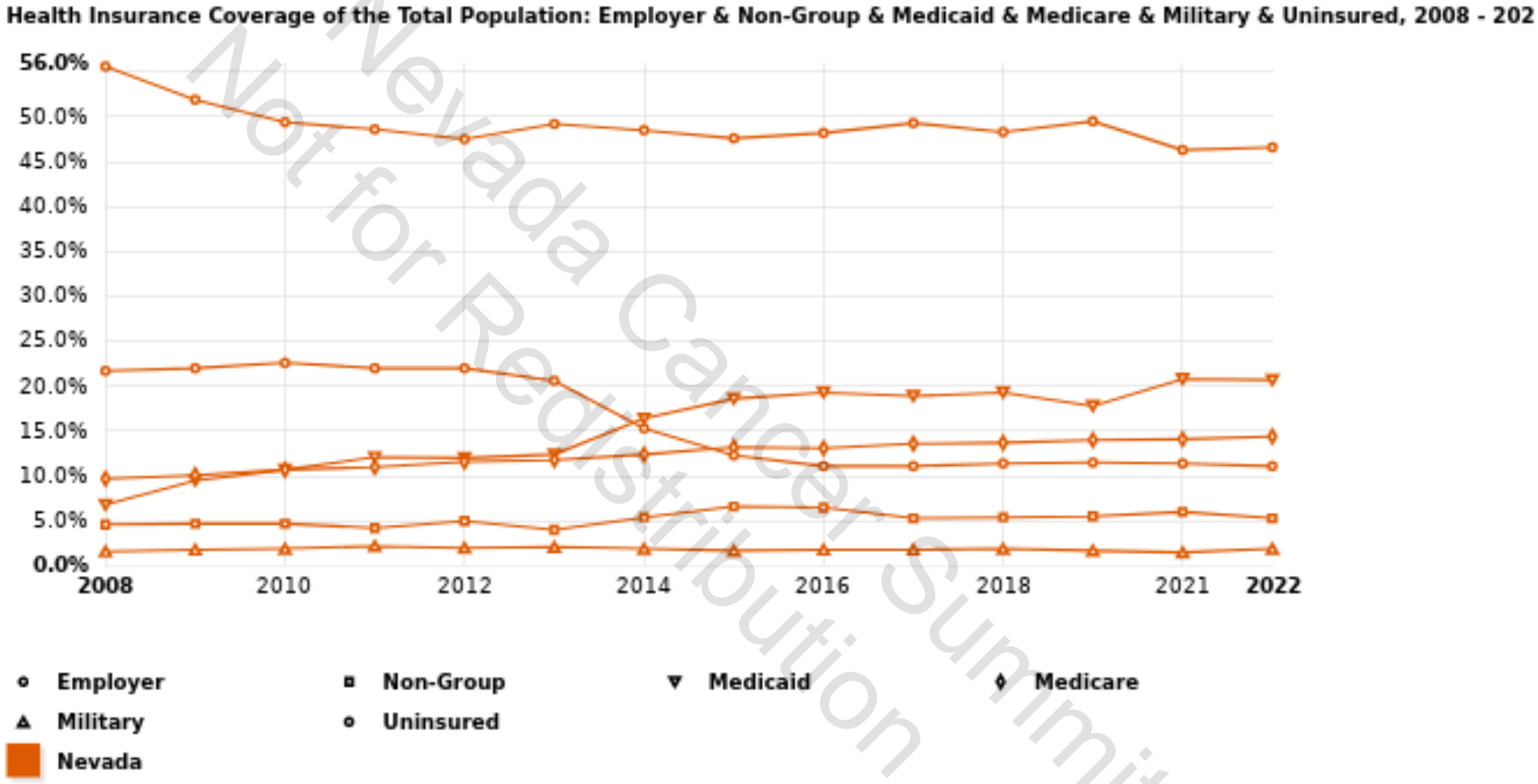


SOURCE: KFF's State Health Facts.

# ACCESS TO CARE:
# HEALTH INSURANCE

**Who is uninsured?**

- ✓ **More than 1/3 of Nevadans who are uninsured make 2-4 times the federal poverty level**
  - ✓ $47,112 up to $94,224 per year for two adults and one child
  - ✓ Many make enough to disqualify for Medicaid but not enough to afford health insurance or aren't provided employer coverage

- ✓ **More than 70% of those uninsured have at least one full-time worker in their household**

- ✓ **Hispanics account for 30% of Nevada's population but more than half of those uninsured**

According to Kaiser Family Foundation

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# ENVIRONMENT:
# CLIMATE CHANGE

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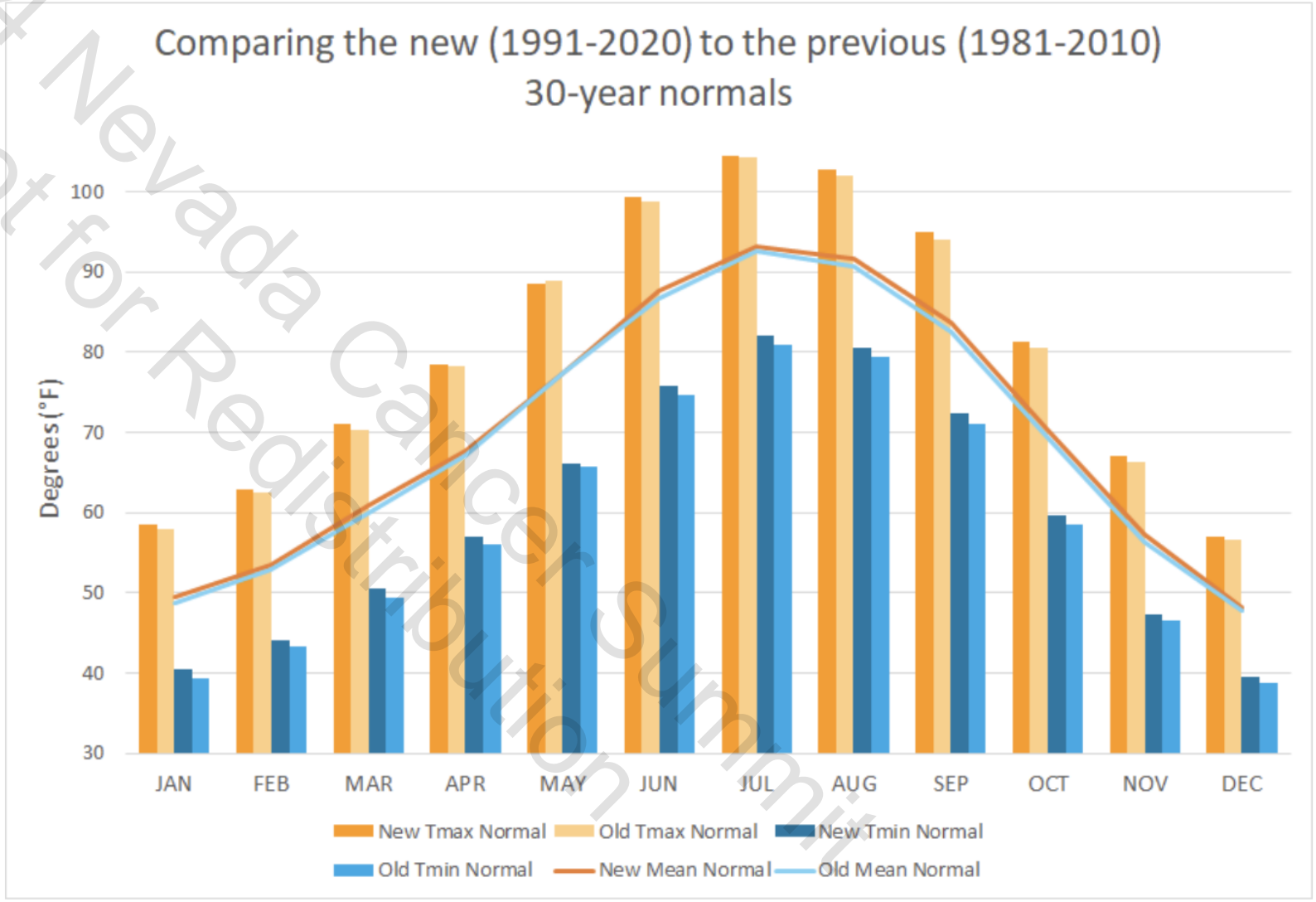
Comparing the last 30 years to the previous 30 years:

- ✓ Mean high temps increased up to 1 degree
- ✓ Mean low temps increased up to 7 degrees
- ✓ Warming increased faster in the more recent 30 years
- ✓ Development has increased urban heat island effect

LAS VEGAS




National Weather Service

# **ENVIRONMENT:** CLIMATE CHANGE

- ✓ Reno and Las Vegas are the two fastest-warming cities in the U.S. based on the increase in annual average temperature from 1970 to 2023.
- ✓ Studies have shown that urban heat islands are more likely to be found in predominantly lower-income and non-white communities.
- ✓ Heavy smoke from wildfires in the Reno metro area went from about 11 days every 4 years to about 17 days each year.
- ✓ There is a 9% increase in lung cancer incidence or mortality for every 10 μ/m3 increase in PM2.5 (wildfire smoke). There is an established link between total ambient air pollution and lung cancer.
- ✓ Wildfires also emit pollutants, including human carcinogens, that can contaminate water and soil and thus remain in the environment long after PM2.5 returns to baseline levels.

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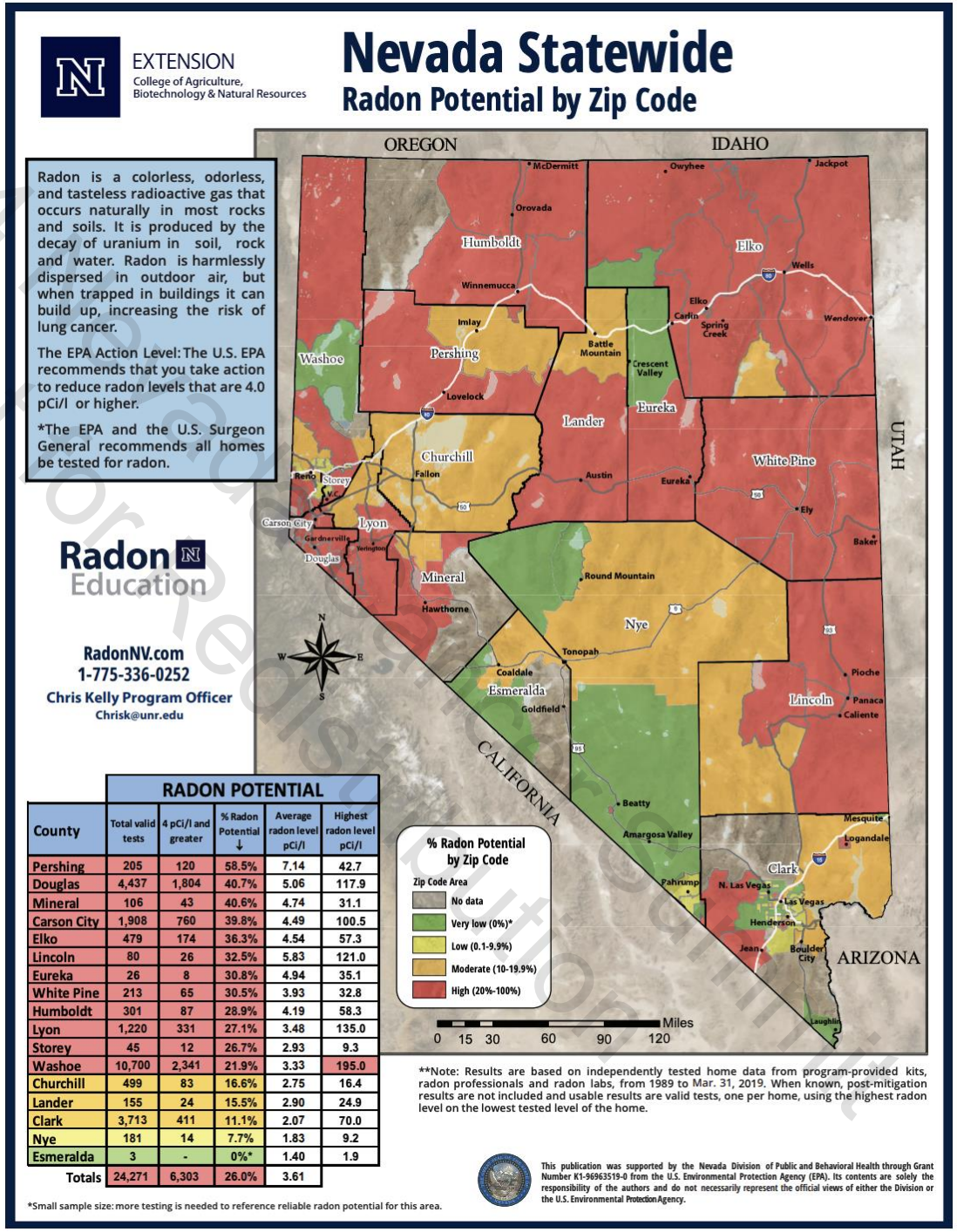
Climate Central, Federal Reserve Bank of San Francisco, Clearing the Air: Understanding the Impact of Wildfire Smoke on Asthma and COPD

# ENVIRONMENT: RADON

- ✓ Radon is the number one cause of lung cancer in non-smokers.




| RADON POTENTIAL | | | | | |
|---|---|---|---|---|---|
| County | Total valid tests | 4 pCi/l and greater | % Radon Potential ↓ | Average radon level pCi/l | Highest radon level pCi/l |
| Pershing | 205 | 120 | 58.5% | 7.14 | 42.7 |
| Douglas | 4,437 | 1,804 | 40.7% | 5.06 | 117.9 |
| Mineral | 106 | 43 | 40.6% | 4.74 | 31.1 |
| Carson City | 1,908 | 760 | 39.8% | 4.49 | 100.5 |
| Elko | 479 | 174 | 36.3% | 4.54 | 57.3 |
| Lincoln | 80 | 26 | 32.5% | 5.83 | 121.0 |
| Eureka | 26 | 8 | 30.8% | 4.94 | 35.1 |
| White Pine | 213 | 65 | 30.5% | 3.93 | 32.8 |
| Humboldt | 301 | 87 | 28.9% | 4.19 | 58.3 |
| Lyon | 1,220 | 331 | 27.1% | 3.48 | 135.0 |
| Storey | 45 | 12 | 26.7% | 2.93 | 9.3 |
| Washoe | 10,700 | 2,341 | 21.9% | 3.33 | 195.0 |
| Churchill | 499 | 83 | 16.6% | 2.75 | 16.4 |
| Lander | 155 | 24 | 15.5% | 2.90 | 24.9 |
| Clark | 3,713 | 411 | 11.1% | 2.07 | 70.0 |
| Nye | 181 | 14 | 7.7% | 1.83 | 9.2 |
| Esmeralda | 3 | - | 0%* | 1.40 | 1.9 |
| Totals | 24,271 | 6,303 | 26.0% | 3.61 | |

*Small sample size: more testing is needed to reference reliable radon potential for this area.

**Note: Results are based on independently tested home data from program-provided kits, radon professionals and radon labs, from 1989 to Mar. 31, 2019. When known, post-mitigation results are not included and usable results are valid tests, one per home, using the highest radon level on the lowest tested level of the home.

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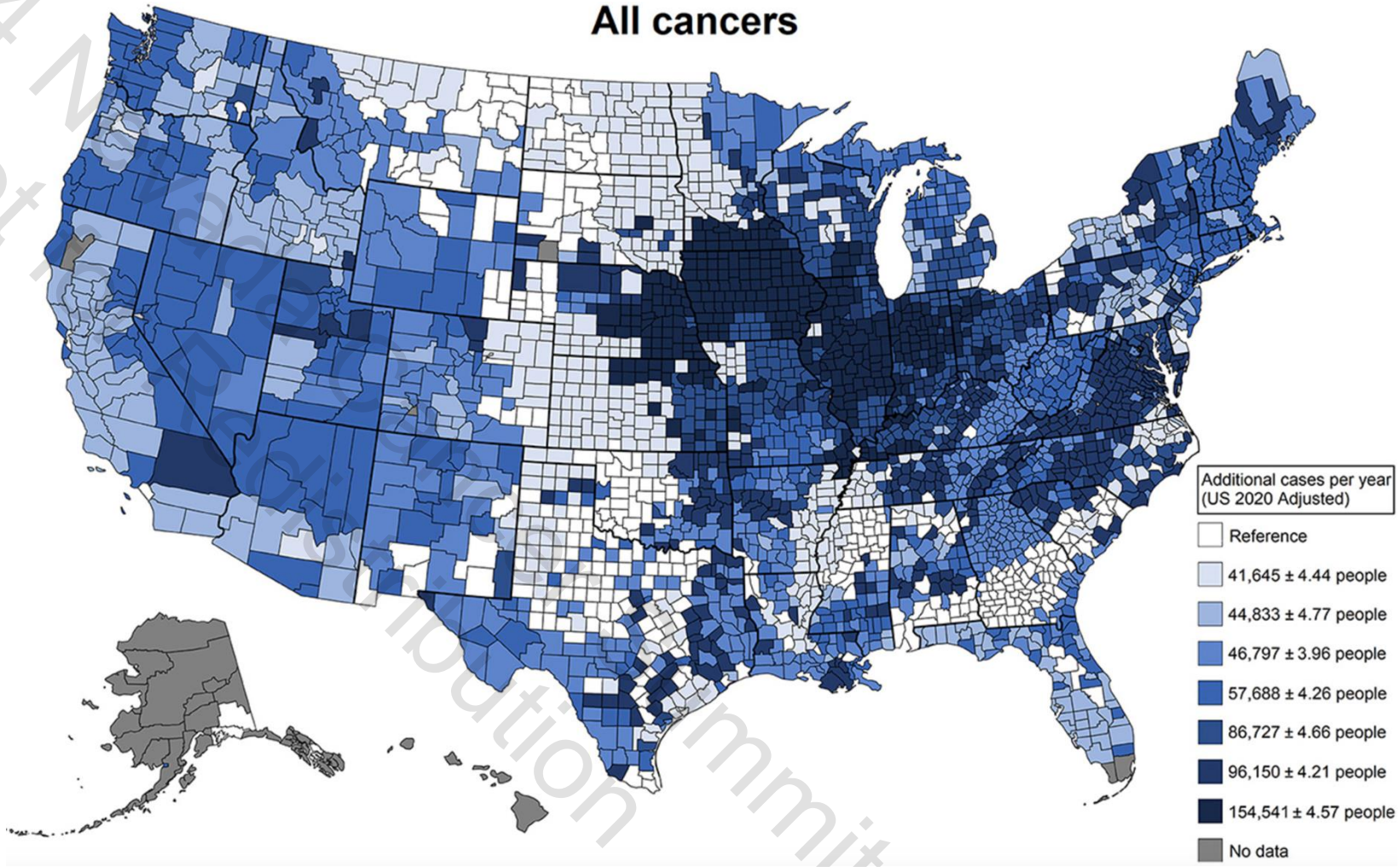
# ENVIRONMENT: CHEMICALS

- ✓ Pesticides have been linked to colorectal, lung, and pancreatic cancers, childhood and adult leukemias, lymphomas and other cancers.

- ✓ *Additional cancer cases in a single year that can be attributed to differences in agricultural pesticide use patterns. These patterns of use were defined by latent class analysis; estimates were derived from generalized linear models adjusted for agricultural land use, total population, the Social Vulnerability Index, and smoking rates.* ***This plot contrasts the counties that have the least risky use of agricultural pesticides with the counties that have the riskiest use of agricultural pesticides.***

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# **ENVIRONMENT:** CHEMICALS

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- ✓ Open-pit gold mining is one of the highest potential mining threats on the environment as it affects the air and water chemistry. The exposed dust may be toxic or radioactive, making it a health concern for the workers and the surrounding communities.
- ✓ Heavy metals like Arsenic (As), lead (Pb), and cadmium(Cd) are believed to cause cancer, neural and metabolic disorders and other diseases [4,16]. Arsenic is considered one of the most important contaminants of drinking water in the world as it causes cancer of the skin, lungs, urinary bladder and kidney.
- ✓ Potential to have effects on the food chain through cattle grazing on sites contaminated by mines.
- ✓ Yerington Paiute Tribe's water contaminated with carcinogens including arsenic, chromium and uranium from Anaconda Mine (superfund site).

"The environmental impact of gold mines: pollution by heavy metals"., Frontiers in Cancer Control and Society

# ENVIRONMENT


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# CROSS-CUTTING ISSUES ACTIVITY

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# THE PLAN'S CROSS-CUTTING ISSUES

- ✓Health Equity and Racial Disparities
- ✓Environmental Factors
- ✓Access to Healthcare
- ✓Social Determinants of Health

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# QUESTIONS TO CONSIDER

- ✓ In what way does this issue affect plan priority areas?
  - ✓ Prevention
  - ✓ Early Detection
  - ✓ Diagnosis & Treatment
  - ✓ Survivorship & Palliative Care
  - ✓ Data & Surveillance
  - ✓ Clinical Trials & Research
  - ✓ Childhood & AYA Cancers
  - ✓ Genetics
- ✓ What data would help to illustrate these issues in Nevada?
- ✓ How does this issue affect people of different: genders, ages, races, sexual orientations, abilities, geographies, professions, incomes?
- ✓ Are there policies, systems or environmental changes that could help reduce the negative impacts of this issue?

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# NEXT STEPS

March-June 2024: Initial feedback and priority setting with surveys and stakeholder meetings

September 2024-February 2025: Workgroups meet to develop objectives and strategies; webinars on cross-cutting issues.

March-June 2025: Plan is written, reviewed by a steering committee, edited, final data added, designed, and printed.

September 2025: 2026-2030 Nevada Cancer Plan is released at Nevada Cancer Control Summit.

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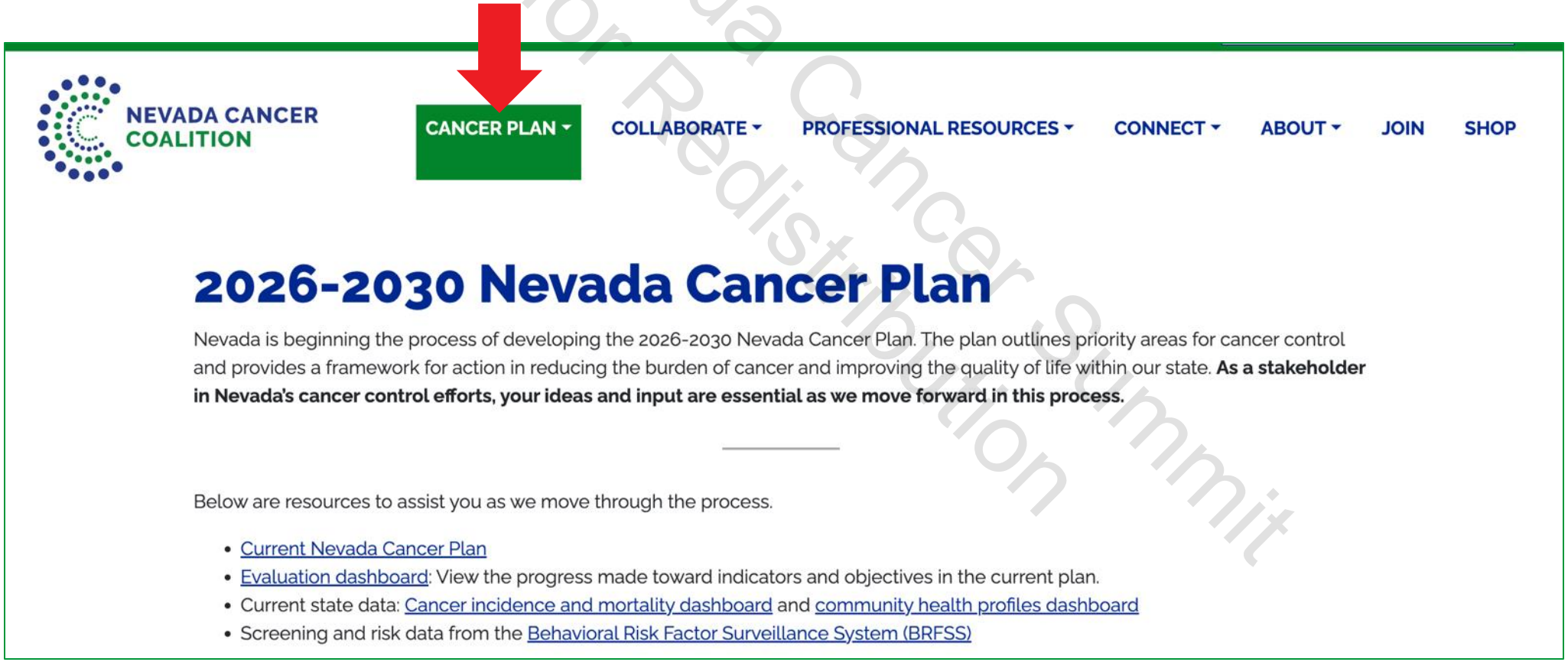
# PLAN RESOURCES & MATERIALS

✓Under the "**Cancer Plan**" tab you'll see a link to the Cancer Plan Revision page. Here you'll find the timeline, links to upcoming meetings, data resources, relevant webinars, and other materials.

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# JOINING A WORKGROUP

If you'd like to work on a particular priority area, please put your name and organization or business card on the wall next to that priority area before you leave.

Or Email: Kristen@NevadaCancerCoalition.org

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# THANK YOU!

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