



Cancer Prevention and Air Pollution: Public Health Tools and Resources

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22.1 Million Survivors by 2030

All People Free of Cancer

Aspirations

PREVENTION

Eliminate preventable cancers



SCREENING

All people get the right screening at the right time for the best outcome



CANCER SURVIVORS

Cancer Survivors live longer, healthier lives



Strategic Priorities

Reduce risk of cancer

Scale best practices to increase screening outcomes

Improve health and wellbeing for cancer survivors

Guiding Principles

Equity

*Begin with the
End in Mind*

Collaboration

*Targeted
Communications*

Strengths

Data

Translation & Evaluation

Partnership

Cancer Health Inequities: Unfair, Unjust, Avoidable

- Cancer health disparities exist by geography, environment, race, income, and other social determinants of health.
- Other chronic health conditions (obesity, diabetes) are linked to higher risk for some cancers and poorer survival after a cancer diagnosis.
- Environmental Justice: equal protection from environmental health hazards and the equitable treatment and involvement of all people in environmental laws and policies.
- Communities at social and economic disadvantage may be exposed to higher levels of air pollution AND be more vulnerable to the harmful effects of air pollution.



Data Resources



Official Federal Cancer Statistics

U.S. Cancer Statistics

United States Cancer Statistics (USCS)

CDC > Cancer Home



Providing the latest cancer data on the United States population.

[Learn more](#)


Data Visualizations Tool


Public Use Databases

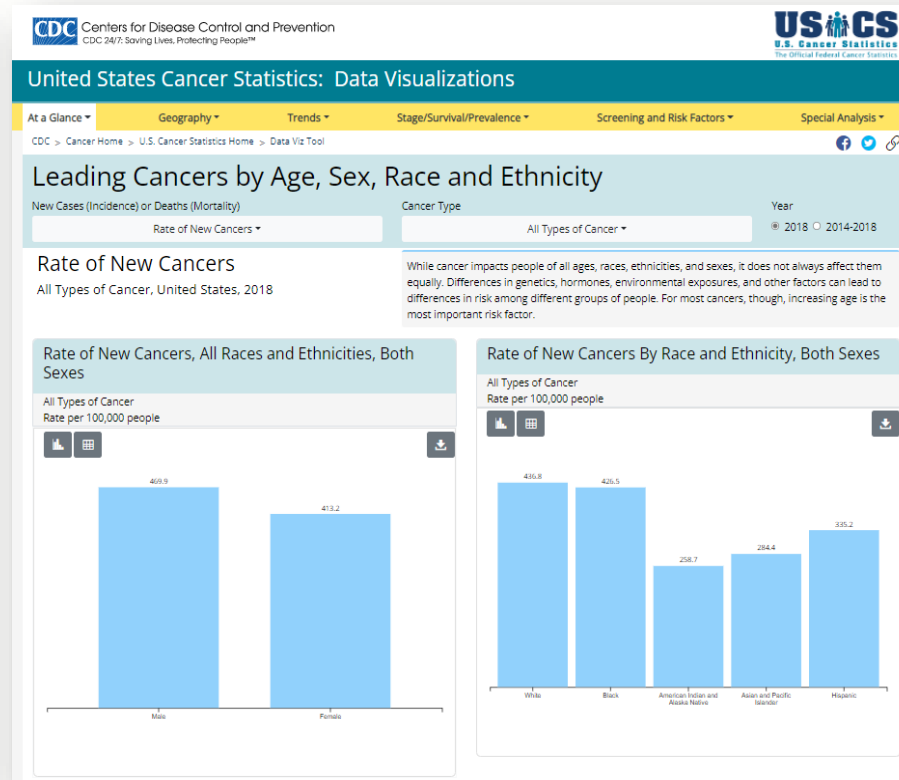
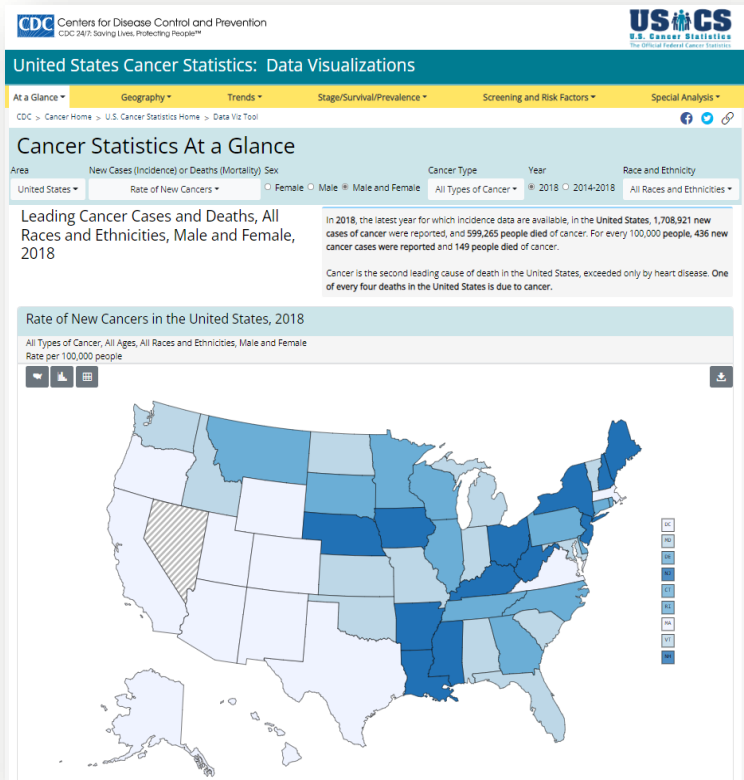

Other Tools


Publications

www.cdc.gov/uscs

Data Visualizations Tool

U.S. Cancer Statistics



www.cdc.gov/cancer/dataviz

Data Visualizations Tool

County-level data

Cancer burden: Gwinnett County, Georgia

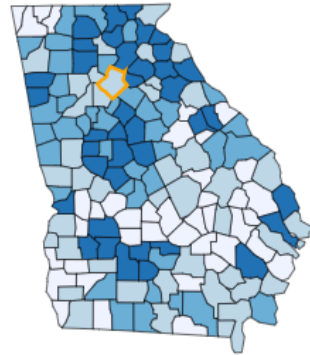
All Types of Cancer, 2014-2018

In Gwinnett County, Georgia from 2014-2018, there were **18,123 new cases of cancer**. For every 100,000 people, **453 cancer cases** were reported.

Over those years, there were **4,881 people who died of cancer**. For every 100,000 people in Gwinnett County, Georgia, **139** died of cancer.

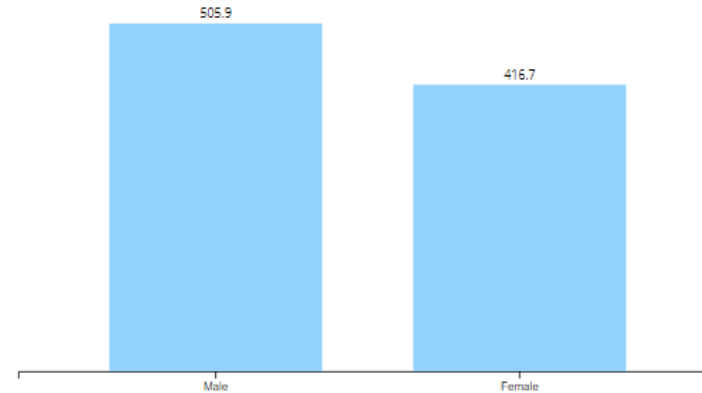
Rate of New Cancers in Gwinnett County, Georgia

All Types of Cancer, All Ages, All Races and Ethnicities, Male and Female, 2014-2018
Rate per 100,000 people



Rate of New Cancers, All Races and Ethnicities, Both Sexes

All Types of Cancer, 2014-2018
Rate per 100,000 people

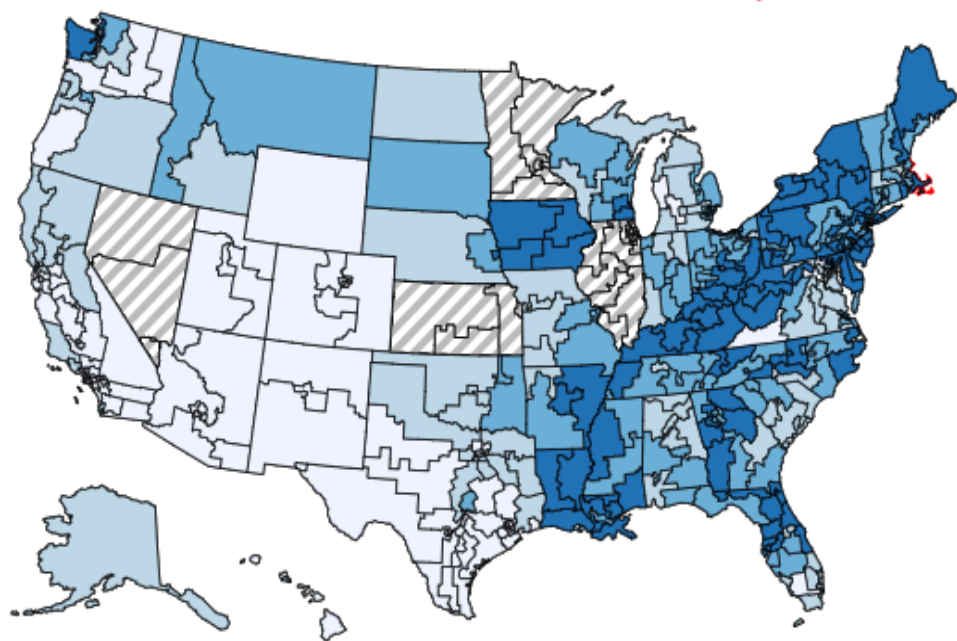


www.cdc.gov/cancer/dataviz

Estimated Rate of New Cancer Cases in the United States, by Congressional District, 2014-2018

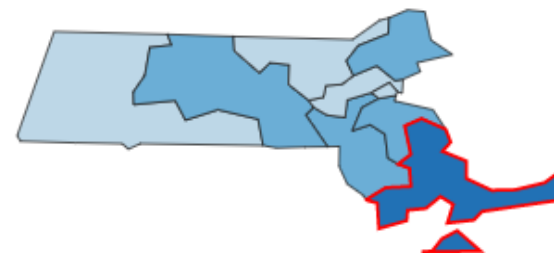
All Types of Cancer, All Races and Ethnicities, Male and Female

Estimated rate per 100,000 people



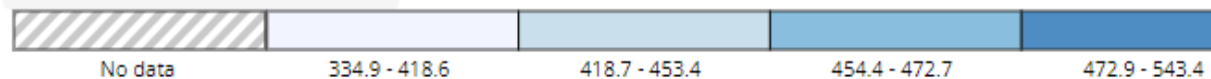
undefined, Congressional District 9, All Types of Cancer, Male and Female, All Races and Ethnicities

Estimated rate per 100,000 people



In Congressional District 9, Massachusetts, from 2014-2018, there were an estimated 26,182 new cases of cancer. For every 100,000 people, 484.7 new cancer cases were estimated.

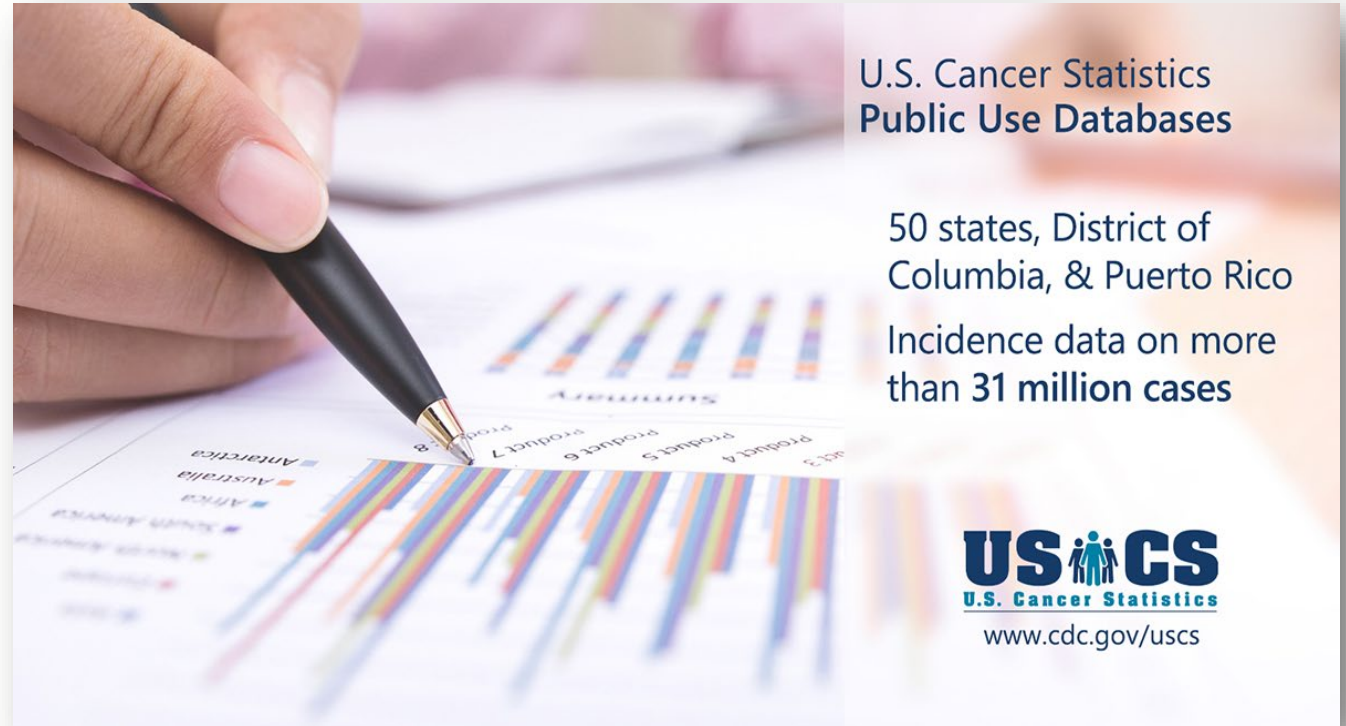
Over those years, there were an estimated 8,836 people who died of cancer. For every 100,000 people in Congressional District 9, Massachusetts, an estimated 156.3 died of cancer.



Public Use Database

U.S. Cancer Statistics

- Demographics data
 - age, sex, race, ethnicity, state
- Tumor identification
 - primary site, histology, grade, behavior, stage



White MC, et al. The history and use of cancer registry data by public health cancer control programs in the United States. *Cancer*. 2017 Dec 15;123:4969-76. <https://doi.org/10.1002/cncr.30905>

www.cdc.gov/cancer/public-use



Environmental Public Health Tracking: **Better information for better health**

nephtrackingsupport@cdc.gov



ENVIRONMENTAL PUBLIC HEALTH

TRACKING

DELIVERS DATA RELEVANT TO YOUR NEEDS

*Tracking makes standardized
data easier to use.*



Dashboards



Interactive Data Explorer
(maps, charts, and tables)



**Application Program
Interface** (API)



**Location-specific
Information**
(County Level)

Data Visualizations

Interactive Tools

Contextual Information

Downloadable Datasets

State & Local Resources

Visit www.cdc.gov/ephtracking
to explore these tools and more.



Types of Air Quality Measures

- **Monitor + Modeled Air Data**
 - ozone days above regulatory standard
 - PM2.5 – days above regulatory standard
 - annual PM2.5 – level
- **Air Toxics (cancer risk estimates, air concentrations)**
 - benzene
 - formaldehyde
 - acetaldehyde
 - carbon tetrachloride
 - 1,3-butadiene
- **Health Impacts of Fine Particles in Air: Mortality benefits associated with reducing PM2.5 concentration levels**
- **Wildfires**

SELECT DATA X ?



ABOUT DATA

SELECT DATA X ?



ABOUT DATA

CDC Query Panel

STEP 1: CONTENT ?

Search

Air Quality

Annual PM2.5 Level (Monitor + Modeled)

Annual average ambient concentrations of PM 2.5

STEP 2: GEOGRAPHY TYPE ?

State By County

STEP 3: GEOGRAPHY ?

- ☐ Idaho
- ☐ Illinois
- ☐ Indiana
- ☐ Iowa
- ☐ Kansas
- ☐ Kentucky
- ☐ Louisiana
- ☐ Maine
- ☐ Maryland
- ☒ Massachusetts
- ☐ Michigan
- ☐ Minnesota
- ☐ Mississippi

STEP 4: TIME ?

All Years

- ☒ 2016
- ☐ 2015
- ☐ 2014
- ☐ 2013
- ☐ 2012
- ☐ 2011
- ☐ 2010
- ☐ 2009
- ☐ 2008
- ☐ 2007
- ☐ 2006
- ☐ 2005

STEP 5: ADVANCED OPTIONS ?

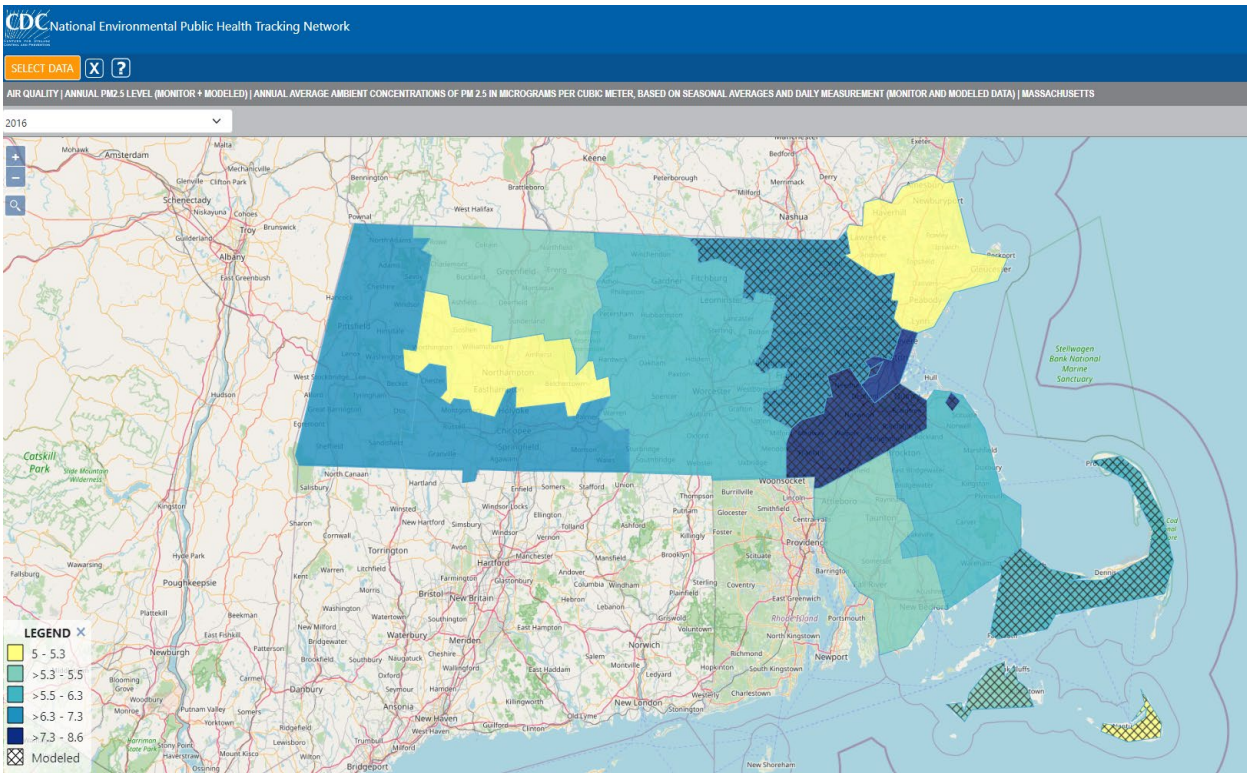
☐ No Advanced Options

Disclaimer

Clear Selections

GO →

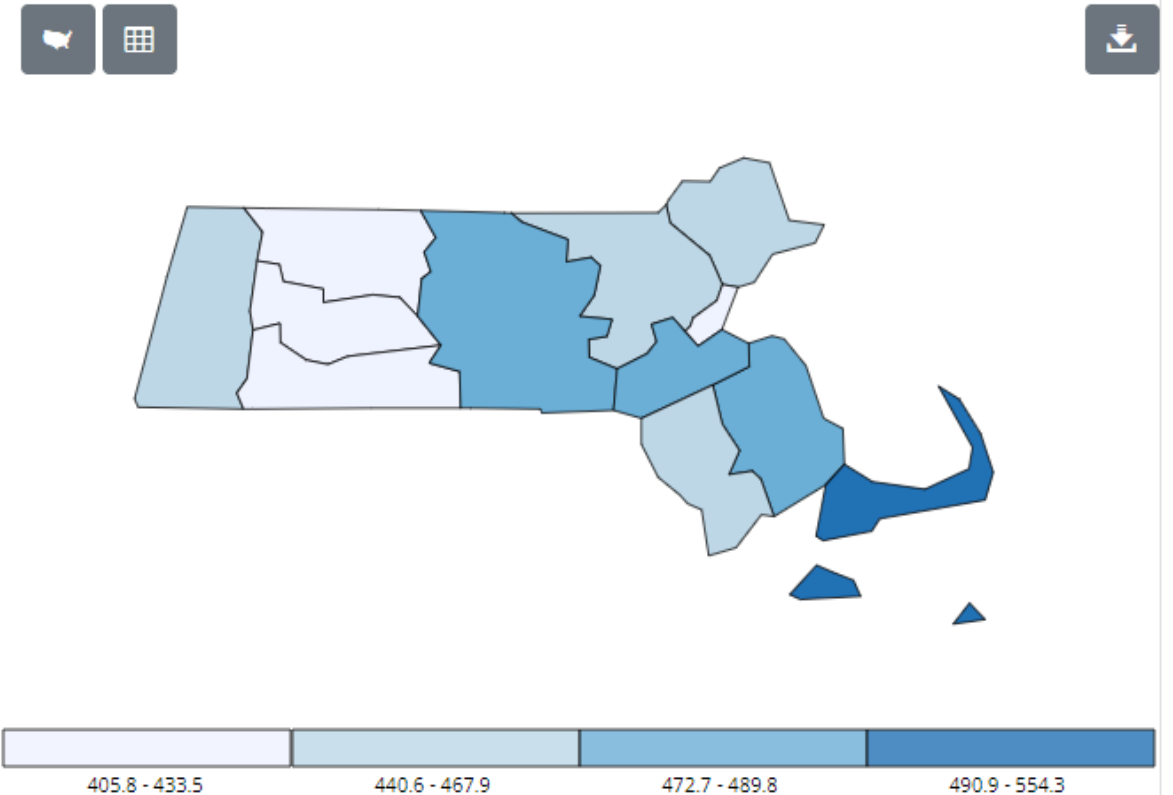
Proceed with Caution



Annual PM2.5 Level (Monitor + Modeled) | Annual average ambient concentrations of PM 2.5, 2016, data provided by EPA;
<https://ephrtracking.cdc.gov/DataExplorer>

Rate of New Cancers in Massachusetts

All Types of Cancer, All Ages, All Races and Ethnicities, Male and Female, 2014-2018
Rate per 100,000 people



Source - U.S. Cancer Statistics Data Visualizations Tool, based on 2020 submission data (1999-2018); <https://www.cdc.gov/cancer/dataviz>, released in June 2021

EJSCREEN: Environmental Justice Screening and Mapping Tool



Launch the EJSCREEN Tool

[Explore EPA's environmental justice screening and mapping tool](#)

In order to better meet the Agency's responsibilities related to the protection of public health and the environment, EPA has developed a new environmental justice (EJ) mapping and screening tool called EJSCREEN. It is based on nationally consistent data and an approach that combines environmental and demographic indicators in maps and reports.

What is EJSCREEN?



Learn to Use EJSCREEN



Launch the Tool



Partnerships



National Comprehensive Cancer Control Program Overview

In 2017, CDC's National Comprehensive Cancer Control Program (NCCCP) funded **66 awardees** for five years to implement evidence-based practices to prevent cancer, promote early detection of cancer, support cancer survivors, and reduce cancer disparities.

The four **NCCCP priority areas** include:



Health equity

to make sure communities with worse cancer outcomes have the best opportunities for improving health



Primary prevention

to reduce people's risk of developing cancer



Early detection

to make sure everyone gets the right cancer screening at the right time



Cancer survivorship

to help cancer survivors live longer, healthier lives

Each priority area can be implemented using three **strategies**:

Environmental approaches

promoting policies and changing physical surroundings to make the healthy choice the easy choice

Health system changes

facilitating improvements in medical care that increase access to quality care and allow doctors to diagnose and treat cancer better

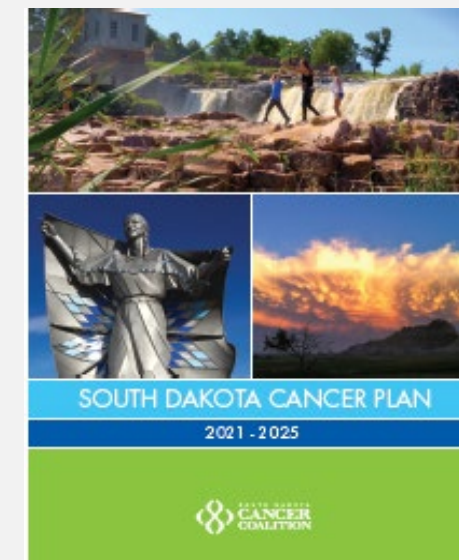
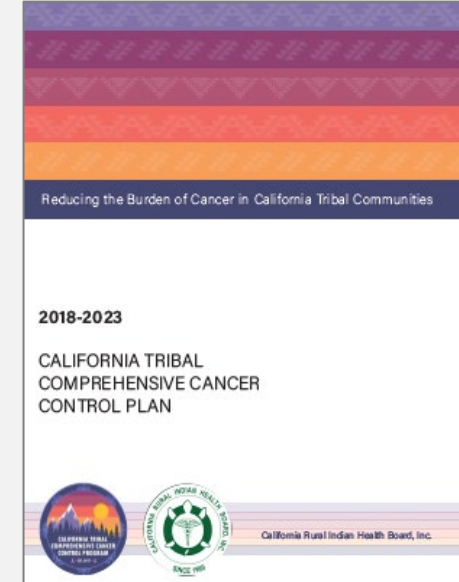
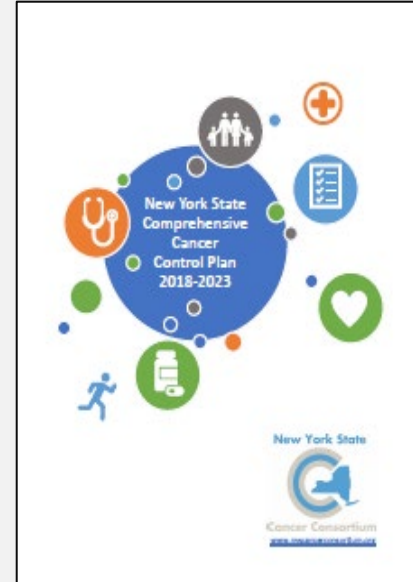
Community-clinical linkages

providing access to community resources to support patients' ability to follow clinical recommendations outside the clinical setting

What is a Comprehensive Cancer Control Plan?

- A five-year plan with objectives aligned with state/territory/tribe cancer burden.
- Includes specific goals, strategies, interventions, and outcome measures.
- Coalition workgroups are responsible for plan implementation along with their NCCCP staff partners.
- Plans are evaluated and are typically renewed every five years.

https://www.cdc.gov/cancer/ncccp/ccc_plans.htm



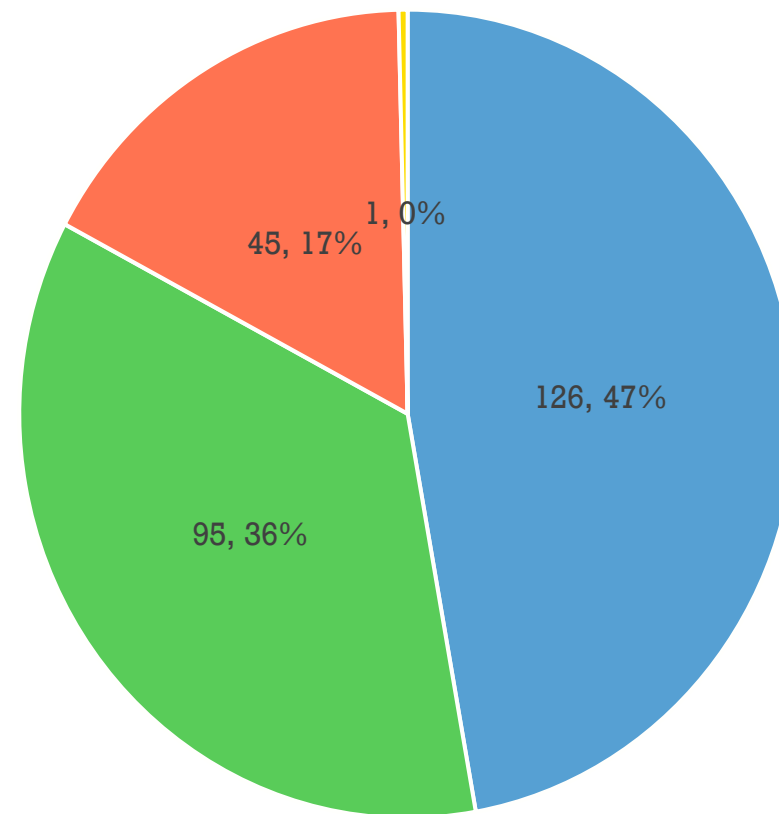
Current NCCCP Work in Primary Prevention

In 2019, programs implemented a total of 267 interventions focused on the primary prevention of cancer. Examples:

- **Environmental approaches**
 - Smoking bans and restrictions to reduce secondhand smoke exposure
- **Health systems changes**
 - Provider education to increase tobacco use cessation
- **Community-clinical linkages**
 - Increasing community access to radon testing

Evidence-based intervention strategies could be added to address hazardous air pollution, if desired by the coalitions who develop the plans.

Strategies used to implement primary prevention interventions



- Environmental approaches
- Health systems change strategies
- Community-clinical linkage efforts
- Unspecified

Environmental Health Webinar Series

Hosted by the National Association of Chronic Disease Directors



- Webinar #1: Environmental health and impact on cancer prevention
 - October 20, 2021
<https://vimeo.com/639197819>
- Webinar #2: Evidence-informed interventions
 - February 15, 2022
- Webinar #3: Partnerships
 - April 2022

Contact: lbst_ic@chronicdisease.org



“Today, President Biden is reigniting the Cancer Moonshot with renewed White House leadership of this effort. Because of recent progress..., it’s now possible to set ambitious goals: to **reduce the death rate from cancer by at least 50 percent** over the next 25 years and improve the experience of people and their families living with and surviving cancer— and, by doing this and more, end cancer as we know it today.”



[Administration](#) [Priorities](#)

BRIEFING ROOM

Fact Sheet: President Biden Reignites Cancer Moonshot to End Cancer as We Know It

FEBRUARY 02, 2022 • STATEMENTS AND RELEASES

Thank you!

Go to the official federal source of cancer prevention information:
www.cdc.gov/cancer



Division of Cancer Prevention and Control
Reliable. Trusted. Scientific.