Working Together
for a Virginia Without Cancer

CACV
Cancer Action Coalition of Virginia

VIRGINIA CANCER PLAN
2023 - 2027

Table of Contents

Message from the Cancer Action Coalition of Virginia

Kelly Fitzgerald
CACV Board Chair 2022

Jessica Deering
CACV Executive Director

CACV
Cancer Action Coalition of Virginia

To the citizens of Virginia:

Like many of you, our lives have been touched by Cancer. We have seen loved ones pass away, friends struggle, and caregivers never waiver. We have also witnessed the beautiful human strength we all possess that shines through even in these darkest of moments. Cancer is not something that can be endured alone. It touches every aspect of our lives, and it is only with the support of the larger, diverse communities we embody that this can be overcome.

One such community is the Cancer Action Coalition of Virginia (CACV). The mission of CACV is to reduce the burden of cancer for all persons living in Virginia, utilizing the Virginia Cancer Plan to provide a forum for collaboration, education, and advocacy. As Virginia's comprehensive cancer coalition, CACV serves as an important vital alliance of organizations and individuals working together to provide statewide guidance, support, leadership and coordination of cancer prevention and control activities throughout the Commonwealth of Virginia.

Over the past year, CACV, experts with knowledge across the cancer continuum, and citizens of the commonwealth have worked to create the fifth edition of the Virginia Cancer Plan.

This working document is a framework that presents priority objectives, goals, and strategies to reduce cancer risk, eliminate preventable cancers and minimize cancer deaths and disabilities. It provides guidance for designing, implementing, monitoring, and evaluating cancer-related actions and addressing a myriad of issues. The plan provides direction to better understand and reduce cancer disparities through research, education, and clinical practice. Through the guidance offered in the 2023-2027 Virginia Cancer Plan members of the public, people with cancer, their families and caregivers, healthcare providers, policymakers, and community leaders will all benefit.

The CACV Board would like to thank the Virginia Cancer Plan Advisory Committee and the coalition membership for their commitment to developing and implementing the 2023-2027 Virginia Cancer Plan. Without your expertise, passion, and dedication, we could not have created this blueprint.

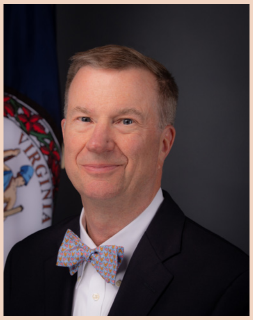
To every Virginian, CACV invites you to join us in this significant effort to eliminate cancer and make a difference in our commonwealth. Each of us has an equal right to health care, support, and compassion. Each one of us matters.

This plan is dedicated to those who fight the battle against cancer: patients, survivors, and their families and caregivers.

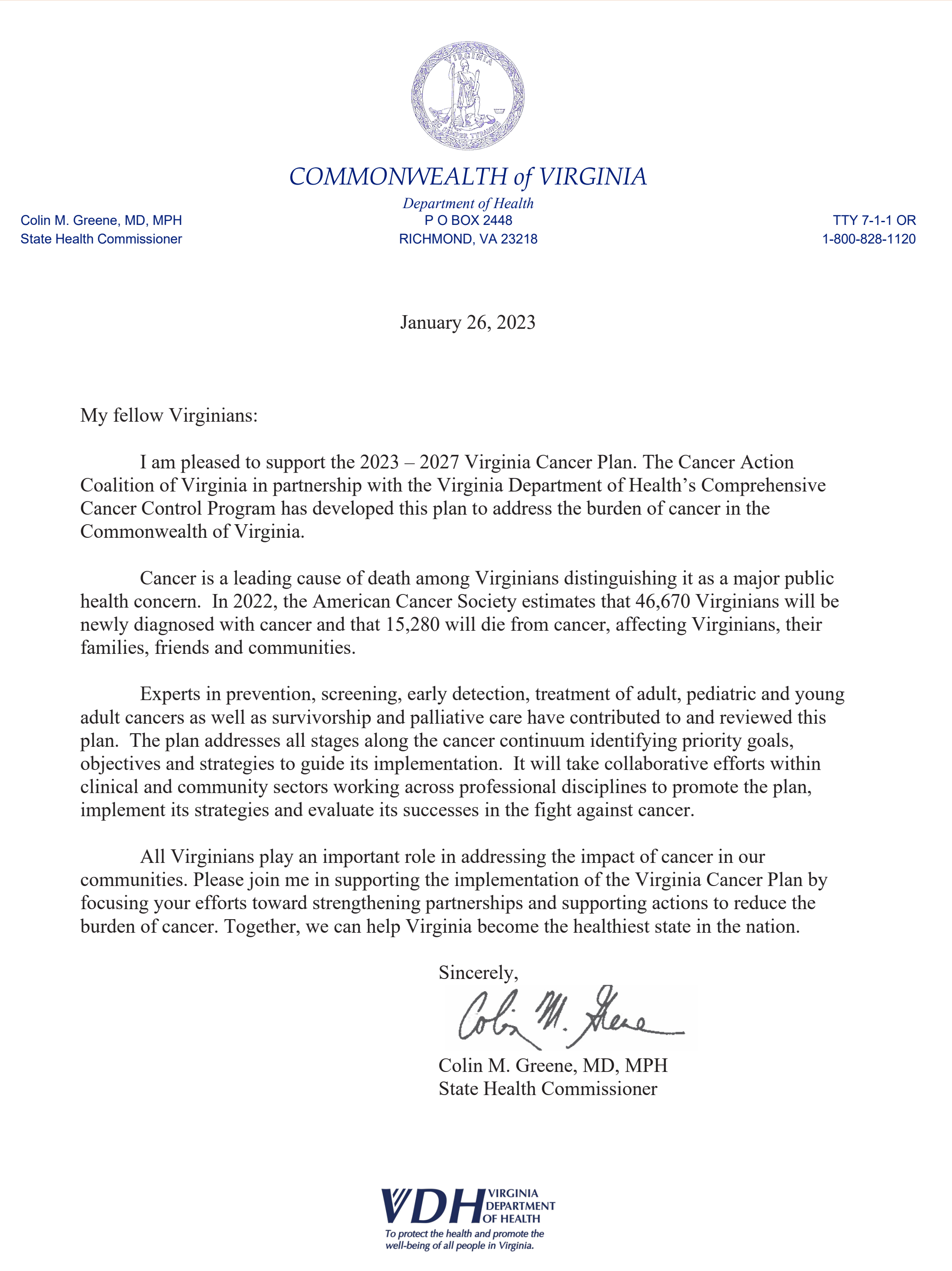
Kelly Fitzgerald
CACV Board Chair 2022

Jessica Deering
CACV Executive Director

Message from the Virginia Department of Health



Colin M. Greene, MD, MPH
State Health Commissioner



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January 26, 2023

My fellow Virginians:

I am pleased to support the 2023 – 2027 Virginia Cancer Plan. The Cancer Action Coalition of Virginia in partnership with the Virginia Department of Health's Comprehensive Cancer Control Program has developed this plan to address the burden of cancer in the Commonwealth of Virginia.

Cancer is a leading cause of death among Virginians distinguishing it as a major public health concern. In 2022, the American Cancer Society estimates that 46,670 Virginians will be newly diagnosed with cancer and that 15,280 will die from cancer, affecting Virginians, their families, friends and communities.

Experts in prevention, screening, early detection, treatment of adult, pediatric and young adult cancers as well as survivorship and palliative care have contributed to and reviewed this plan. The plan addresses all stages along the cancer continuum identifying priority goals, objectives and strategies to guide its implementation. It will take collaborative efforts within clinical and community sectors working across professional disciplines to promote the plan, implement its strategies and evaluate its successes in the fight against cancer.

All Virginians play an important role in addressing the impact of cancer in our communities. Please join me in supporting the implementation of the Virginia Cancer Plan by focusing your efforts toward strengthening partnerships and supporting actions to reduce the burden of cancer. Together, we can help Virginia become the healthiest state in the nation.

Sincerely,

Colin M. Greene

Colin M. Greene, MD, MPH
State Health Commissioner

VDH VIRGINIA DEPARTMENT OF HEALTH
To protect the health and promote the well-being of all people in Virginia.

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Overview

Since 1998, the Centers for Disease Control and Prevention (CDC) National Comprehensive Cancer Control Program (NCCCP) has made great strides to reduce the burden of cancer, determine cancer control priorities, address disparities, and develop and implement cancer plans in the United States. Cancer coalitions that partner with NCCCP form groups of dedicated individuals, community members, professionals, and cancer survivors who share their expertise, resources, and ideas to address cancer control priorities and cancer disparities too broad for one entity to reach.

CACV was formed in 1998 as the Cancer Plan Advisory Committee. Under the guidance of the Virginia Department of Health (VDH), Virginia's first cancer plan was developed in 1998 by a team of committed volunteers. Since then, Virginia has developed and updated the cancer plan every five years.

Today, CACV serves as an essential alliance of organizations and individuals working together to provide statewide guidance, support, leadership and coordination of cancer prevention and control activities throughout the Commonwealth of Virginia.

A subgroup of CACV, the Virginia Cancer Plan Advisory Committee met from September 2021 - May 2022, through a process facilitated by the Virginia Tech Center for Public Health Practice and Research, to develop the comprehensive goals, objectives and strategies included in this plan. The plan also includes input from equity specialists throughout the Commonwealth of Virginia.

The mission of the Cancer Action Coalition of Virginia (CACV) is to reduce the burden of cancer for all persons living in Virginia utilizing the Virginia Cancer Plan to provide a forum for collaboration, education, and advocacy.

Progress Summary

Virginia has made progress toward achieving the objectives outlined in Virginia's Cancer Plan, 2018-2022. CACV, its membership, and other key cancer control stakeholders have collaborated over the past five years to address objectives in the 2018-2022 plan. This has contributed to the progress made on important objectives such as:

- A decrease in smoking among Virginia adults
- An increase in the percentage of 13–17-year-olds who complete the Human Papilloma Virus (HPV) vaccination series
- An increase in the percentage of lung cancer diagnoses at the local stage
- Securing state funding to address the needs of childhood cancer survivors

In addition to these accomplishments, CACV and its members have focused on several key priority areas listed below. Our work in these areas has advanced our progress in reaching the goals of the Virginia Cancer Plan and has also made a difference in the health and well-being of all Virginians.

Virginia Colorectal Cancer Roundtable (VCCRT)

CACV became a member of the National Colorectal Cancer Roundtable (NCCRT) in 2017 making it one of approximately 100 organizations across the nation committed to taking action in prevention, screening, and early detection of colorectal cancer. One of CACV's key priority taskforces is the Virginia Colorectal Cancer Roundtable (VCCRT).

The goals of VCCRT are to develop a robust colorectal cancer roundtable to facilitate partnerships across Virginia to reduce the burden of colorectal cancer. Currently, there are 49 members representing 24 organizations including our two National Cancer Institute (NCI) centers, Commission on Cancer accredited hospitals, Federally Qualified Health Centers, health plans, industry leaders, and non-profits all focused on the colorectal cancer continuum.

To reach the shared goal of 80% screened for colorectal cancer across the Commonwealth of Virginia, CACV continues to prioritize addressing the burden of colorectal cancer. Over five years, the percentage of adults aged 50-75 who receive recommended colorectal cancer screening has increased from 70.3% (2016) to 75.7% (2020).

VCCRT continues to work towards the goal of 80% screened through education and awareness activities specifically focusing on the colorectal cancer mortality hotspot in Central and Eastern Virginia. Additionally, VCCRT advocates for increased access to colorectal screening for all Virginians.

Virginia HPV Immunization Taskforce (VHIT)

The Virginia HPV Immunization Taskforce (VHIT) was established in 2017 as a CACV priority taskforce. VHIT is comprised of medical providers, school employees, and members of health care systems and non-profit organizations focused on increasing HPV vaccination rates in Virginia. VHIT activities include education and outreach in communities across the commonwealth to share information on HPV-related cancers and the importance of immunization to prevent these cancers. VHIT's work and activities have helped to exceed the goals set in the 2018-2022 Virginia Cancer Plan for HPV vaccination rates.

Pediatric, Adolescent and Young Adult (AYA) Cancers

Over the years, Virginia has been one of a few states to include pediatric cancer in their state cancer plan. The inclusion of this often-forgotten patient population has encouraged significant activity amongst pediatric cancer advocates in Virginia.

CACV in partnership with ASK Childhood Cancer Foundation and other partner organizations hold the state's annual Childhood Cancer Awareness Day at the Virginia General Assembly. Year after year this event grows in the number of participants and the impact is significant in teaching our legislators about childhood cancer and the need for dedicated resources.

In addition to legislators, CACV members and partner organizations have created educational opportunities to help teachers, school nurses, social workers, administrators, and others learn about childhood cancer, common late effects, and how to support patients, survivors, and siblings.

Virginia Cancer Conference and Other Meetings

A core focus of CACV's work includes offering education and training to our members and partners to provide information and tools needed to help reach the goals and objectives of the Virginia Cancer Plan. Over the past five years, we have had the opportunity to provide education and training to hundreds of stakeholders working in cancer prevention and control.

The Virginia Cancer Conference is a biennial event hosted by CACV. The Virginia Cancer Conference aims to provide education and training to key stakeholders in the Virginia cancer community. The conference is attended by physicians, nurses, clinical social workers, patient navigators, health educators, survivors, caregivers, advocates, and community members.

CACV also hosts quarterly meetings to disseminate the newest available and locally applicable cancer prevention and control information to our members and partners. The quarterly meeting topics align with the goals and objectives of the Virginia Cancer Plan. These meetings also provide a forum for members to network, share information about their work and build partnerships.

To learn more about CACV, the Virginia Cancer Plan and how you can get involved, visit our website: cancercoalitionofvirginia.org

Call to Action: Why A Plan?

The 2023-2027 Virginia Cancer Plan provides a roadmap for the next five years to help Virginia residents address the burden of cancer. The goals of the plan can be addressed throughout the Commonwealth of Virginia and require the engagement and collaboration of individuals and organizations involved in cancer prevention, screening, early detection, treatment, and post-treatment care for Virginia residents. The plan provides data, guidance, information, and links to resources for all Virginians.

The plan is based on an evaluation of the most critical cancer concerns for Virginia. It describes the cancer burden in Virginia including the disparate impact cancer has on Virginia's low-income, uninsured, and minority populations. This plan includes key goals, objectives, and strategies in each of the following areas:

Prevention: encouraging Virginians to adopt healthy behaviors and avoid unhealthy environments.

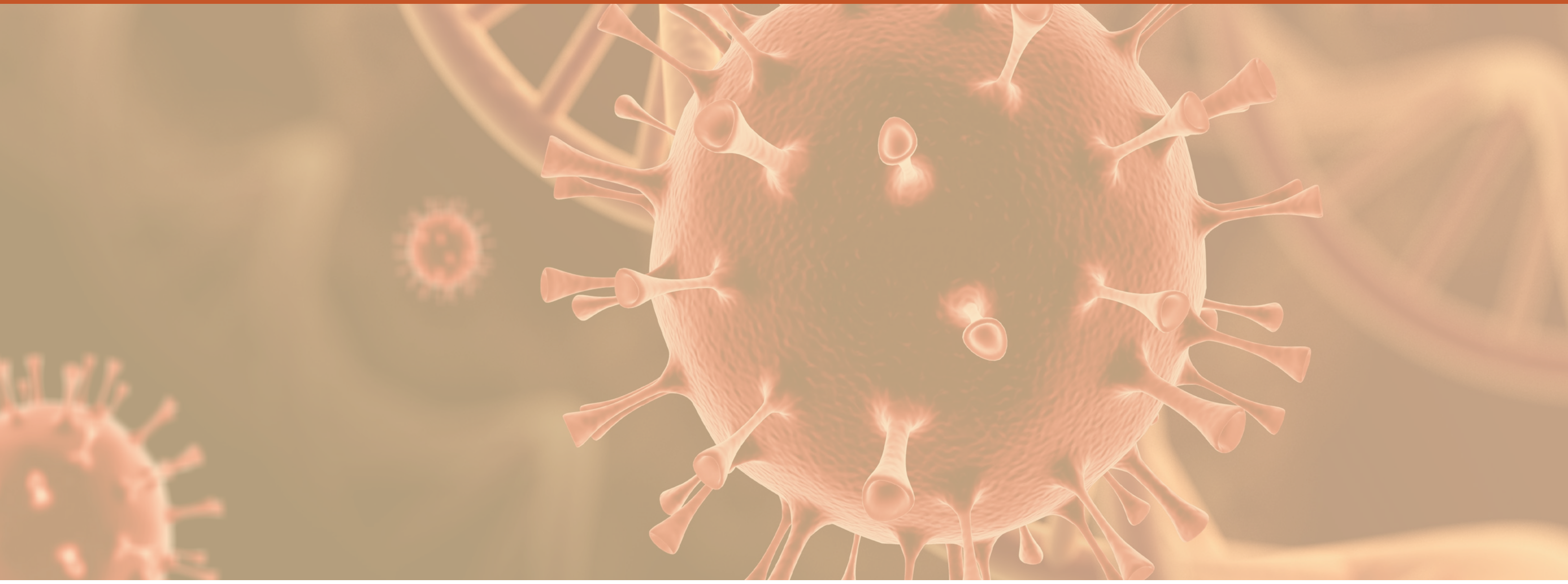
Early Detection: promoting the benefits of screening tests to ensure early diagnosis.

Diagnosis and Cancer Directed Therapy: reducing the barriers to care, promoting evidence-based practices, and encouraging participation in clinical trials.

Survivorship and Palliative Care: ensuring resources to optimize quality of life for cancer survivors and their families.

Pediatric, Adolescent and Young Adult (AYA) Cancers: improving access to care for pediatric and AYA patients, improving long-term follow-up care, improving support systems, and increasing awareness of palliative strategies for pediatric and AYA patients.

A Note About the COVID-19 Pandemic



Since March 2020, the COVID-19 pandemic has profoundly impacted people's health worldwide - from 2019 to 2020, life expectancy declined by 1.5 years in the United States, to the lowest level since 2003.[1,2] The pandemic has brought to light existing health equity issues, with Black and Latino populations, and lower-income populations bearing the brunt of the pandemic and experiencing disproportionately high rates of COVID-19.[3] In addition, during the pandemic, many healthcare workers resigned due to the long strenuous hours.[3]

The pandemic had a great impact on cancer. Early in the pandemic, closures, mitigation efforts, and healthcare systems diverting resources towards COVID-19 efforts led to delayed screenings, which lead to delayed diagnosis and treatment initiation for some individuals.[3] In addition, fear of exposure to the virus may have led to the delay of preventative care or access to treatment. One study found a sharp decrease nationally of breast, colorectal and cervical cancer screenings in March and April of 2020, compared to the same period in 2019.[3]

The pandemic also negatively impacted treatment and survivorship due to medical visits and procedures being delayed or canceled early in the pandemic to support COVID-19 mitigation efforts. In addition, some studies have found that people with cancer may be at greater risk of severe complications or death from COVID-19 due to impaired immune systems (from cancer or the treatment they are receiving).[3]

Ultimately, the COVID-19 pandemic may affect cancer mortality long-term, with increases due to delayed screenings, diagnosis and treatment, and the loss of employment and associated health insurance. The NCI estimates 10,000 excess deaths over the next 10 years due to the pandemic's impact on access to screenings and treatment.[3]

As the pandemic begins to subside, with many people benefitting from either natural immunity or having received a vaccine, the healthcare system must start to play "catch up" and ensure people receive their required screenings and access the care they need. We must also ensure that there are enough healthcare workers to provide preventative care and treatment for cancer patients.

Goals, Objectives, and Strategies

2023-2027 Virginia Cancer Plan

Goals:
The overarching change we want to see in Virginia.

Objectives:
The measurable accomplishments necessary to meet the goal.

Strategies:
Specific actions that can be taken to help achieve the objective; strategies are based on research and best practices when possible.

At the national level, Congress passed the 21st Century Cures Act in December 2016, which authorizes funding for the Cancer Moonshot through 2023. The Cancer Moonshot, an initiative from the National Institutes of Health, aims to increase access to therapies for more patients, while improving prevention and early detection capacities.[4] In February 2022, President Biden announced a renewed focus of the Cancer Moonshot, highlighting new 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.[5] The goals, objectives, and strategies in the Virginia Cancer Plan are consistent with the recommendations from the Cancer Moonshot Blue Ribbon Panel, a panel of scientific experts.[6]

The Virginia Cancer Plan incorporates objectives and strategies from plans that statewide partners have developed to address cancer related issues such as healthy eating, active living, environmental risk reduction, and common risk factors for cancer such as tobacco use and obesity. One such plan that informed this Virginia Cancer Plan is the Strategic Plan for a Comprehensive Tobacco Control Program in Virginia, developed by the Tobacco Free Alliance of Virginia. All Virginians are encouraged to consult this plan as well and collaborate on strategies.

This plan is for all Virginians: residents, patients, survivors, caregivers, those that are part of public health agencies, community organizations; or health care systems, health insurers, educators, researchers; and employers and members of professional organizations. Everyone can use it to continue battling cancer in Virginia. Each objective in the plan includes a list of actionable strategies designed specifically for Virginia and best tailored to fit individual and organizational goals.

December 2023: Updates were made to the baseline and targets for various objectives to reflect up-to-date data.

What Virginians Can Do

Virginia Residents

- Maintain a healthy weight by eating well and exercising
- Get screened for cancer according to national guidelines
- Quit smoking and support smoke-free workplaces, schools, and parks
- Limit alcohol consumption
- Avoid ultraviolet (UV) radiation and use sun protection strategies
- Take advantage of cancer prevention vaccines
- Ensure that your home has been tested for radon and avoid environmental carcinogens
- Participate in research studies and clinical trials and volunteer with those whose lives are impacted by cancer

Local Public Health Agencies and Community Organizations

- Collaborate to remove barriers to cancer prevention, screening, treatment, and support
- Provide or host cancer survivor support groups
- Assist community members with signing up for insurance
- Provide cancer information and resources that resonate with those you serve
- Ensure access to education about the dangers of radon and access to testing kits and resources related to mitigation/remediation

Employers and Members of Professional Organizations

- Educate the public, employees, and policymakers about best practices for cancer screening, diagnosis, and treatment
- Provide time off for recommended cancer screenings and immunizations
- Support cancer survivors so they can continue to be successful employees
- Offer employee benefits that encourage wellness

Health Insurers and Policymakers

- Support access to and coverage of smoking cessation classes, nutrition programs, mental health providers, and cancer treatment drugs
- Ensure no cost-sharing for all recommended cancer screenings and immunizations
- Streamline access and reduce out-of-pocket costs to participate in cancer research and clinical trials
- Support policies that make it easier for Virginians to live healthy, tobacco-free lives
- Develop and offer palliative care services to patients and families
- Offer training so providers are knowledgeable about palliative care and hospice and can engage in meaningful conversations regarding goals of care
- Continue to learn about the intersection of cancer disparities and zip code (geography) and consider how you can provide equitable services to improve health outcomes

Providers and Healthcare Systems

- Offer patient navigation for cancer screening, treatment, and survivorship
- Refer to or integrate mental health services for cancer survivors
- Use electronic medical records and reminders to keep individuals up to date on cancer screenings and vaccinations
- Implement brief interventions, such as motivational interviewing, to improve individual health behaviors such as smoking, alcohol use, poor diet, and physical inactivity
- Keep patients and survivors aware of and up to date on family cancer history
- Connect patients and survivors to cancer research and clinical trials
- Submit cancer cases to the cancer registry
- Ensure palliative care and hospice are fully covered services
- Explore alternative payment models to support community-based palliative care services
- Support initiatives and payment models that encourage providers to help patients complete advance directives

Everyone in Virginia has a role to play in preventing and controlling cancer, and in supporting cancer survivors.

Together we can make a difference.

Virginia Cancer Burden

Cancer Definition

Cancer develops when abnormal cells grow uncontrollably and spread inside the body. These cells may form solid masses called tumors or may be found in the blood, which when malignant are diagnosed as cancer. Malignant tumors invade nearby tissues and may travel to other parts of the body, spreading the cancer (a process called metastasis). There are over 100 different types of cancer, with varying prognoses depending on type.[7] Cancer affects the physical, economic, and social well-being of individuals, families, and caregivers in Virginia.

Incidence

In 2018, there were 40,113 cases of cancer in Virginia, a rate of 394.8 cases per 100,000 people.[8] In 2018, the most common cancers in Virginia were female breast, prostate, lung, and colorectal (Figure 1).[9]

Cancer incidence is evenly spread throughout Virginia, with some areas in the Eastern and Southern parts of the state having higher rates (Figure 2). Overall, the incidence of cancers in Virginia has decreased since 2009 (Figure 4). Males in Virginia were more likely to develop cancer than females (419.9 versus 379.8 cases per 100,000, respectively).[9]

The most common types were prostate cancer in males and breast cancer in females (Figure 6).[8] Lung cancer was the second most common type of cancer for both males and females (Figure 6). When examining cancer incidence by race, Black males were more likely than White males, White females, and Black females to be diagnosed with any type of cancer.[8] Black males' incidence rate for prostate cancer is almost twice as high as for White males.[8] When examining the rate of cancer by age, in 2014-2018, Virginians aged 65+ were more likely than younger people to develop any type of cancer, at a rate of 1,807.4 cases per 100,000 people.[10]

A note about how data is reported

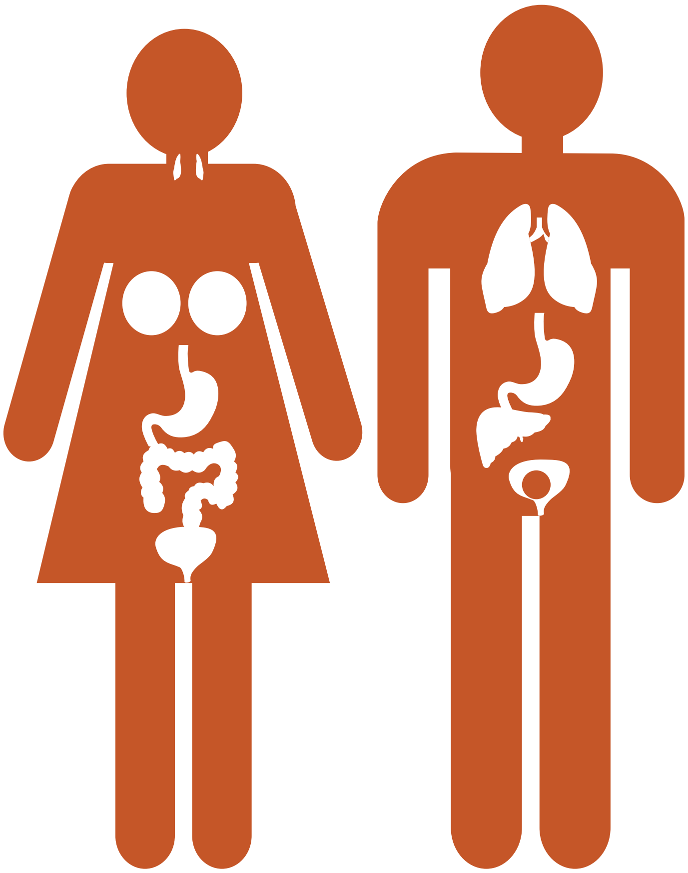
For many surveys and state level data, data are dichotomized into male and female genders. As such, "men" and "women" are referenced throughout the plan. This method of reporting data does not take into account the LGBTQIA+ community resulting in this population continuing to be underrepresented, potentially affecting the resources and care they receive. With that being said, the committee does not consider this plan to be truly complete without acknowledging this data gap.

Mortality

Cancer was the second leading cause of death among adults in both the US and Virginia with over 15,000 Virginians dying from cancer in 2020.[11] The Virginia cancer mortality rate in 2018 was 149.3 deaths per 100,000 people, similar to the overall rate for the United States.[8] The mortality rate for cancer has been steadily decreasing since 2009 (Figure 5). Males in Virginia died from cancer more often than females (178.9 versus 128.2 deaths per 100,000, respectively), and the cancers with the highest mortality rates were lung, female breast, prostate, and colorectal (Figure 7).[9] With the exception of lung cancer in females, the mortality rate was higher for Black people for all types of cancer compared to White or Hispanic people in Virginia. Mortality rates in Virginia are higher in the far western and southeast regions, which are areas of the state with more rural, underserved populations (Figure 3).

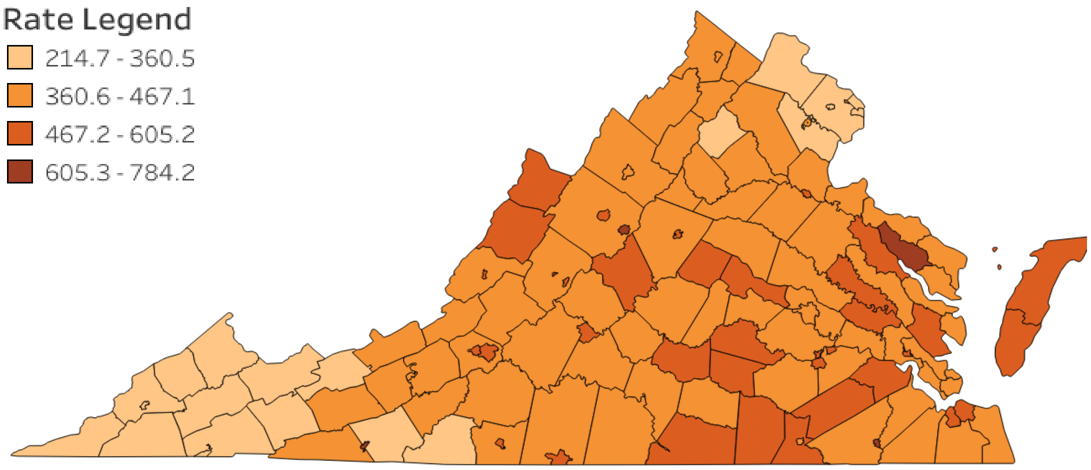
Figure 1. Cancer Cases by Anatomic Site (N=200,485) Virginia 2014-2018

Female Breast	32,603	**16.3%**
Lung and Bronchus	27,112	**13.5%**
Prostate	23,914	**11.9%**
Colon and Rectum	16,785	**8.4%**
Non-Hodgkin Lymphoma	8,027	**4.0%**
Kidney/Renal Pelvis	7,584	**3.8%**
Pancreas	6,021	**3.0%**
Oral Cavity and Pharynx	5,676	**2.8%**
Thyroid	5,640	**2.8%**
Other	52,520	**26.2%**



Data Source: Virginia Cancer Registry based on combined 2014-2018 data. Data were collected by cancer registries participating in the National Program of Cancer Registries.
Incidence rates are age-adjusted to the 2000 U.S. standard population.

Figure 2. All Sites Cancer Incidence Rates by Locality, 2014-2018



Data Source: Virginia Cancer Registry based on combined 2014-2018 data. Data were collected by cancer registries participating in the National Program of Cancer Registries.
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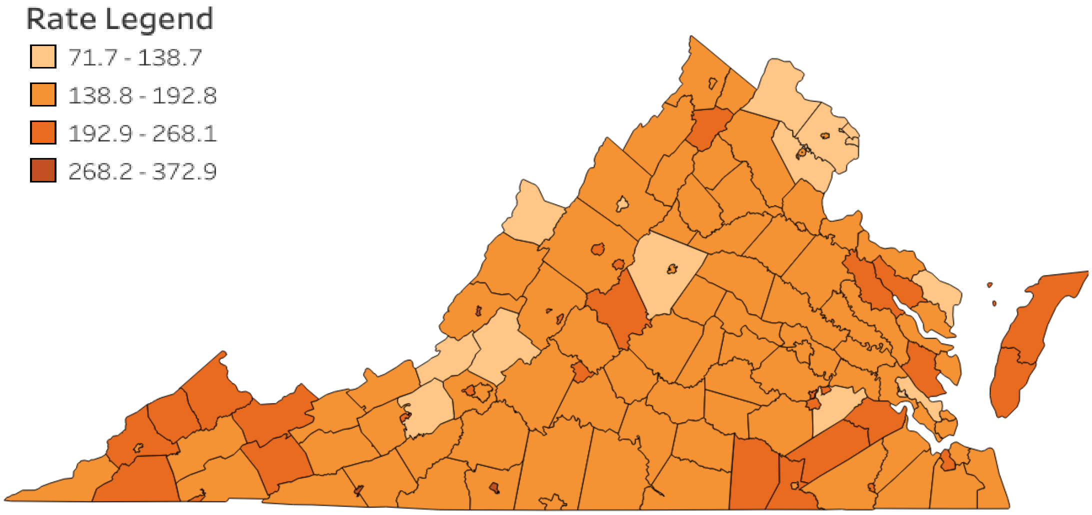
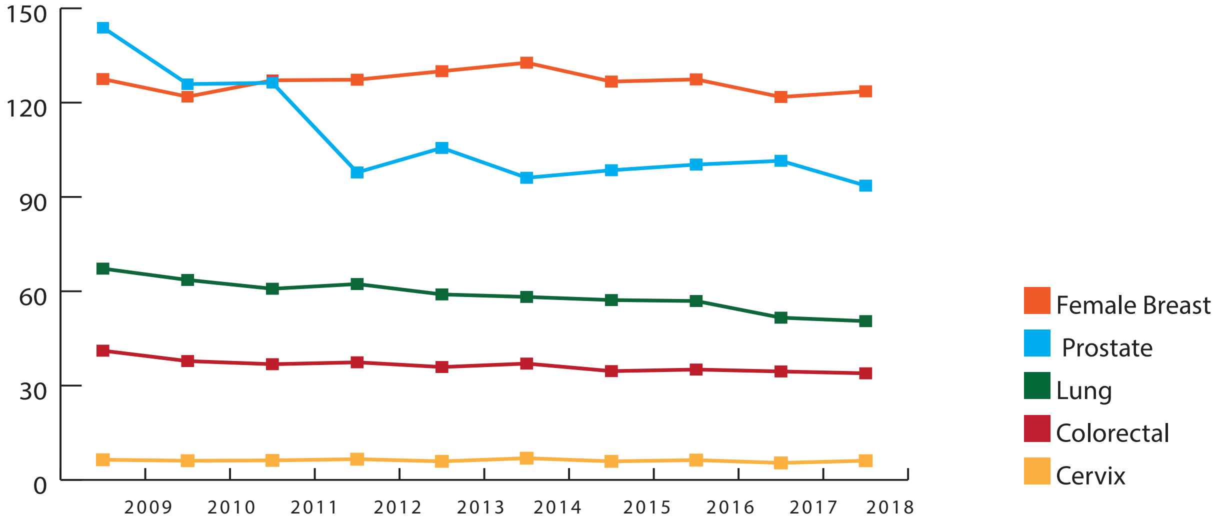
Figure 3. All Sites Cancer Mortality Rates by Locality, 2014-2018



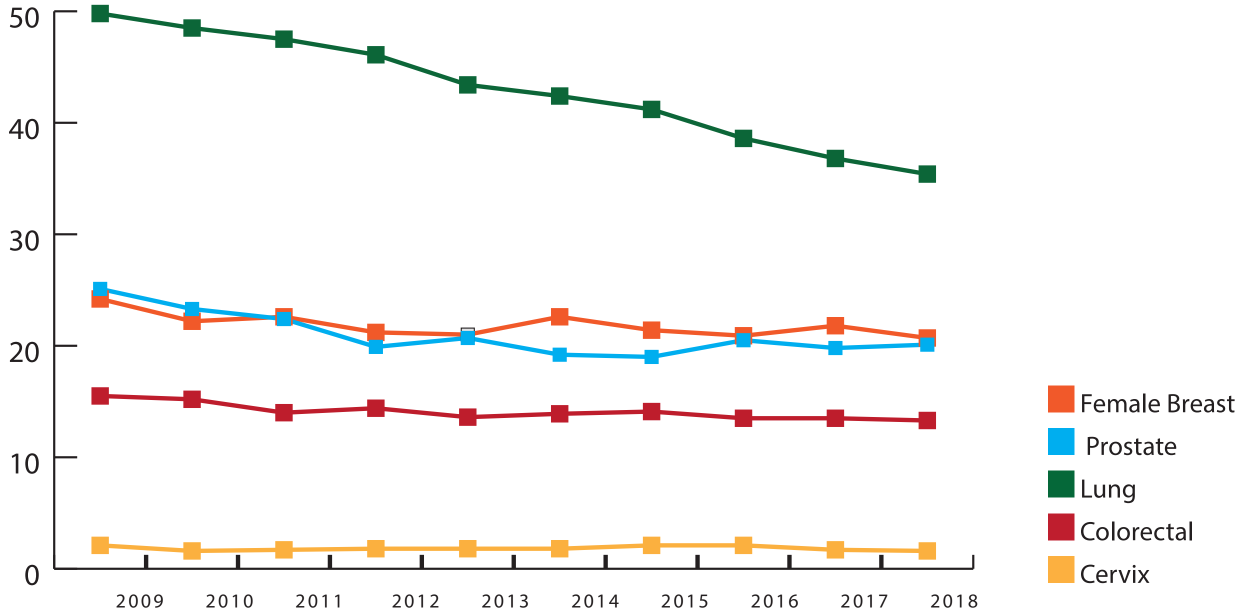
Data Source: Virginia Cancer Registry based on combined 2014-2018 data. Data were collected by cancer registries participating in the National Program of Cancer Registries.
Mortality rates are age-adjusted to the 2000 U.S. standard population.

Figure 4. Age-Adjusted Incidence by Selected Cancer, Virginia 2009-2018



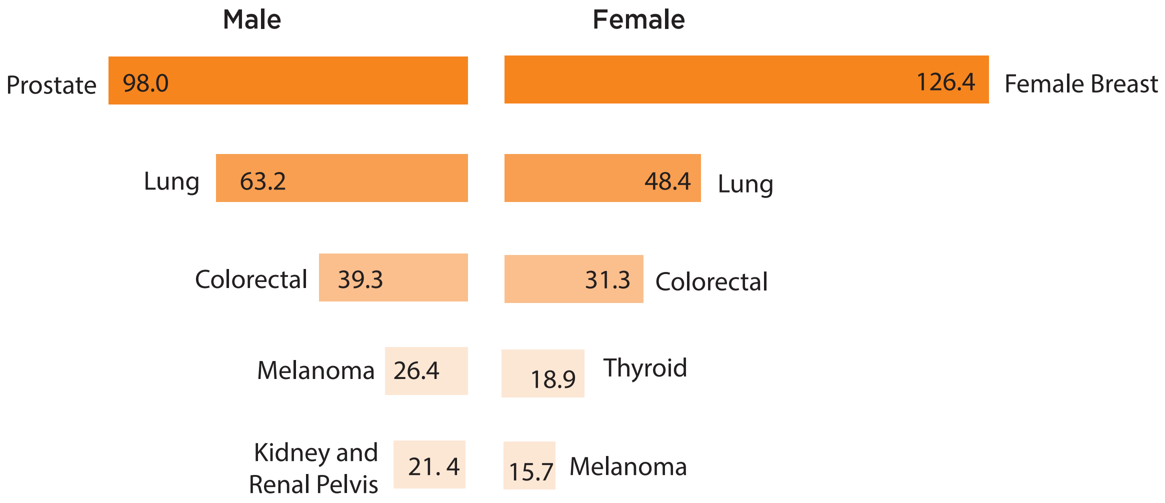
Data Source: Virginia Cancer Registry, 2009-2018. Data were collected by cancer registries participating in the National Program of Cancer Registries.
Incidence rates are age-adjusted to the 2000 U.S. standard population.

Figure 5. Age-Adjusted Mortality by Selected Cancer, Virginia 2009-2018



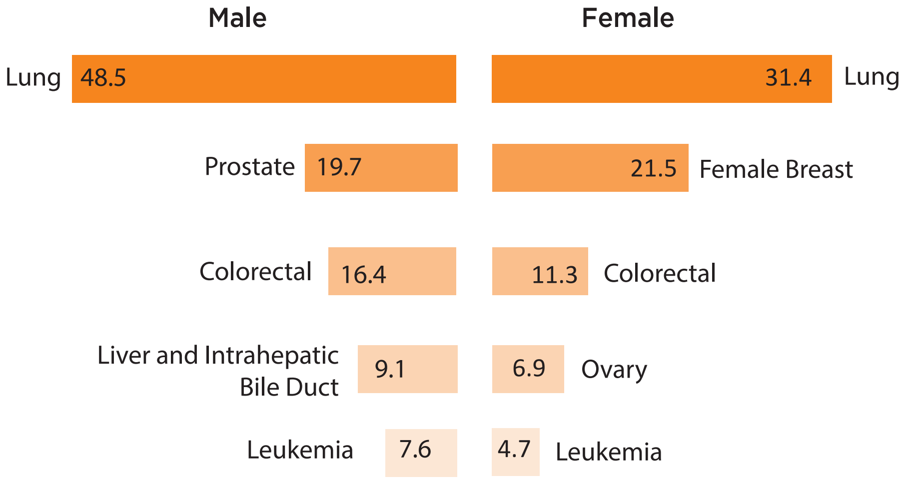
Data Source: Virginia Cancer Registry, 2009-2018. Data were collected by cancer registries participating in the National Program of Cancer Registries.
Mortality rates are age-adjusted to the 2000 U.S. standard population.

Figure 6. Top Five Cancers by Age-Adjusted Incidence Rates and Sex, Virginia, 2014-2018



Data Source: Virginia Cancer Registry based on combined 2014-2018 data. Data were collected by cancer registries participating in the National Program of Cancer Registries.
Incidence rates are age-adjusted to the 2000 U.S. standard population.

Figure 7. Top Five Cancers by Age-Adjusted Mortality Rates and Sex, Virginia, 2014-2018



Data Source: Virginia Cancer Registry based on combined 2014-2018 data. Data were collected by cancer registries participating in the National Program of Cancer Registries.
Mortality rates are age-adjusted to the 2000 U.S. standard population.

Pediatric Cancer

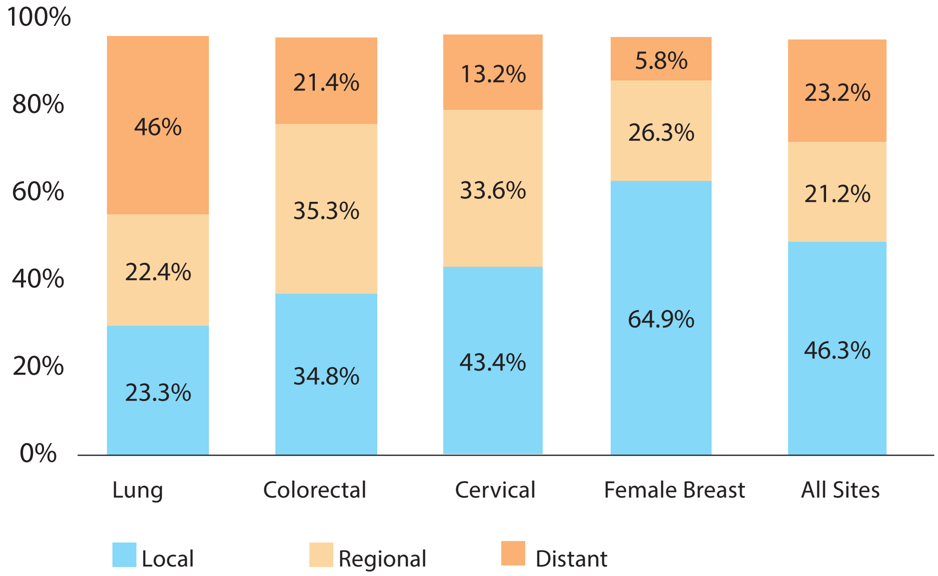
In 2018 in Virginia, 515 children and young adults ages 0-24 were diagnosed with cancer of any type. Cancer was the sixth leading cause of death in this age group, with an incidence rate of 18.8 cases per 100,000 children and young adults.[9] In 2014-2018, the most common types of cancer in children and young adults ages 0-39 were brain and central nervous system, leukemia, and Hodgkin's Lymphoma.[12] From 2015 to 2019, 43 children and young adults ages 0-20 annually died from cancer in Virginia.[10]

Nationally, the overall 5-year survival rate for pediatric cancers has increased to over 85% from 58% in the mid-1970s, due to medical and research advances.[13] The NCI funds research through federal dollars; however, pediatric cancer research represents only 4% of those funds. Each year about 60% of children with pediatric cancer in the US enter one of approximately 100 clinical trials sponsored by the NCI. This collaborative research program spearheaded by the Children's Oncology Group (COG) provides access to state-of-the-art therapies and the collective expertise of world-renowned pediatric specialists to children regardless of their geographic location. It enables children in Virginia to receive cutting-edge therapy without leaving their state.[14]

Cancer Stages

Cancer stage refers to the extent of disease at diagnosis. When cancer is local, it is contained within the original site or organ. Cancer in the regional stage has spread outside the original site to nearby organs or lymph nodes. Metastasis, also referred to as distant stage, is the process in which cancer cells break away from where they are first formed and travel to the other parts of the body to form new tumors. In general, diagnosing cancer in the local stage before it has spread leads to better health outcomes. In Virginia, 23.3%, 34.8%, 43.4%, and 64.9% of lung, colorectal, cervical, and breast cancers were diagnosed at the local stage from 2014-2018, respectively (Figure 8).[15]

Figure 8. Percent of Incident Cancer Diagnosis Stage, Virginia, 2014-2018



Data Source: Data Source: Virginia Cancer Registry based on combined 2014-2018 data. Data were collected by cancer registries participating in the National Program of Cancer Registries.
Stage defined using Derived Summary Staging values. Unstaged and in situ diagnoses were not included.

Cancer Data

A robust and comprehensive data collection and management system is essential to identify factors that influence cancer health disparities. Additionally, accurate and timely data are necessary to determine measurable and feasible cancer prevention and control objectives, identify baseline measures, and monitor progress toward targeted outcomes. Having access to high-quality, comprehensive, and inclusive data is crucial to setting appropriate measurable objectives. As this plan was prepared, the committee struggled with both finding and accessing comprehensive data for all objectives - note that in these cases, non-measurable objectives have been set as “to be determined”. With access to better data, CACV and partners would be able to set more measurable objectives, in turn striving to achieve them.

In addition, accessing existing data has some challenges, often with multiple procedural layers to navigate before being able to request and access data. As an organization, CACV is committed to finding ways to access quality data more efficiently.

Data sources such as the Behavioral Risk Factor Surveillance System (BRFSS)[19] and the Youth Risk Behavior Surveillance System (YRBSS, called Virginia Youth Survey (VYS) in Virginia)[38] from the CDC, and the Virginia Cancer Registry (VCR), along with other Virginia Department of Health data provide valuable information related to cancer risk and burden. BRFSS and VYS collect data on a variety of risk behaviors biennially. These data can be very beneficial for understanding population-level health behaviors, but some marginalized populations are not accurately represented in the data. Although the surveys and other data registries include questions on sexual orientation and gender identity, the percent of respondents who identify as such is so small that the data is suppressed. Therefore, usable data provided by these population level surveys at the state level are dichotomized into male and female genders. As such, “men” and “women” are referenced throughout the plan. This method of reporting data does not take into account the LGBTQIA+ community.

Certain other challenges limit the utility of these data sources and emphasize the need to optimize the cancer data collection and management system for the United States and for Virginia. Such challenges include inconsistent inclusion of optional questions in BRFSS and VYS, delays in reporting data, underreporting of cancer diagnosis, and small sample sizes resulting in target measures sometimes falling within a baseline’s margin of error.

Research has shown that certain risk factors may increase a person's chances of developing cancer. Risk factors include exposures to certain chemicals or other substances and engaging in certain health behaviors. They also include factors that people cannot control such as genetics, sex, and age.[16]

Genetics, Sex, and Age

Approximately 5-10% of cancers in the United States are in people with a family history of cancer.[17] Older age is the most important risk factor associated with cancer, with the median age of cancer diagnosis in the US being 66 years. Some cancers, such as bone cancer, are more common in people under age 20.[18] In addition, cancer incidence and mortality rates overall are higher among males than females.

Overweight and Obesity

Excess weight increases the risk of developing some types of cancer, including breast, colorectal, and pancreatic.[17] In 2020, 67.3% of Virginia adults were overweight or obese.[19] Healthy weight youth are less likely to be overweight or obese in adulthood, therefore reducing risk of cancer. In 2019, 27.8% of Virginia high school students were overweight or obese.[20]

Alcohol

Drinking alcohol can increase the risk of certain types of cancer, including mouth, throat, esophageal, larynx, liver, and breast.[17] The more a person consumes alcohol, the higher their risk. In 2020, 52.1% of Virginia adults reported drinking alcohol in the past month, and 14.8% engaged in binge drinking, defined as 4 or more drinks for women or 5 or more drinks for men in one sitting.[19] In 2019, 24.1% of Virginia high school students reported using alcohol in the past 30 days and 12.7% engaged in binge drinking.[20]

Smoking and Other Tobacco Use

One-third of all cancer deaths in the United States are associated with tobacco use, and almost 9 out of 10 lung cancer cases link to smoking.[21] Other cancers associated with smoking include colorectal, liver, esophageal, stomach, bladder, and pancreatic.[21] In 2020, 13.6% of Virginia adults smoked cigarettes and in 2019, 5.5% of Virginia high school students were current cigarette smokers.[19,20] Over 2,300 Virginia youth become new, daily smokers each year, and an estimated 150,000 Virginia youth will die prematurely due to smoking.[22] Non-smokers who regularly breathe in smoke from others' cigarettes have a 20-30% higher risk of developing lung cancer. [23]

Smokeless tobacco (also referred to as snus, snuff, or dip) is no safer - users have an increased risk of mouth, esophageal, and pancreatic cancers.[17] In 2020 about 3.4% of Virginia adults were current smokeless tobacco users. The percentage of youth who used smokeless tobacco in 2019 was 3.8%.[20]

A tobacco product on the rise among youth is electronic vapor products - devices that heat a flavored liquid into a vapor that the user inhales. About 19.9% of Virginia youth use electronic vapor products.[20]
Current studies show that e-cigarettes usually contain nicotine, and that users are more likely to try other tobacco products in the future.[24] Of people who use e-cigarettes, only 56% of 18- to 24-year-olds report never smoking cigarettes.[25]

According to the Robert Wood Johnson Foundation, "Health equity means that everyone has a fair and just opportunity to be as healthy as possible".[26] Similarly, Healthy People 2030 refers to health equity as the attainment of the highest level of health for all people and states that "Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and social determinants of health — and to eliminate disparities in health and health care."[27]

Health disparities are differences in health opportunities related to social, economic, and environmental factors. These include race, ethnicity, disability, gender, sexual orientation, gender identity, geographic location, income, and education, which are sometimes referred to as social determinants of health. Language barriers can also affect health outcomes by reducing health literacy. Health literacy is the capacity to "obtain, communicate, process, and understand basic health information and services to make appropriate health decisions."[28]

The NCI defines cancer health disparities as differences in cancer incidence, prevalence, mortality, survivorship, and related health conditions. Different populations experience cancer burden disproportionately. Lack of health care coverage, low socioeconomic status (SES), and lower education levels are major factors in cancer health disparities. These factors influence cancer risk associated with lifestyle (behaviors such as smoking, diet, and physical activity) and environment, in addition to reducing access to medical care including cancer screening and treatment. Individuals of a lower SES may be more likely to experience cancer-related financial stress. Cancer patients and survivors are more likely to experience financial toxicity related to healthcare costs than people who have never had cancer.[29]

This cancer plan addresses health equity with specific objectives and strategies focusing on populations experiencing health disparities. Most sections of the plan include SMARTIE objectives (specific, measurable, achievable, realistic, timely, inclusion, and equity-focused) that are data-driven and focus specifically on disproportionately affected populations at greater risk for certain health outcomes. Specifically, the plan includes objectives that focus on the Lesbian, Gay, Bisexual, Transgender, Questioning/Queer, Intersex, Asexual (LGBTQIA+) community, the Black population and those living in Southwest Virginia and other rural areas of Virginia, due to the health disparities that they are experiencing in a variety of risk behaviors and health outcomes.

Examples of cancer health disparities nationally include:[30]

- The cancer death rate is higher for people with low SES.
- The likelihood of being diagnosed with late-stage cancer is higher for medically underserved people and Hispanics/Latinos.
- Blacks have the highest mortality rate for many, all though not all, cancer types.
- People from minority, medically underserved, and geographically isolated groups have lower access to and participate less in cancer clinical trials.[31]
- The incidence rates of colorectal, lung, and cervical cancers are much higher in rural Appalachia than in urban areas in the region.
- The 5-year survival rate for breast cancer is lower for Black women compared to White women.
- LGBTQIA+ persons experience greater barriers to health insurance coverage and access to health care.[32]
- Research on lifestyle factors and the continuum of care related to cancer prevention, diagnosis, treatment, and survivorship for the LGBTQIA+ population is limited.
- Adolescent and Young Adult (AYA) patients from low SES or the LGBTQIA+ population are much less likely to be offered or to proceed with fertility preservation services.[33]

Clinical Linkages

In light of the social determinants of cancer burden and outcomes, the community health worker (CHW) model is a promising approach to improve care across the continuum of cancer prevention, detection, treatment, and survivorship.[34] A CHW applies their unique understanding of the experience, language and culture of the populations they serve to promote healthy living and to help people take greater control over their health and their lives. CHWs receive training to work in various community settings and partner in the delivery of health and human services. They carry out one or more of the following roles: providing culturally appropriate health education and information; linking people to the services they need; providing direct services, including informal counseling and social support; advocating for individual and community needs, including identification of gaps and existing strengths; and actively building individual and community capacity. In some cases, CHWs are known by other names including, but not limited to, promotores de salud, patient navigator, lay health promoter, and community health advocate.

CHWs, other appropriately trained community members, or clinicians may deliver patient navigation services. Common navigation services include improving health literacy, increasing awareness of and access to lifestyle change programs and preventive services, and assisting patients in accessing medical services.[35] In a treatment setting, patient navigation is the process of connecting patients to timely resources such as those addressing barriers to care, providing patient education, and offering support.

Navigation services can assist the patient and their caregivers with access to medical and psychosocial care throughout the cancer experience.[36] The Virginia Cancer Patient Navigation Network (VaCPNN) is comprised of patient navigators across Virginia who enhance outcomes for patients, families and healthcare teams through education, networking, and mutual support.[37]

Prevention

Cancer prevention reduces the risk of developing cancer through strategies that include promotion of healthy lifestyle behaviors, healthy environments, and laws and policies that support healthy lifestyles and environments. Although other preventable risk factors exist for cancer, the risks listed below were specifically selected for this plan because of their importance and urgency in Virginia.

Tobacco

In Virginia, an estimated 10,300 adult deaths each year are associated with smoking.[39] Risk of lung cancer drops with smoking cessation. In addition, the risk of dying from lung cancer decreases by half within 10 years of quitting.[21]

Nutrition and Physical Activity

Healthy eating habits and physical activity can reduce the risk of obesity. The American Cancer Society (ACS) recommendations for cancer prevention include achieving and maintaining a healthy weight throughout life; being physically active; eating a healthy diet with an emphasis on plant-based foods.[41] ACS also recognizes the importance of access to affordable, healthy foods, and safe environments for physical activity.

Alcohol

Drinking alcohol can increase the risk of certain types of cancer, including mouth, throat, esophageal, larynx, liver, and breast.[17] The more a person consumes alcohol, the higher their risk. In Virginia, from 2013 to 2016, there were an average of 1,852 alcohol attributable cancer cases per year in adults 30 years and over.[42] Dietary guidelines recommend that those who drink alcohol do so moderately, defined as one drink per day for women and up to two drinks per day for men.[43]

Human Papillomavirus (HPV)

Human papillomavirus (HPV) is a group of viruses that can cause genital warts and some cancers, including cervical, anal, genital, and mouth/throat cancers. HPV spreads through unprotected sexual contact. HPV is so common that the CDC reports that nearly everyone gets HPV at some point in their life.[44] Although most HPV infections go away without causing problems, it is possible for a person to develop cancer several years after infection with HPV. The HPV vaccine can protect against HPV-associated cancers. The recommendation is to administer the vaccine to all individuals before exposure to the virus. HPV is estimated to cause nearly 36,500 cases of cancer in men and women every year in the United States. HPV vaccination can prevent 33,700 of these cancers by preventing the infections that cause them.[45]

Quitline

Tobacco cessation services are available by calling 1-800-QUIT-NOW or by going to the website: [QuitNow.net/Virginia.](QuitNow.net/Virginia) Services include cessation coaching from trained specialists and a workbook to guide the quitting process. Cessation medications may be available. The Quitline also helps with quitting other forms of tobacco, including Electronic Nicotine Delivery System (ENDS) products. Chances of quitting tobacco successfully are eight times higher with the program.[40]

Hepatitis

Hepatitis B and C are infectious diseases that, when chronic, have been linked to liver cancer. Chronic hepatitis C also increases the risk of non-Hodgkin lymphoma and head and neck cancers.[46] Hepatitis B is vaccine preventable, whereas there is no vaccine for hepatitis C. Providing culturally competent information on vaccination, testing, and treatment of hepatitis will help decrease infections and therefore cancers.

Ultraviolet (UV) Radiation

UV radiation is a harmful form of radiation produced by the sun and by indoor tanning devices. Too much exposure to UV radiation can lead to skin cancer, which is the most common cancer in the United States.[47] In order to reduce exposure to UV radiation, the CDC recommends staying in the shade, particularly during midday hours; wearing protective clothing that includes long sleeves, hats, and sunglasses; using sunscreen with a sun protection factor (SPF) of 15 or higher; and avoiding indoor tanning.[48]

Youth and young adults are generally more likely to use indoor tanning beds than other age groups.[49] It is particularly important to address indoor tanning among youth because the risk of skin cancer is greater the younger an individual starts tanning. In Virginia, the use of tanning beds is restricted to adults ages 18 and over.[50]

Radon and Other Environmental Carcinogens

Radon is a natural, radioactive gas that has no color or smell. Radon forms in rocks and soil and can enter homes through cracks or gaps in the walls or foundations, or through the water supply. Radon is the second most common cause of lung cancer after smoking, and it is estimated that radon is linked to 21,000 lung cancer deaths in the United States each year.[51]

The Environmental Protection Agency (EPA) reports that many localities in central and western Virginia fall within the "radon belt", a region of the United States with a high risk for elevated levels of radon.[52] Radon testing is the only effective method of detection because radon is odorless and not visible. Radon test kits are relatively easy to use and inexpensive. Radon mitigation (reduction) systems are very effective, but costs vary depending on the size of the home and the methods needed. Radon-resistant construction techniques are now available to reduce radon levels in new construction.[53] Other environmental carcinogens include pesticides, solvents, and other chemicals. These can be found at hazardous waste sites and in the workplace, personal care and consumer products, drinking water supplies, and indoor or outdoor air.

Prevention

Goal 1: Reduce exposure to and use of tobacco products among Virginians.

	Objectives	Baseline	Target
1.1	Decrease the percentage of adult cigarette smokers.	**13.6%** (BRFSS 2020)	**12%**
1.2	Decrease the percentage of adult cigarette smokers in lower income (<$15,000) populations.	**25.3%** (BRFSS 2020)	**24%**
1.3	Decrease the percentage of adult cigarette smokers in Southwest Virginia.	**21.3%** (BRFSS 2020)	**18.2%**
1.4	Increase the percentage of adolescents in grades 9-12 who never tried a cigarette (even one or two puffs).	**81.8%** (VYS 2019)	**88.8%**
1.5	Decrease the percentage of adolescents in grades 6-8 who smoke cigarettes.	**1.9%** (VYS 2019)	**1.0%**
1.6	Increase the percentage of LGBTQIA+ adolescents in grades 9-12 who never tried a cigarette (even one or two puffs).	**69%** (VYS 2019)	**72.5%**
1.7	Increase the percentage of adolescents in grades 9-12 living in Southwest Virginia who never tried a cigarette (even one or two puffs).	**73.1%** (VYS 2019)	**76.7%**
1.8	Decrease the percentage of adults who use chewing tobacco, snuff or snus.	**3.4%** (BRFSS 2020)	**3.1%**
1.9	Decrease the percentage of adolescents in grades 9-12 who use chewing tobacco.	**3.8%** (VYS 2019)	**2.6%**
1.10	Decrease the percentage of adolescents in grades 6-8 who use chewing tobacco.	**2.2%** (VYS 2019)	**2.1%**
1.11	Decrease the percent of adolescents in grades 9-12 who use an electronic vapor product.	**19.9%** (VYS 2019)	**11.3%**

Strategies

a. Advocate for changing state laws to discourage consumption by increasing prices/taxes and requiring tobacco product retailers to be licensed.

b. Advocate for changing state laws to eliminate exemptions for indoor tobacco use.

c. Encourage physicians and other healthcare providers to screen for all tobacco use and refer to tobacco cessation resources as appropriate.

d. Promote culturally competent educational programs to discourage the use of all tobacco products and encourage cessation services (Quitline, Text to Quit, InDepth, etc.).

e. Increase funding for tobacco product cessation programs.

f. Advocate for adopting tobacco-free college, university, and healthcare campus policies.

g. Advocate for tobacco-free outdoor public spaces such as parks, beaches, playgrounds, etc.

h. Expand age-appropriate prevention messages through existing youth-oriented community-based channels, such as organized athletics, youth councils, 4H, and scouts.

i. Advocate for adopting a policy to prohibit the sale of flavored liquid nicotine.

j. Encourage MCOs to cover additional services, above those stipulated in their contracts to include tobacco cessation incentives to members, to reduce costs, and improve the quality of care through value-added services. *(Continued on next page).*

Goal 1: Reduce exposure to and use of tobacco products among Virginians.

Objectives	Baseline	Target
1.12 Decrease the percent of adolescents in grades 6-8 who use an electronic vapor product.	**6.1%** (VYS 2019)	**2.8%**
1.13 Increase registration and usage of Quit Now Virginia referral services by physicians and healthcare providers.	**574 sites** (VDH, Quit Now Virginia)	**861 sites**
1.14 Increase the percentage of providers who Ask, Advise and Refer patients to the Quitline.	**1.92%** (American Journal of Preventive Medicine)	**2.0%**

Strategies

k. *(Continued)* Increase education to adults about the impact of secondhand smoke on respiratory health and lung cancer risk in children and youth.

l. Seek to better understand the landscape of current secondhand smoke exposure in the home.

m. Develop and expand the use of tailored, evidence-based messages about the risks of tobacco use, with particular focus on populations in Southwest Virginia, Black persons, and the LGBTQIA+ community.

n. Increase understanding of the factors associated with increased risk for tobacco use among LGBTQIA+ youth.

o. Develop and implement evidence-based strategies to reduce risk of tobacco use among LGBTQIA+ youth.

p. Collaborate with Quit Now Virginia to educate and raise awareness among physicians and providers on the availability of patient referrals to cessation services.

q. Advocate for improved Quit Now utilization by promoting the Quit Now Virginia referral process via collaborative networks and partner communications.

r. Provide the United States Public Health Service Clinical Practice Guideline Treating Tobacco Use and Dependence resource to oncologists and providers statewide to improve awareness, importance and understanding of cessation services.

s. Encourage physicians and providers to be consistent with the appropriate standard of care by asking each patient about tobacco usage and referring tobacco, nicotine and vape users to Quit Now Virginia.

Goal 2: Increase the adoption of dietary patterns recommended to reduce cancer risk among Virginians.

	Objectives	Baseline	Target
2.1	Increase the percentage of adults who meet daily recommended fruit and vegetable intake.	**16.1%** (BRFSS 2019)	**18.8%**
2.2	Decrease the percentage of adolescents in grades 9-12 who did not eat other vegetables (not counting green salad during the past 7 days).	**13.9%** (VYS 2019)	**13.2%**
2.3	Decrease the percentage of adolescents in grades 9-12 who did not eat fruit during past 7 days.	**14.1 %** (VYS 2019)	**13.4%**
2.4	Decrease the percentage of adolescents in grades 6-8 who did not eat fruit in past 7 days.	**11.7%** (VYS 2019)	**11.1%**
2.5	Decrease the percentage of adolescents in grades 6-8 who did not eat vegetables in past 7 days.	**15.6%** (VYS 2019)	**14.8%**
2.6	Decrease the number of census tracts in Virginia designated as food deserts.	**269** (USDA ERS Food Access Research Atlas 2019)	**255**

Strategies

a. Implement nutrition and beverage standards in public institutions, worksites, schools, and other key locations, including sodium and sugar standards.

b. Strengthen healthier food access and sales in retail venues (e.g. corner grocery stores, commercial groceries), and community venues (i.e. farmers markets) through increased availability of fruit and vegetables and more low/no sodium/sugar options, improved pricing, placement, and promotion.

c. Provide simple, healthy snack recipes in school health curriculum.

d. Engage local farmers to collaborate with school systems to offer produce on school property.

e. Encourage schools to grow a garden 'farmacy'.

f. Promote breastfeeding and increase access to breastfeeding friendly environments.

g. Increase access to healthy food in food desert communities through innovations in education and food access including mobile markets, community gardens, community kitchens, etc.

Goal 3: Improve physical activity among Virginians.

	Objectives	Baseline	Target
3.1	Increase the percentage of adults who engage in 150 or more minutes of aerobic exercise and two or more days of muscle strength training exercise per week.	**22.7%** (BRFSS 2019)	**23.3%**
3.2	Increase the percentage of adults in Southwest Virginia who engage in 150 or more minutes of aerobic exercise and two or more days of muscle strength training exercise per week.	**19.3%** (BRFSS 2019)	**20.3%**
3.3	Increase the percentage of adults in low income (<$15,000) populations who engage in 150 or more minutes of aerobic exercise and two or more days of muscle strength training exercise per week.	**13.4%** (BRFSS 2019)	**14.0%**
3.4	Increase the percentage of adolescents in grades 9-12 who are active at least 60 minutes per day every day in the past 7 days.	**22%** (VYS 2019)	**23.1%**
3.5	Increase the percentage of LGBTQIA+ adolescents in grades 9-12 who are active at least 60 minutes per day every day in the past 7 days.	**11.8%** (VYS 2019)	**12.4%**
3.6	Increase the percentage of adolescents in grades 6-8 who are active at least 60 minutes per day every day in the past 7 days.	**29%** (VYS, 2019)	**30.5%**

Strategies

a. Strengthen community physical activity promotion through signage, worksite policies, social support, and joint use agreements in communities and jurisdictions, including with youth-serving organizations (including schools).

b. Develop a toolkit for implementation in transportation and community plans that promote walking, biking, and other forms of physical activity, including to and from schools.

c. Collaborate with youth-serving organizations (including schools) to promote evidence-based educational programs with a reward system.

d. Collaborate with community centers, health departments, and local recreation departments to provide various opportunities for sport and activity.

e. Implement diverse group and individual physical activities for youth, not just competitive sports.

Goal 3: Improve physical activity among Virginians.

	Objectives	Baseline	Target
3.7	Decrease the percentage of adults who are overweight or obese.	**67.3%** (BRFSS 2020)	**63.9%**
3.8	Decrease the percentage of adolescents in grades 9-12 who are overweight or obese.	**27.8%** (VYS 2019)	**27.5%**
3.9	Decrease the percentage of adolescents in grades 6-8 who self-describe as slightly or very overweight.	**26.4%** (VYS 2019)	**25.0%**

Strategies

a. Implement evidence-based engagement strategies to build support for lifestyle/behavior change.

b. Increase reach for evidence-based support for lifestyle/behavior change through collaborative networks, including youth-serving organizations (e.g., community health workers).

c. Increase electronic health records (EHR) adoption and the use of health information technology (HIT) to improve performance (e.g., provider recall/reminder systems for patients with elevated BMI and education and refer to appropriate resources).

Goal 4: Decrease underage and excessive alcohol consumption among Virginians.

	Objectives	Baseline	Target
4.1	Decrease the percentage of adults who are heavy drinkers.	**5.7%** (BRFSS 2020)	**5.4%**
4.2	Decrease the percentage of adolescents in grades 9-12 who had at least one drink in the past 30 days.	**25.4%** (VYS 2019)	**24.1%**
4.3	Decrease the percentage of adolescents in grades 6-8 who ever drank alcohol.	**21.6%** (VYS 2019)	**20.5%**

Strategies

a. Promote responsible alcohol use through tailored, evidence-based messages and strategies to adult alcohol users.

b. Educate youth and young adults on the connection between alcohol and cancer risk.

c. Collaborate with higher education institutions to reduce binge drinking.

d. Advocate for increasing alcohol taxes.

e. Limit alcohol advertisements in public locations near schools and parks where youth ages 21 and younger may be exposed.

f. Enhance the enforcement of laws prohibiting alcohol sales to minors.

g. Encourage providers to screen for unhealthy alcohol use in adults, including pregnant women, and provide brief counseling interventions.

Goal 5: Increase prevention and treatment of carcinogenic infectious diseases among Virginians.

	Objectives	Baseline	Target
5.1	Increase the percentage of females aged 13-15 years who are up to date on their HPV vaccine series.	**59.9%** (CDC 2020)	**80.0%**
5.2	Increase the percentage of males aged 13-15 years who are up to date on their HPV vaccine series.	**37.2%** (CDC 2020)	**80.0%**
5.3	Increase the percentage of 7th graders who have begun the HPV vaccine series.	**54.2%** (SIS, 2021)	**80.0%**
5.4	Increase the percentage of 12th graders who are up to date on their HPV vaccine series.	**32.2%** (SIS, 2021)	**80.0%**

Strategies

a. Provide accurate information to Virginians (including parents, schools, communities, physicians, and other healthcare providers) about the purpose, efficacy, and safety of the HPV vaccination.

b. Advocate for school-based health services to include HPV vaccination.

c. Increase implementation of client reminder and end-of-appointment scheduling of the next visit to increase the HPV vaccine series completion.

d. Always introduce the HPV vaccine as “same day, same way” so that this vaccine, also required for middle school, is considered of equal importance to the Tdap and meningitis vaccines.

e. Provide culturally competent education on the HPV vaccination and connection to HPV vaccination resources.

f. Educate providers on routinely recommending the HPV vaccine at ages 9-12.

g. Incorporate the use of standing orders to allow nurses and providers to administer HPV vaccines to eligible patients.

h. Utilize electronic medical records to identify care gaps, patient outreach, generating to identify care gaps, generate series completions reminders, and use the Virginia Immunization Information System (VIIS) to check patient vaccination status.

i. Educate the community and providers on vaccination recommendations for adults, including shared decision making with one’s physician for those 27-45 based on individual risk and benefit.

Goal 5: Increase prevention and treatment of carcinogenic infectious diseases among Virginians.

	Objectives	Baseline	Target
5.5	Increase the hepatitis B vaccination rate among Virginia 7th graders.	**96.4%** (SIS, 2021)	**100%**
5.6	Increase the hepatitis B vaccination rate of 15-59 year olds.	**TBD**	**TBD**
5.7	Reduce the number of new chronic hepatitis B infections.	**1,710** (VDH, 2021)	**1,368**
5.8	Reduce the number of new chronic hepatitis C infections.	**6,510** (VDH, 2021)	**5,208**
5.9	Decrease the rate of liver cancer deaths.	**6.1 per 100,000** (VDH, 2014-2018)	**5.8 per 100,000**
5.10	Increase the number of people with viral hepatitis who receive and continue (hepatitis B) or complete (hepatitis C) treatment, including people who use drugs and people in correctional settings.	**TBD**	**TBD**
5.11	Increase the proportion of people who are tested and aware of their viral hepatitis status.	**TBD**	**TBD**

Strategies

a. Analyze liver cancer incidence and hepatitis B & C surveillance data to better understand the relationship between viral hepatitis infection and liver cancer incidence in Virginia.

b. Provide culturally competent education to communities, patients, and providers on hepatitis B & C and the importance of vaccination, testing, and treatment to help prevent liver cancer.

c. Collaborate with community organizations serving disproportionately impacted populations to provide culturally competent education on the link between the opioid epidemic, increased rates of viral hepatitis, and liver cancer.

d. Train providers to identify patients at risk for hepatitis B & C, assess for risk factors (e.g., opioid or injection drug use), test according to age and risk-based guidelines, and connect with appropriate treatment.

e. Improve implementation of recommended monitoring and care for people with chronic hepatitis B or chronic hepatitis C related to treatment status to prevent morbidity and mortality.

f. Educate providers on routinely recommending the hepatitis B vaccine to all adults.

g. Utilize standing orders to allow nurses and providers to administer hepatitis B vaccines to eligible patients.

h. Use electronic medical records for identifying care gaps, patient outreach, generating series completions reminders, and use the Virginia Immunization Information System (VIIS) to check patient vaccination status. *(Continued next page).*

Goal 5: Increase prevention and treatment of carcinogenic infectious diseases among Virginians.

Strategies

i. *(Continued)* Provide viral hepatitis vaccination at a broad range of clinical and nontraditional community-based settings including HIV, STI, refugee health clinics, organizations that serve people who use drugs and/or people experiencing homelessness, and correctional facilities.

j. Educate pregnant patients on the importance of the hepatitis B vaccine birth dose.

k. Encourage the administration of universal hepatitis B vaccine birth dose within 24 hours of birth, including through encouraging use of quality measures (e.g., Healthcare Effectiveness Data and Information Set [HEDIS] measure).

l. Train providers to implement guidelines for hepatitis B and hepatitis C screening, diagnosis, and management during pregnancy into their standard of care.

Goal 6: Reduce overexposure to ultraviolet (UV) radiation from the sun and indoor tanning devices (to include, but not limited to tanning beds, booths, and sun lamps) among Virginians.

Objectives	Baseline	Target	Strategies
6.1 Decrease the percentage of youth reporting sunburns in the past 12 months.	**TBD**	**TBD**	a. Promote policies and education addressing skin cancer, sunscreen use, sun-protective clothing, and hazards of tanning bed use among youth-serving organizations, including but not limited to child development centers, schools, Parks and Recreation, youth worksites, 4H clubs and summer camps. b. Advocate for the inclusion of questions on the VYS regarding the use of sun-safe behaviors. c. Increase the availability of shade in public spaces.
6.2 Reduce the incidence rate of adults diagnosed with melanoma.	**28.8 per 100,000** (VCR, 2014-2018)	**27.4 per 100,000**	a. Provide education to the public regarding the risks of indoor tanning. b. Increase awareness of skin cancer and melanoma risk and early detection in high-risk communities (migrant workers, agriculture workers, outdoor workforce) through education and tailored (culturally appropriate) messages. *(Continued on next page.)*

Goal 6: Reduce overexposure to ultraviolet (UV) radiation from the sun and indoor tanning devices (to include, but not limited to tanning beds, booths, and sun lamps) among Virginians.

Objectives		Baseline	Target
6.2	Reduce the incidence rate of adults diagnosed with melanoma.	**28.8 per 100,000** (VCR, 2014-2018)	**27.4 per 100,000**

Strategies

c. *(Continued)* Increase access to dermatologists in high-risk communities with limited health provider access through innovative strategies (e.g., telehealth).

d. Partner with healthcare systems to increase access to free skin cancer screenings.

e. Provide tailored (or culturally appropriate) education to minority populations (including ethnic and LGBTQIA+ people) on skin cancer risk and prevention strategies.

f. Partner with employers to implement sun safety policies.

Goal 7: Reduce exposure to radon and other environmental substances linked to cancer.

Objectives		Baseline	Target
7.1	Increase the reported number of homes tested for radon in the past 12 months.	**29, 892** (Virginia Radon, 2021)	**31,386**
7.2	Increase the reported number of homes mitigated for radon in the past 12 months.	**3, 983** (Virginia Radon, 2021)	**4,182**

Strategies

a. Promote radon awareness in moderate/high-risk areas through media campaigns and other educational activities.

b. Encourage public schools to continue testing all new ground contact classrooms as required by Virginia Code 22.1-138 and provide a pathway for remediation as appropriate.

c. Continue to educate realtors and encourage home buyers to test for radon during real estate transactions - particularly in high and moderate risk areas

d. Adopt a policy to require mandatory reporting of radon tests performed and mitigation systems installed by radon professionals. *(Continued next page)*

Goal 7: Reduce exposure to radon and other environmental substances linked to cancer.

Strategies

e. *(Continued)* Encourage more contractors to become trained and certified radon mitigators as required by Virginia Code 32.1-229.01- particularly in the sections of Virginia with the greatest need.

f. Advocate for increasing state funding to provide more educational activities and radon test kits.

g. Increase the number of eligible local jurisdictions requiring new radon resistant construction techniques.

Objectives	Baseline	Target
7.3 Improve availability of and public access to information about environmental and occupational exposures.	**TBD**	**TBD**

Strategies

a. Support research and funding to increase the evidence for environmental cancer risk.

b. Improve Virginian's awareness and understanding of: 1) the risks of exposure to cancer-causing substances, including the potential risks from products used in and around the home (e.g., some pesticides, solvents and other chemicals); and 2) the identification of these substances and actions to reduce exposures.

c. Expand the responsible use of pesticides through increased access and utilization of Pesticide Applicator Certification.

d. Partner with federal, state, and local governments, businesses, and communities to reduce exposures to known or suspected environmental risk factors for cancer (e.g., carcinogens at hazardous waste sites, in the workplace, in personal care and consumer products, in drinking water supplies, and indoor or outdoor air).

e. Promote and implement workplace policies and support initiatives that reduce environmental exposures to substances linked to cancer.

Cancer Screening

Screening tests are used to find cancer early before there are any symptoms present and improve treatment outcomes. Regular screening tests (along with follow-up tests and treatment if diagnosed) reduce the risk of dying from cancer. National organizations, including the United States Preventive Services Task Force (USPSTF) and the ACS, recommend screening tests for some types of cancers.

Detecting cancer in the early stages increases the likelihood of successful treatment. The two major components of early detection are (1) education to promote early diagnosis and (2) screening. Recognizing warning signs of cancer early and taking prompt action can also lead to early diagnosis.[54] For example, recommendations to detect skin cancer in early stages are to monitor skin for sudden variations that can include but are not limited to irregular moles, sores that do not heal, thickened lumps, and changes in texture (especially around breast or genital areas). Symptoms of cancer are not limited to visual changes; sudden changes in bodily functions can also be cause for concern. These changes include but are not limited to unexplained abdominal pain, unusual bleeding or discharge or a change in bowel movements, difficulty swallowing or loss of appetite, weight change, unexplained night sweats, and fatigue. These symptoms do not necessarily mean that cancer is present, but if they persist, a doctor should be consulted.[55,56]

Shared Decision-Making

Conflicting or confusing guidelines may be presented to people with an array of options for cancer screening. Individuals must decide whether to screen, when to start screening, which test to undergo, how often to undergo the test, and when to stop screening.[57] Cancer screening tests have potential benefits, but also present potential harm including false positive results and risks involved in unnecessary follow up screening and medical procedures. Shared decision-making between patients and healthcare providers promotes informed decisions that take into account the patient's individual risk factors and are consistent with the patient's values and preferences.[58] Recommendations for breast and cervical cancer screening in the transgender community are not standardized across organizations, which may cause confusion for patients and providers. Transgender patients should discuss appropriate screening tests for their individual health status with their provider. For more information about cancer screening recommendations for the transgender community, please visit The Center of Excellence for Transgender Health.[59]

80% In Every Community

CACV and many of its partners support the National Colorectal Cancer Roundtable's (NCCRT) 80% In Every Community initiative, a shared goal to screen 80% of those eligible for colorectal cancer by the end of each year. The initiative, and its transition beyond 2018, aim to reduce colorectal cancer as a major public health issue. CACV convened the VCCRT in 2016, bringing together stakeholders including health systems, primary care practitioners, gastroenterologists, nurses, navigators, community groups, employers, insurers, and citizens to explore and address barriers to screening.

Early Detection

Breast Cancer

Breast cancer is the most commonly diagnosed cancer in Virginia. Mammography is the recommended screening test to detect breast cancer at its earliest stage. In 2020 in Virginia, 76.2% of women 40 - 74 years of age reported having a mammogram in the previous two years.[19]

Cervical Cancer

Regular screening tests can prevent cervical cancer. The recommended screening test for cervical cancer is the Pap smear and/or HPV testing. Because few women have symptoms or signs in the early stages of cervical cancer, screening for early detection is very important. In 2020, 79.8% of women in Virginia aged 21-65 years reported having had a Pap smear test in the previous three years.[19] Additionally, in 2020, 51.8% of women in Virginia reported ever having had a HPV test.

Lung Cancer

Lung cancer is the leading cause of cancer death in Virginia. A late-stage diagnosis is common in most lung cancers and makes treatment more difficult (Figure 8). Low-dose spiral computed tomography (CT) was adopted to detect lung cancer in 2013. Evidence suggests that this screening test reduces lung cancer mortality by about 20% compared to standard chest x-ray.[60]

Prostate Cancer

Incidence rates for prostate cancer spiked in the late 1980s and early 1990s, most likely due to increased use of the prostate-specific antigen (PSA) blood screening test.[60] Recommendations against routine PSA testing beginning in 2008 have reduced screening rates.[60] Patients and providers should discuss the uncertainties, risks, and potential benefits of prostate cancer screening. In 2020, 46.6% of men in Virginia 40+ had a discussion with their provider on the advantages or disadvantages of a PSA test.

Colorectal Cancer

Colorectal cancer incidence rates have declined for several decades due, in part, to an increase in screening. Some endoscopic screening tests are highly effective at preventing colorectal cancer because polyps, small growths of cells, are found and removed before they turn into cancer.[59] Several screening tests are available, including colonoscopy, CT colonography, flexible sigmoidoscopy, Fecal Immunochemical Test (FIT), Fecal Occult Blood Test (gFOBT) and stool DNA. Individuals should consult with their healthcare provider to choose the best screening test for them. In 2020 in Virginia, 67.6% of adults aged 45-75 reported receiving the recommended colorectal cancer screening.[19]

Other Cancers

Some types of cancer have no national screening guidelines, yet there are still screening options for individuals to discuss with their provider. Virginia identified the following cancers as priorities.

Invasive melanoma accounts for about 1% of all skin cancer cases in the US but is responsible for the vast majority of skin cancer deaths.[60] Individuals can monitor themselves for skin cancer by conducting a self-exam, looking for new or changing skin growths, particularly those that look unusual.[60]

Oral cancer can affect any part of the oral cavity, including the lips, tongue, mouth, and throat.[60] Early detection of any of these oral cancers can be achieved through the identification of abnormalities from visual inspection and neck exam for enlarged lymph nodes by dentists and/or physicians at regular check-ups.[60]

Ovarian cancer is the most common cause of death among gynecologic cancers and accounts for 4% of all cancer deaths among women.[60] There currently is no screening test recommended for the early detection of ovarian cancer in average-risk women.[60] A pelvic exam, sometimes in combination with a transvaginal ultrasound, may be used to evaluate women who have symptoms.[60]

Pancreatic cancer is difficult to detect in its early stages. It is difficult for healthcare providers to see or feel pancreatic tumors due to the location of the pancreas in the body.[61] Currently, no recommended screening tests are approved to detect pancreatic cancer.[61]

Importance of Family History

Cancers that occur in several members of the same family and/or at younger ages may link to an inherited gene mutation (hereditary cancer syndrome). Knowing one's family medical history helps determine whether cancer may be inherited and genetic testing for individuals with a relevant family history can provide valuable information regarding cancer risk.[62]

Genetic counselors help individuals develop their family history, weigh the pros and cons of testing, interpret test results, and understand their screening and medical management options.[63] For some adoptees, family medical history may be difficult to obtain. Adoptees should be empowered to seek their family medical history if possible. Genetic testing may be another option if family medical history is impossible to obtain.

Goal 8: Increase high-quality cancer screening and early detection rates for Virginians.

Overall Strategies

A. Provide education to physicians, other healthcare providers, and the public about:
   a. current national cancer screening guidelines for populations at high risk for cancer.
   b. barriers faced by the LGBTQIA+ community in obtaining cancer screenings.
   c. available low and no cost cancer screening resources for low-income, underinsured, and uninsured populations.

B. Encourage physicians and other healthcare professionals to use evidence-based practices to increase cancer screening rates (ie, patient reminders, provider reminders, provider assessment and feedback).

C. Advocate
   a. to ensure coverage of screenings across all public and private payer options.
   b. for state and federal policies that improve access to health insurance and/or free or low-cost screenings.
   c. for the implementation of workplace policies to provide (paid) time off for individuals to complete recommended cancer screenings and follow up studies.
   d. to reduce barriers to screening among underserved populations using patient navigation, including community health workers, and other culturally competent outreach strategies.
   e. to support policies that increase health equity and reduce systemic race-related barriers to screening.

D. Work with key community-based stakeholders to:
   a. identify resources to screen rural and uninsured/low-income populations.
   b. identify for themselves existing barriers that have not been addressed and/or acknowledged.

Objectives		Baseline	Target
8.1	Increase the percentage of women aged 40-74 who received a mammogram in the past two years.	**76.2%** (BRFSS 2020)	**80.0%**
8.2	Increase the percentage of Hispanic/Latina women aged 40-74 who received a mammogram in the past two years.	**TBD**	**TBD**

Strategies plus overall strategies

a. Provide education to physicians, other healthcare providers, and the public about:
   - current national breast cancer screening guidelines stressing informed decision-making.
   - issues related to breast cancer screening in the LGBTQIA+ community.
   - the benefits of 3D mammograms for women with dense breasts.

b. Encourage healthcare providers and imaging centers to have conversations with their patients about breast cancer risk assessments at routine annual/physical exams.

c. Make more resources and marketing materials available in Spanish and/or preferred language on mammography reaching the Hispanic/Latino community.

Goal 8: Increase high-quality cancer screening and early detection rates for Virginians.

	Objectives	Baseline	Target
8.3	Increase the percentage of women aged 21-65 who have had a pap test in the past 3 years.	**79.8%** (BRFSS 2020)	**83.8%**
8.4	Increase the percentage of women who have ever had an HPV test.	**51.8%** (BRFSS 2020)	**54.4%**

Strategies **plus overall strategies**

a. Provide education to physicians, other healthcare providers, and the public about:
   - current national cervical cancer screening guidelines.
   - issues related to cervical cancer screening in the LGBTQIA+ community.

b. Increase the number of providers in underserved areas to provide cervical cancer screenings.

c. Support research on other screening methods and their utilization in communities of need.

	Objectives	Baseline	Target
8.5	Increase the percentage of adults aged 45-75 who receive recommended colorectal cancer screening.	**67.6%** (BRFSS 2020)	**80%**
8.6	Reduce the colorectal cancer mortality rate in Southwest Virginia.	**16 per 100,000** (VCR 2014-2018)	**15.2 per 100,000**

Strategies **plus overall strategies**

a. Provide education to physicians, other healthcare providers, and the public about:
   - the increase in early onset colorectal cancer in individuals younger than 45.
   - the symptoms to look for in individuals under the age of 45.
   - issues related to colon cancer and colon cancer screening in the LGBTQIA+ community.
   - the importance of personal choice for the selection of colorectal cancer screening tests including non-invasive tests.

b. Update EMR reminders to be aligned with (USPSTF and ACS) guidelines (starting at age 45).

Goal 8: Increase high-quality cancer screening and early detection rates for Virginians.

Objectives		Baseline	Target	Strategies plus overall strategies
8.7	Increase the percentage of lung cancers diagnosed at the localized stage.	**22.7%** (VCR 2014-2018)	**27.3%**	a. Provide education to physicians, other healthcare providers, and the public about current national lung cancer screening guidelines and the use of risk assessments to determine who should be screened based on current national guidelines. b. Promote shared decision-making process for lung cancer screening c. Support health systems as they work to create and implement lung cancer screening programs.
8.8	Increase the percentage of high-risk current or former smokers aged 50-80 who receive lung cancer screenings.	**9.8%** (BRFSS 2022)	**10.3%**	
8.9	Increase the percentage of lung cancers diagnosed at the localized stage for African Americans.	**20.7%** (VCR-2014-2018)	**21.7%**	
8.10	Increase the percentage of men aged 40+ who have ever had a discussion with their provider on the advantages or disadvantages of a PSA test.	**46.6%** (BRFSS 2020)	**69.8%**	a. Encourage health systems and healthcare providers to adopt a comprehensive prostate cancer risk assessment (including Black persons) which promotes shared decision-making discussions between the provider and the patient. b. Provide education to men in Virginia regarding national prostate cancer screening guidelines for those who are at high risk.
8.11	Increase the percentage of Black men aged 40+ who have ever had a discussion with their provider on the advantages or disadvantages of a PSA test.	**49%** (BRFSS 2020)	**51.5%**	
8.12	Increase the percentage of melanomas that are diagnosed at the local stage.	**78.9%** (VCR 2014-2018)	**80%**	a. Provide education to physicians, other healthcare providers, and the public about: • Cancer symptoms and potential screening options. • Genetic counseling and testing options and methods. • Current national skin cancer screening guidelines. b. Support research on new screening options for these cancers. c. Promote policies that improve access to dental care in Virginia. d. Encourage dermatologists to reference different skin conditions found on darker skin.
8.13	Increase the percentage of oral cancers that are diagnosed at the local stage.	**30.7%** (VCR 2014-2018)	**33%**	
8.14	Increase the percentage of ovarian cancers that are diagnosed at the local stage	**16.8%** (VCR 2014-2018)	**17.3%**	
8.15	Increase the percentage of pancreatic cancers that are diagnosed at the local stage.	**12.8%** (VCR 2014-2018)	**15%**	

Diagnosis and Cancer Directed Therapy

Diagnosis

A variety of tests can diagnose cancer when the disease is suspected. The tests used are determined based on the type of cancer that may be present and its location in the body. These include laboratory tests using blood, urine or other body fluids, imaging procedures (CT scan, nuclear scan, ultrasound, Magnetic Resonance Imaging (MRI), Positron Emission Tomography (PET) scan, x-ray, and biopsy (testing a sample of the tissue where cancer is suspected).

Early cancer diagnosis facilitates treatment at earlier stages. Diagnosis and treatment at earlier stages improves survival and quality of life for cancer patients.[64]

Therapy

Cancer directed therapy is a treatment intended to remove, destroy, or reduce the size of tumors or delay the spread of cancer cells. The major types of cancer directed therapy are surgery, radiation, chemotherapy, hormonal therapy, and biological therapies such as immunotherapy.

Non-cancer directed therapy is any treatment meant to prepare the body for cancer directed treatment, prolong the patient's life, reduce pain, or make the patient more comfortable. This is supportive care.[65]

Importance of Evidence-Based Care

Use of evidence-based diagnosis and treatment is essential to achieving optimal outcomes for cancer patients. Evidence-based medicine relies on rigorous scientific research to determine which therapies are most likely to result in the best patient outcomes in disease progression and quality of life.[66]

Cancer patients can experience significant fertility and sexual side effects from treatment but may not feel comfortable discussing these issues with their treatment provider. The American Cancer Society and other reputable organizations provide resources for patients and health care providers to facilitate discussion of the important aspects of quality of life.[67]

Many cancer patients seek complementary, alternative, and integrative medicine. Complementary treatments are ones used along with standard, evidence-based medical treatment. Alternative medicine is used instead of standard, evidence-based care.[68] Treatments of this type can be important components of effective, patient-centered cancer care. However, patients should consult with their primary cancer treatment provider while seeking these types of care to ensure that they are safe and do not interfere with their standard treatment regimen.

Diagnosis and Cancer Directed Therapy

The Commission on Cancer (CoC) is a consortium of professional organizations that focus on survival and quality of life for cancer patients.[69] It sets national standards for accreditation of cancer centers in the United States and Puerto Rico to ensure high-quality, multidisciplinary, and comprehensive cancer care. These standards follow evidence-based guidelines. As of August 2022, there were 38 CoC-accredited cancer programs in Virginia.[70] The National Comprehensive Cancer Network (NCCN) is an alliance of 27 leading cancer centers dedicated to high quality cancer care through a comprehensive set of evidence-based guidelines for cancer management.[71] The NCI Cancer Center Program also provides oversight for cancer treatment through its NCI-Designated Cancer Centers.[72] NCI-Designated Cancer Centers conduct studies including basic laboratory research, population research and clinical trials to test new treatments. There are two NCI-Designated Cancer Centers in Virginia – the Massey Cancer Center at Virginia Commonwealth University in Richmond and the University of Virginia Comprehensive Cancer Center in Charlottesville.

Access to Care

Access to services related to cancer diagnosis and cancer-directed therapy is a major concern for all cancer patients. Access to health care services means “the timely use of personal health services to achieve the best health outcomes.”[73] Adequate access to care requires the ability to enter the health care system (i.e. insurance coverage), proximity to a location where the services are provided (geographic location) and finding a provider that the patient trusts and can communicate with.[74] Financial barriers, lack of health insurance, lack of available services and lack of culturally competent care reduce access to care. Social determinants of health including race, ethnicity, SES, age, sex, disability status, sexual orientation, gender identity and residential location are often associated with differences in access to care. Strategies to improve access to care include programs to promote health literacy, patient navigation services, and access to clinical trials.

Workforce Capacity for Cancer Care

Adequate workforce capacity is vital to ensure quality cancer care.[75] The number of oncology clinicians has not kept up with the number of people diagnosed with cancer, particularly in underserved populations including rural areas. Additionally, advances in cancer have increased complexity of cancer care.[75]

Opportunities to enhance cancer care workforce capacity include patient navigation.[76] Navigators assist patients throughout the care continuum and improve access to care by addressing health literacy and serving as patient advocates and care liaisons to streamline the care process. Benefits of oncology patient navigator programs include improved screening rates, adherence to recommended treatment and timeliness of cancer care.[77]

Access to Clinical Trials

Cancer clinical trials are essential to continue advancements in cancer care to improve survival rates and quality of life for cancer patients. Participation in clinical trials ensures access to standard of care for cancer patients. Barriers to clinical trial participation by cancer patients include logistical concerns (time, travel, etc.), financial burden, patient health literacy and mistrust, and the uncertainty inherent in clinical trials.[78,79] Patient navigation is a promising approach to improve equitable enrollment and retention of cancer patients in clinical trials.[79]

Diagnosis and Cancer Directed Therapy

Goal 9: Increase availability and access to current evidence-based diagnosis and treatment options following national standards.

	Objectives	Baseline	Target
9.1	Increase the percentage of adults with any kind of health care coverage.	**88.9%** (BRFSS 2020)	**93.3%**
9.2	Increase the percentage of cancer patients with health insurance that paid for all of their cancer treatment.	**95.5%** (BRFSS 2020)	**98.0%**
9.3	Increase the percentage of Black cancer patients with health insurance that paid for all of their cancer treatment.	**93.1%** (BRFSS 2020)	**97.8%**
9.4	Reduce late-stage cancer diagnoses (all sites).	**43.5%** (VCR, 2014-2018)	**41.3%**
9.5	Reduce late-stage cancer diagnoses for Black cancer patients (all sites).	**45.8%** (VCR, 2014-2018)	**43.5%**
9.6	Reduce the percentage of cancer patients who report that their pain is not under control.	**36.1%** (BRFSS 2020)	**34.3%**

Strategies

a. Provide education to providers, patients, and community stakeholders about cancer diagnostic and treatment options.

b. Promote collaboration between community and academic treatment centers through continuing medical education, research and public education.

c. Promote accreditation of cancer centers by the Commission on Cancer (CoC).

d. Advocate for inclusion and coverage of fertility preservation services.

e. Advocate for and support legislation favorable to cancer patients, including no limitations on lifetime and annual coverage and pre-existing conditions.

f. Advocate that state insurance plans provide comprehensive cancer care for diagnosis and therapy and provide adequate coverage for diagnosis and treatment.

g. Provide education to providers, patients, and community stakeholders on the impacts of the opioid epidemic on the access to necessary pain medications for cancer patients as part of their cancer treatment.

Goal 10: Reduce socioeconomic, structural, cultural and workforce barriers to obtaining quality diagnosis and treatment.

	Objectives	Baseline	Target
10.1	Reduce the percentage of adult cancer survivors who could not see a doctor when they needed to because of costs in the past 12 months.	**6.7%** (BRFSS 2020)	**6.4%**
10.2	Increase the number of patient navigators in the state navigator network.	**57** (VACPNN 2022)	**70**

Strategies

a. Provide education to decision makers (legislators and policy makers) regarding barriers to obtaining cancer care.

b. Provide education to and identify resources to assist patients and families in avoiding and overcoming financial toxicity.

c. Promote the use of patient navigation to assist patients in overcoming barriers to care.

(Continued on next page.)

Goal 10: Reduce socioeconomic, structural, cultural and workforce barriers to obtaining quality diagnosis and treatment.

Objectives	Baseline	Target
10.3 Increase the number of patient navigators in the state navigator network in the most underserved areas of the state.	**14** (VACPNN 2022)	**20**
10.4 Increase the number and range of types of health providers involved in cancer care.	**TBD**	**TBD**
10.5 Increase the number and range of types of health providers involved in cancer care in underserved areas of the state.	**TBD**	**TBD**

Strategies

d. *(Continued)* Provide education to vulnerable populations on the importance of seeking high quality care and connect to resources for cancer treatment.

e. Promote access to patient materials that adhere to health literacy standards and promote resources that help providers talk with clients that have low health literacy and/or language barriers.

f. Identify and facilitate resources that address structural barriers to include increasing transportation to and from cancer treatment centers.

g. Promote opportunities to retain/increase the number of healthcare professionals, primarily in underserved areas.

h. Encourage continued coverage of telehealth services post-COVID, especially for rural and underserved areas, with services by audio if video is not available.

i. Encourage inclusion of a question in the BRFSS cancer module to identify respondents in active cancer therapy.

j. Monitor data on charity care - 2019 VHI data show 3.58%.

Goal 11: Increase the number and diversity of cancer patients enrolled in clinical research trials.

Objectives	Baseline	Target
11.1 Increase the percentage of Virginia cancer patients who participate in clinical cancer research trials.	**3.9%** (BRFSS 2020)	**4.1%**
11.2 Increase enrollment in clinical trials among people from racial/ethnic minority groups with cancer.	**TBD**	**TBD**
11.3 Increase enrollment in clinical trials among cancer patients who live in rural areas.	**TBD**	**TBD**

Strategies

a. Conduct formative evaluation with stakeholders regarding a statewide, culturally and linguistically appropriate media campaign to increase public awareness about the benefits of participating in clinical trials.

b. Identify, reduce, and/or address barriers to participation in clinical and research trials. *(Continued on next page.)*

Goal 11: Increase the number and diversity of cancer patients enrolled in clinical research trials.

Strategies

c. *(Continued)* Provide education to physicians, other healthcare providers, patients, and caregivers on the availability, purpose, and benefits of clinical and research trials.

d. Promote policies that support availability of, patient access to, and participation in clinical trials.

e. Improve access to available, high quality educational resources describing clinical trial recruitment, eligibility, and participation.

f. Advocate for increased funding of clinical and translational research.

g. Advocate for third party payers to facilitate payment for participation in clinical trials to help increase participation (include transportation to research site, etc.).

h. Enhance recruitment and retention strategies to engage diverse patients.

i. Assess the availability and utility of Virginia clinical trial data.

Goal 12: Establish a system for regular collection of data regarding cancer care across the Commonwealth of Virginia.

Objectives	Baseline	Target
12.1 Implement a biennial survey of cancer treatment providers regarding cancer care.	**TBD**	**TBD**

Strategies

a. Establish a CACV task force to develop and implement a survey of Virginia cancer treatment providers regarding cancer care.

b. Educate the Virginia General Assembly on the value of the survey and importance of funding for accurate data collection and analysis.

Survivorship and Palliative Care

Survivorship and palliative care improve the quality of life for patients, their family, and caregivers across the cancer continuum. While they share complementary goals, the focus and approach are somewhat different.

Cancer Survivorship

Cancer survivorship focuses on the physical, mental, emotional, social, and financial health and wellbeing of a person with cancer from diagnosis through the end of life.[80] The survivorship experience includes whole person issues (may incorporate family, friends, and caregivers) with follow-up care, late effects of treatment, disease recurrence, second cancers and quality of life.[80]

To support cancer survivorship, the Commission on Cancer (CoC), in its 2020 Standards, included Survivorship Programs as a necessary requirement for institutions to achieve accreditation by providing optimal resources for cancer care.[81] Survivorship programs aim to meet the needs of cancer patients treated with curative intent and at minimum must include at least three services per year. Potential Survivorship Program services include treatment summaries; survivorship care plans; screening for new cancers; support groups and services; screen programs for cancer recurrence; financial support services; physical activity programs; seminars for survivors; rehabilitation services; nutritional services; psychological support and psychiatric services and formalized referrals to experts in cardiology, pulmonary services, sexual dysfunction and fertility counseling.[81] There are over 1500 institutions accredited in the United States and 38 in Virginia.[81,82]

Optimal nutrition and physical activity are an important part of holistic cancer care. Nutritional and physical activity assessments and counseling should start at diagnosis and continue throughout survivorship with the goal of improving or maintaining adequate nutritional and physical status, respectively.[83] To increase the likelihood of survival and long-term health, the ACS recommends:

1. Avoidance of obesity and maintenance or increase in muscle mass through diet and physical activity;
2. Engagement in regular physical activity, with respect to type of cancer, health status, treatment, symptoms and side effects;
3. Meet nutrient needs by following a healthy eating pattern that is consistent with recommendations to prevent chronic disease;
4. Follow the general advice of the ACS Guidelines for Diet and Physical Activity for Cancer Prevention to reduce risk of a new cancer.[83]

At its simplest, the ACS recommends that cancer survivors: get to and stay at a healthy weight, be active and eat a variety of healthy foods from plant sources.[84]

People who have or have had cancer may struggle with the burden of the costs of cancer (e.g. cancer treatment and medication expenses; related tests, procedures and surgeries; loss of job or change of job status; transportation costs and many others). Financial toxicity is defined as the negative outcomes that cancer causes (whether directly or indirectly) on a person's financial status and quality of life.[85] Multiple systemic and individual interventions have been suggested to ameliorate some of the financial burdens of cancer.

Systemic recommendations for decreasing some of the costs of cancer include policy change to decrease medication prices and provide better insurance coverage for cancer survivors, having value-based pricing and pricing transparency in treatment centers and hospitals and providing access to a financial navigator.[85,86] Oncologists should focus on value-based care and treatments and communication of these to patients.[87] Having health insurance is one of the most effective ways to decrease the financial burden of cancer.[86] Individuals may seek out a financial navigator, learn about health insurance options and inform themselves about financial and financial education/organization resources.[85,87]

Palliative Care

As it relates to cancer patients, palliative care focuses on the support of patients and family caregivers who are coping with physical, emotional, social, and spiritual concerns related to their cancer diagnosis. Patients may be referred to palliative care to help manage symptoms, such as pain, or to help with discussions and decisions regarding medical treatment and goals of care. Palliative care can be helpful for patients of any age and at any point in their illness trajectory from the time of diagnosis through the end of life and is delivered through an interdisciplinary team of physicians, nurses, social workers, and chaplains.[88]

Hospice is a special kind of care that people can choose when they are near the end of life and have stopped treatment to cure or control their cancer. Hospice care focuses on quality of life versus the extension of life and supports patients and their families during the dying and bereavement processes.[89,90]

It is important to educate patients and their families on palliative care and end of life options throughout the continuum of care. Options include, but are not limited to, hospice care, pain and symptom management, advance directives, physician orders for life-sustaining treatment, religious and spiritual services, and the right to refuse and discontinue treatment.[91]

More information on palliative care is available on the Virginia Department of Health Palliative Care website. Pediatric cancers are often different from the types of cancers that develop in adults and in many cases are not treated in the same manner. Therefore, it is important to treat children at a center that is a member of the Children's Oncology Group (COG) where the treatment team understands the unique needs of children and teens with cancer and their families. Because childhood cancer threatens every aspect of the family's life and the possibility of a future, optimal cancer treatment must include psychosocial care.[92] Psychosocial care has been proven to yield better management of common disease-related symptoms and adverse effects of treatment such as pain and fatigue.[93]

Survivorship and Palliative Care

Goal 13: Optimize the quality of life for patients and caregivers across the cancer continuum.

Objectives		Baseline	Target	Strategies
13.1	Increase access to survivorship programs.	**TBD**	**TBD**	a. Maintain Behavioral Risk Factor Surveillance Survey (BRFSS) Survivorship Module. b. Quantify available survivorship programs in Virginia c. Work with community stakeholders and leaders to increase access to survivorship services. d. Identify gaps and disparities in access to statewide survivorship resources in Virginia. e. Promote consistent recognition that survivorship begins at time of diagnosis f. Promote funding for survivorship programs across the state of Virginia, so that all people have access to this type of program regardless of geographic location, race/ethnicity, gender and socioeconomic status.
13.2	Increase the use of survivorship programs.	**TBD**	**TBD**	
13.3	Increase the percentage of cancer survivors who received a written summary of cancer treatments from a healthcare professional.	**49.1%** (BRFSS 2020)	**51.6%**	a. Provide education to healthcare providers, patients and caregivers on the components of survivorship, including the use of written treatment summaries. b. Provide education to primary care providers on the importance and use of written treatment summaries with their patients who are cancer survivors and connect them to resources as appropriate.
13.4	Increase the percentage of patients who received written instructions for routine cancer check-ups (after completing cancer treatment) from a healthcare provider.	**84.45%** (BRFSS 2020)	**88.7%**	
13.5	Increase the percentage of cancer survivors, including skin cancer*, who engage in 150 or more minutes of aerobic exercise and two or more days of muscle strength training exercise per week.	**22.1 %** (BRFSS 2019)	**22.8%**	a. Provide education to cancer survivors and caregivers on the impact of continued risk factors (tobacco, alcohol, obesity, UV exposure, etc.) and refer to appropriate resources to decrease reoccurrences and secondary cancers and promote optimal treatment outcomes. b. Provide education to cancer survivors and caregivers on national nutrition and physical activity guidelines to decrease reoccurrences and secondary cancers. *(Continued next page).*
13.6	Increase the percentage of cancer survivors, including skin cancer*, who consumed fruits and vegetables five or more times per day.	**14.5%** (BRFSS 2019)	**15%**	

Goal 13: Optimize the quality of life for patients and caregivers across the cancer continuum.

Objectives	Baseline	Target	Strategies
13.7 *(Continued)* Increase the percentage of cancer survivors, including skin cancer*, who report no frequent (14 or more days out of 30 days) bad mental health.	**88.7%** (BRFSS 2020)	**93.1%**	c. Work with community stakeholders and leaders to increase access to affordable, healthy foods in communities, places of work, and schools, regardless of geographic location, race/ethnicity, gender & socio-economic status. d. Promote chronic disease self-management workshops or classes to cancer survivors and caregivers. e. Advocate for coverage of nutrition, physical activity, and mental health services by private and public insurance plans.
13.8 Increase the percentage of cancer survivors, including skin cancer*, who report no frequent (14 or more days out of 30 days) bad physical health.	**82.3%** (BRFSS 2020)	**84.1%**	
13.9 Increase the number of health systems that have a financial navigator available.	**2**	**5**	a. Create a data repository of entities that have financial resources available. b. Advocate for government resources to reduce the financial burden for all of those impacted by cancer c. Educate those eligible for services about marketplace plans and promote the open enrollment period under ACA. d. Promote screenings for financial distress in all patients.
13.10 Increase the percentage of patients who have health insurance that paid for all or part of the cancer treatment (with most recent diagnosis of cancer).	**95.5%** (BRFSS 2020)	**100%**	
13.11 Increase the percentage of patients with lower income (< $15,000) who have health insurance that paid for all or part of the cancer treatment (with most recent diagnosis of cancer).	**90.3%** (BRFSS 2020)	**94.8%**	
13.12 Reduce the percentage of patients denied health insurance or life insurance coverage because of cancer.	**8.8%** (BRFSS 2020)	**8.4%**	

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* BRFSS data includes respondents who had ever been told they had skin cancer and respondents who had ever been told they had any other type of cancer.

Goal 13: Optimize the quality of life for patients and caregivers across the cancer continuum.

Objectives	Baseline	Target	Strategies
13.13 Maintain or increase the Virginia palliative care grade.	**86.5** (Center to Advance Palliative Care, 2019)	**90.8**	a. Provide education to palliative care programs on the existence and purpose of the National Palliative Care Registry (NPCR) and encourage provider reporting of relevant metrics to the registry. b. Complete and maintain palliative care data repository to enable quantification of community-based palliative care programs. c. Partner with collaborating organizations to assess the palliative care needs of Virginia. d. Work with stakeholders and community leaders to increase the number of hospitals who offer palliative care services or referrals to palliative care. e. Work with community stakeholders and leaders to increase access to palliative care, hospice and survivorship services. f. Encourage oncology services providers to use the Quality Oncology Practice Initiative (QOPI) to report their performance on quality indicators and link with Patient Reported Outcomes (PROs). g. Provide education to healthcare providers on the tools and resources they can use to facilitate meaningful culturally sensitive conversations on palliative care. h. Investigate funding for palliative care programs across the state of Virginia, so that all people have access to this type of program regardless of geographic location, race/ethnicity, gender socioeconomic status.
13.14 Increase the number of hospital programs in Virginia that have advanced Palliative Care Certification from the Joint Commission.	**5** (Quality Check, 02/2022)	**7**	
13.15 Increase the percentage of Medicare cancer patients who enroll into hospice more than seven days prior to death.	**68.9%** (Medicare, 2021)	**72.5%**	a. Quantify the percentage of cancer decedents who used hospice (disaggregated by race) to determine the gaps in access and services. b. Advocate for more accessible data sets addressing hospice care. c. Provide education to patients and caregivers on comprehensive information regarding all legal and ethical end-of-life care options such as advance directives and living wills. *(Continued on next page.)*

Goal 13: Optimize the quality of life for patients and caregivers across the cancer continuum.

Strategies

d. *(Continued)* Promote earlier hospice care transitions for qualifying cancer patients.

e. Partner with the media to educate disparate populations on the benefits of earlier transition to hospice care.

f. Work with community stakeholders and leaders to increase access to palliative care, hospice and survivorship services.

g. Identify gaps in statewide survivorship and palliative care resources in Virginia.

h. Promote consistent statewide messaging on survivorship and palliative care.

i. Investigate funding for hospice programs across the state of Virginia, so that all people have access to this type of program regardless of geographic location, race/ethnicity, gender and socioeconomic status.

Objectives	Baseline	Target
13.16 Increase the number of health systems that offer cancer patient case management, care coordination and cancer navigation across the continuum of cancer care.	**TBD**	**TBD**

Strategies

a. Establish a baseline for the number of health systems that offer cancer case management, care coordination and cancer navigation to include telehealth services.

b. Promote access to cancer care management during and beyond treatment.

c. Provide trainings, seminars, and educational workshops for patient navigators, social workers, community health workers, and others involved in the continuum of cancer care.

d. Partner with hospitals, regional and community cancer centers, and organizations to promote navigation services.

e. Promote patient navigation to link cancer survivors and caregivers to resources for financial, mental health, sexual health, spiritual health, nutrition, and physical activity needs.

f. Promote funding for palliative care programs across the state of Virginia, so that all people have access to this type of program regardless of geographic location, race/ethnicity, gender and socioeconomic status.

Pediatric, Adolescent and Young Adult (AYA) Cancers

Depression and other psychosocial concerns can affect adherence to treatment regimens by impairing cognition, weakening motivation, and reducing coping abilities.[92]For children and families, treating the pain, symptoms, and stress of cancer enhances quality of life and is as important as treating the disease.[94]

Two thirds of pediatric cancer survivors have significant late effects from treatment, which will require life-long medical management. Childhood cancer survivors are more likely than their peers to repeat a grade (21% vs 9%), attend a learning disability or special education program (20% vs 8%) and/or have educational problems (46% vs 23%).[93] Cancer survivors in the United States report medication use for anxiety and depression at rates nearly two times those reported by the general public, likely a reflection of greater emotional and physical burdens from cancer or its treatment.[95] Adolescents with cancer experienced significantly more Health Related Hindrance (HRH) of personal goals than their healthy peers, and their HRH was significantly associated with poorer health-related quality of life, negative affect, and depressive symptoms.[96]

Childhood cancer also affects family members. Financial hardship during childhood cancer affects a significant proportion of families and negatively affects overall family well-being.[97] Parents have reported significant worsening of their own health behaviors, including diet and nutrition, physical activity, and time spent engaged in enjoyable activities, after their child's diagnosis.[98]

Goal 14: Improve access to quality treatment and timely medical information for patients and their families.

Objectives	Baseline	Target	Strategies
14.1 Increase participation on the Virginia Pediatric Cancer Plan to include communication and collaboration among all state-wide pediatric cancer stakeholders.	**5** (ASK 2022)	**5**	a. Maintain a Pediatric Cancer Workgroup with Division Chiefs from all pediatric cancer treatment centers with quarterly meetings. b. Recruit members for quarterly meetings for various aspects of pediatric cancer, including non-profit organizations. c. Include a pediatric track in the existing CACV State Cancer conference. d. Create a webpage on the CACV site for pediatric cancer taskforce with vetted links to appropriate resources with information on pediatric cancer diagnosis, treatment, and support services.
14.2 Obtain state revenue sources for childhood cancer.	**No** (Virginia General Assembly 2021)	**Yes**	a. Secure funding to support cross collaboration at major university/medical centers in the Commonwealth and create connections for collaborations between all the pediatric cancer treatment centers. b. Organize Pediatric Cancer Day in the Commonwealth to engage the state legislature. c. Incorporate a focus on cancers affecting pediatric and AYA patients into the General Assembly Cancer Caucus.
14.3 All pediatric cancer treatment centers will have a policy of providing collaboration between medical oncology and pediatric oncology for AYA patients.	**0** (ASK 2022)	**5**	a. Collect baseline data from key stakeholders for how many AYA patients are treated at pediatric cancer treatment centers versus adult centers, variability in localities. b. Identify one pediatric oncology provider to be a liaison to the medical oncology groups in their local pediatric cancer treatment center to champion this collaborative approach, variability in localities. c. Encourage health systems to establish policies related to collaboration between pediatric oncology and medical oncology to determine optimal treatment location for AYA patients based on age, cancer diagnosis, and psychosocial needs. d. Advocate for fertility preservation at time of initial diagnosis as well as throughout treatment.

Goal 15: Improve long-term follow up care for childhood cancer survivors.

Objectives	Baseline	Target	Strategies
15.1 All pediatric cancer treatment centers will have comprehensive survivorship programs, including: 1) providing a written summary of care, including late-effects as well as recommendations, to 100% of all survivors; 2) a multi-disciplinary approach for multiple practitioners to engage patients in treatment and care; 3) following survivors through successful transition to adult medical care after the completion of cancer therapy; 4) a psychosocial assessment by a qualified provider that evaluates social, emotional, behavioral, academic/occupational functioning, and provides recommendations and referrals for related follow-up care.	**0** (ASK 2022)	**5**	a. Provide education and support to pediatric cancer treatment centers to facilitate individualized survivorship plans. b. Establish an annual evaluation of the percentage of survivors at each institution that has an individualized survivorship plan. c. Coordinate survivorship conferences among pediatric cancer treatment centers, rotating geographically to offer better access for families. d. Advocate for fertility preservation options and reproductive endocrinology services to be offered through treatment and in the survivorship years. e. Expand local non-profit organization participation into survivorship programming including psychosocial aspects.

Goal 16: Improve support services for pediatric patients, survivors and their families.

Objectives	Baseline	Target	Strategies
16.1 All pediatric cancer treatment centers will have a dedicated educational specialist (pending state funding 2022).	**0** (ASK 2022)	**5**	a. Establish a baseline for the number of pediatric cancer treatment centers that have a dedicated educational specialist. b. Continue educational opportunities for teachers and school personnel to familiarize them with late-effects and appropriate.
16.2 All pediatric cancer treatment centers will evaluate their current level of psychosocial care through standard base-line assessment and will identify one or more pediatric oncology providers to champion the psychosocial standards at their treatment center.	**0** (ASK 2022)	**5**	a. Provide education to physicians, other healthcare providers, and the public regarding the Psychosocial Standards of Care for Pediatric Oncology, including the matrix and guidelines. b. Assess each pediatric cancer treatment center's ability to implement standards with current resources and establish a baseline of current psychosocial support. c. Collaborate and share resources to meet the standards of care for all pediatric oncology patients throughout the Commonwealth regardless of geographic location.

Goal 17: Increase awareness of palliative care strategies for children with cancer among healthcare providers, patients and families.

Objectives	Baseline	Target	Strategies
17.1 All pediatric cancer treatment centers will offer palliative care services, following a needs assessment and will commit to prioritizing 2-3 strategies for implementation.	**0** (ASK 2022)	**5**	a. Conduct a needs assessment of palliative care services offered for both in-patient and out-patient care at Virginia pediatric cancer treatment centers, following the NCP's Clinical Practice Guidelines for Quality Palliative Care. b. Increase awareness about palliative care strategies among physicians, other healthcare providers, patients, and families. c. Educate oncology team members on palliative care concepts to ensure concurrent primary palliative care for all youth as part of quality oncology care.

Goal 18: Address financial burdens of pediatric patients, survivors, and their families.

Objectives	Baseline	Target	Strategies
18.1 All pediatric cancer treatment centers will collaborate with VDH, non-profit organizations, and other stakeholders to raise awareness about financial toxicity and identify solutions to lessen the burden on patients and their families.	**0** (ASK 2022)	**5**	a. Assessment of risk for financial hardship is incorporated at the time of diagnosis for all pediatric oncology families. b. Educate the medical team around the implications of financial burden on emotional distress in families. c. Advocate at the state level for legislation and policies to reduce the financial burden.

Evaluation Plan

Objectives in the 2023-2027 Virginia Cancer Plan were set with the need for baseline and follow-up data. When baseline and follow-up data were not available, objectives were marked as "to be determined," and strategies include developing a data collection and management system.

Progress toward meeting targets for outcome objectives under each goal will be reviewed annually. Process data will be collected to document strategies employed to address each objective and goal. Process data will include measuring progress toward the creation of data collection and management systems to provide relevant outcome data.

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Glossary

Access to care: The timely use of personal health services to achieve the best health outcomes.[1]

Age-Adjusted: An age-adjusted rate is a weighted average of the age-specific (crude) rates, where the weights are the proportions of persons in the corresponding age groups of a standard population. The potential confounding effect of age is reduced when comparing age-adjusted rates computed using the same standard population.

Complementary, alternative, and integrative care: Complementary treatments and standard, evidence-based medical treatment are used. Alternative treatments are usually used instead of standard, evidence based medical treatment. Integrative medicine combines standard treatments with complementary or alternative approaches that have been shown to be effective and safe.[2]

Evidence-based: Pertaining to the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of patients.[3]

Hereditary cancer syndrome: Syndromes in which gene changes or mutilations, can be passed down from parent to child and increase a person's risk of developing cancer.[4]

Fertility preservation: Access to fertility preservation services (egg harvesting, sperm banking) early in treatment and financial resources for assistance in covering expenses.[5]

Financial toxicity: Financial difficulties experienced by patients due to out-of-pocket costs (not covered by health insurance, such as copayments and deductibles).[6]

Hospice: Provides care for people in the last phases of an incurable disease so they are as comfortable as possible. Services provided by hospice care include pain and symptom control, home care and inpatient care, spiritual care, family meetings, care coordination, respite care, and bereavement-care.[7]

Navigation services: Services that offer individualized assistance to patients, families, and caregivers to overcome barriers within the health care system. These services offer access to medical and psychosocial care from pre-diagnosis through the entire cancer experience.[8]

Palliative care: An approach to care that focuses on improving the quality of life for patients and their caregivers coping with a life-threatening illness or injury. Palliative care centers on preventing, diagnosing, and treating physical, emotional, social, and spiritual sources of distress.[9]

Survivorship (advocacy definition): Living with, through and beyond a cancer diagnosis.[10]

Survivorship (clinical definition): Focuses on the health and life of a person with cancer post treatment until the end of life.[1]

List of Acronyms

ACA	Affordable Care Act
ACS	American Cancer Society
AYA	Adolescent and Young Adult
BMI	Body Mass Index
BRFSS	Behavioral Risk Factor Surveillance System
CACV	Cancer Action Coalition of Virginia
CDC	Centers for Disease Control and Prevention
CHW	Community Health Worker
CoC	Commission on Cancer
COG	Children's Oncology Group
CT	Computed Tomography
EHR	Electronic Health Record
EMR	Electronic Medical Record
ENDS	Electronic Nicotine Delivery Systems
EPA	Environmental Protection Agency
HEDIS	Healthcare Effectiveness Data and Information Set
HIT	Health Information Technology
HIV	Human Immunodeficiency Virus
HPV	Human Papillomavirus
HRH	Health Related Hindrance
LGBTQIA+	Lesbian, Gay, Bisexual, Transgender, Questioning/Queer, Intersex, Asexual
MCO	Managed Care Organizations
NCCCP	National Comprehensive Cancer Control Program
NCCN	National Comprehensive Cancer Network
NCCRT	National Colorectal Cancer Roundtable
NCI	National Cancer Institute
NCP	National Consensus Project
NPCR	National Palliative Care Registry
PRO	Patient Reported Outcomes
PSA test	Prostate-Specific Antigen Test
QOPI	Quality Oncology Practice Initiative
SES	Socioeconomic Status
STI	Sexually Transmitted Infections
USPSTF	United States Preventive Services Task Force
UV	Ultraviolet
VaCPNN	Virginia Cancer Patient Navigation Network
VCCRT	Virginia Colorectal Cancer Roundtable
VCR	Virginia Cancer Registry
VDH	Virginia Department of Health
VHI	Virginia Health Information
VHIT	Virginia HPV Immunization Taskforce
VIIS	Virginia Immunization Information System
YRBS	Youth Risk Behavior Surveillance System
VYS	Virginia Youth Survey

VIRGINIA CANCER PLAN
2023 - 2027

CACV
Cancer Action Coalition of Virginia

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