BRITISH COLUMBIA

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for everyone

CANCER CARE YOU CAN COUNT ON

Multi-year policy framework to deliver cancer care in B.C.

Minister Message

Cancer is a disease that affects all of us. In fact, this year alone over 21,000 British Columbians will hear the words "you have cancer" from their care provider. This can be one of the most frightening experiences for an individual and their family. When this happens, people want to know that they will have timely access to well-coordinated, modern cancer care – care that is culturally safe – free of racism or discrimination.

Today, B.C. has some of the best cancer outcomes in the world, but we know we can make our cancer care system stronger, and better equipped to deal with the demand that COVID-19 created and the demand from our growing and aging population.

Without a significant response over the coming years, families, communities and our province will face worsening outcomes and a greater cancer burden. This is why we committed to and are launching B.C.'s 10-year cancer action plan.

Through our plan we will secure a cancer-free future for more people – including the elimination of cervical cancer in B.C., help thousands more people survive their cancer diagnosis and extend the duration and quality of life for those living with cancer, while also ensuring B.C.'s cancer care system delivers modern, evidence-based care.

We will deliver on this plan by focusing on four strategies: preventing and detecting cancer, ensuring timely access to treatment, working in partnership across the cancer care system and investing in the system enablers, including our health-care professionals, information management and technology solutions and capital infrastructure. Each of these strategies will be supported by multiple actions – all working to deliver the best cancer care when and where it is needed.

This plan has been developed with BC Cancer, health authorities and cancer care professionals across the province to accelerate the action we need now and care for cancer patients in the future.

Adrian Dix,
Minister of Health

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Introduction

One in two people in British Columbia will face cancer in their lifetime. It means that most people who will read this have had cancer themselves or have experienced cancer through a family member, friend or neighbour. It also means that having a strong cancer care system is something that is important to all British Columbians. Overall B.C. is a strong performer in Canada with the second lowest age adjusted mortality rate, second only to Alberta.

Today, the fact is that our cancer care system is stretched, and the burden of cancer is increasing. It is increasing because there are simply more people – our population is growing. As well, our population is aging and as we age, we are more likely to get cancer due to damage in our cells. Combined these factors will see the number of people in B.C. who receive a new diagnosis of cancer increase form 30,000 in 2021 to 45,000 in 2034.

The burden on our cancer care system is also increasing because we have better outcomes. Due to advances in diagnosis, technology and treatment, more people with cancer are living longer. While this is good news, those individuals also require ongoing care by the cancer care system.

Cancer care is also advancing at a rapid pace. Patients and providers expect our system to keep up with the latest in research and treatments. Keeping up with these advancements in care requires investments in research, the development of new cancer infrastructure and technology, as well as investment in cancer professionals and support staff.

Significant investments have been made over the last five years to support these fast-paced changes and the growing demands for cancer care.

Since 2016-17, BC Cancer's annual expenditures have risen by 36% from $713.6M to $973.1M (2021-22).

BC's 10-Year Cancer Action Plan plan builds on the $1 billion in investments and efforts since 2017 to strengthen cancer care in B.C. including:

- Expanding the publicly funded Human Papilloma Virus (HPV) vaccine program throughout B.C.
- Partnering on an Indigenous cancer strategy including Indigenous Patient Navigators for culturally informed care and treatment
- Investing in two additional PET/CT scanners for a total of 4 (2 Lower Mainland, 1 Victoria, 1 Kelowna)
- Investing $66 million to begin early implementation of team-based care and hire additional physicians, with focus on recruiting oncologists.
- Launching a pilot for at-home HPV testing to screen for cervical cancer
- Creating the Lung Cancer Screening program (2022) to improve screening access for high-risk people
- Eliminating the waitlist for the Hereditary cancer program (2022)
- 10-point Youth Vaping Provincial Action Plan

Despite these investments more is needed to keep up and continue to be a leader in cancer care.

BC's 10-Year Cancer Action Plan makes a commitment to British Columbians to provide the best cancer care system – care people can count on. Over the course of this Plan, with new investments in people, technology, and innovation in the delivery of care we will:

- Secure a cancer-free future for more people – including the elimination of cervical cancer in B.C.
- Help thousands more people survive their cancer diagnosis and extending the duration and quality of life for those living with cancer.
- Ensure B.C.'s cancer system delivers modern, evidence-based care.

The commitment and expertise of BC Cancer, health authorities, physicians, nursing and allied health, public health and others are the cornerstones on which we built this plan, and we recognize their hard work and dedication to do their best for patients.

In launching this plan, our focus first will be stabilizing and strengthening existing cancer services through immediate actions, supporting and growing the workforce and improving geographic access to services. In parallel, the actions required to build for the future will also occur, to ensure people have cancer care they can count on today and always.

Finally, this plan acknowledges and embeds our government's commitment to break the cycles of systemic anti-Indigenous racism and works to embed cultural safety as foundational, presenting key strategies to support and protect Indigenous people as both patients and providers.

BC's 10-Year Cancer Action Plan At-A-Glance

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An Overview of Cancer

What is cancer?

Cancer is a genetic disease in which some of the body's cells grow uncontrollably and spread. Cancer can start and spread from almost anywhere in the body. Normally cells multiply in a very controlled manner as the body needs them. Cancer occurs when this orderly process breaks down.

Genetic changes that cause cancer can happen for many reasons. Genes linked to increased predisposition to cancer may be inherited from our parents. Damage to DNA from environmental causes and from modifiable risk factors such as sun exposure, chemicals in tobacco and viral infections can occur. As people age, cancer becomes more common because there is a greater risk of having cells with damaged DNA.

One in two British Columbians will face a cancer diagnosis in their lifetime. In 2019, approximately 30,000 people were diagnosed with cancer in B.C., more than doubling the number of new cancers diagnosed 30 years before (Figure 1). Cancer is also the leading cause of death with one in four deaths being from cancer.

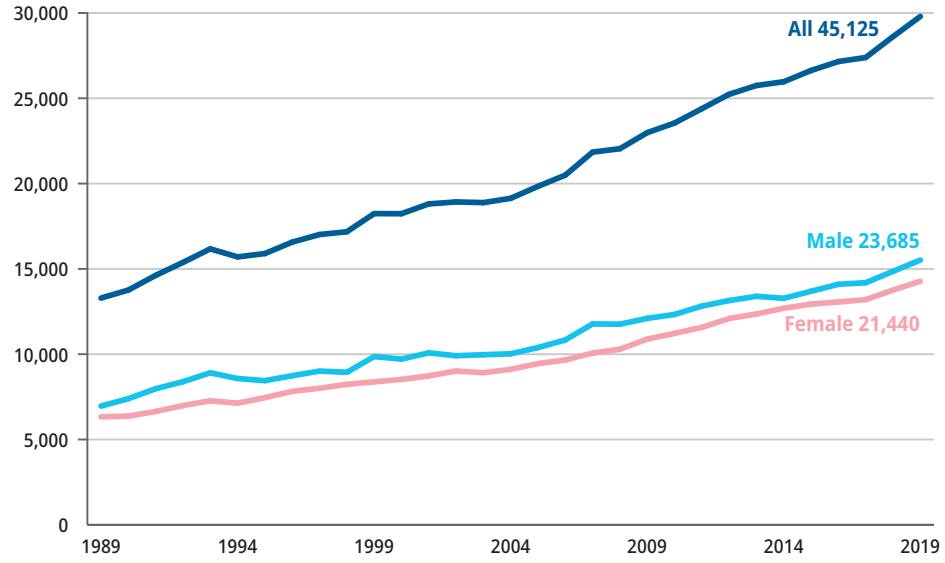

Figure 1: Annual new cases of cancer in British Columbia 1989-2019

Source: BC Cancer, November 2022

The growth in the incidence of cancer in the population is largely attributed to the increase in the population in B.C. and the aging of the population which is relevant as cancer is more common as we age.

B.C.'s population is expected to increase by 12% between 2024 and 2034, from 5.4 million to approximately 6 million. By 2033 there will be approximately 1.5 million seniors in B.C., a 27% increase over projections for the population in 2024. These changes in our population will increase the incidence of new cancer diagnoses from 30,000 annually today to 45,000 new cancer diagnoses annually in 2034.

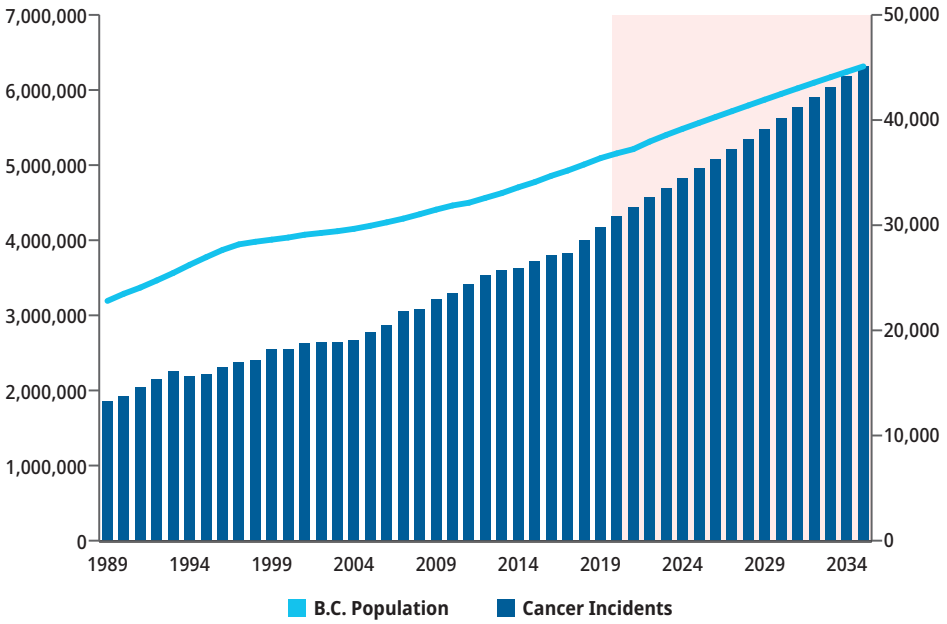

Figure 2: Actual and projected cancer incidence and actual and projected B.C. population growth 1989-2034

Source: BC Cancer, November 2022

In Canada in 2021, the most frequently occurring cancers in men are prostate (20%), lung (13%), colorectal (12%), bladder (8%) and lymphoma (5%); in women breast cancer is most common (25%) followed by lung (13%), colorectal (10%), uterine (7%), and lymphoma (5%).

Cancer in children and adolescents remains rare with approximately 1,000 new cases per year in Canada with about 150 new cases per year in B.C. However, cancer is the leading cause of death by disease among children in Canada even though survival particularly for the leukemias has improved significantly in recent decades. The most common cancers in children include: leukemia (35%), embryonal cell tumors (25%), tumours of the central nervous system (CNS) [17%], and lymphomas (13%).

Over the last decades B.C. has benefited from the positive impact of early diagnosis because of screening programs and from advances in treatment of cancer which have contributed to more people with cancer being cured or living longer with cancer. Approximately two thirds of British Columbians diagnosed with cancer survive five years or more after a cancer diagnosis. These results are reflected in mortality rates from cancer which are age-standardized to account for the impact of aging. B.C. has the second lowest age adjusted mortality rate from cancer, second only to Alberta.

How do population differences and geography influence cancer?

Research shows that a number of population groups are disproportionately affected by cancer – these groups include Indigenous communities, multi-cultural communities, people from lower socio-economic backgrounds, people with mental health conditions and people who are engaged in the justice system.

There are 290,210 people who identify as Indigenous residing in B.C. which accounts for approximately 6% of the B.C. population. Findings from a First Nations Surveillance Study published in 2017 indicated that the most commonly diagnosed cancers for First Nations people in B.C. are prostate, breast, lung, and colon cancers.[1] The study also found that incidence rates for cervical and colorectal cancers are higher amongst First Nations than non-First Nations people. For colorectal cancer, the risk was 1.42 times higher in males and 1.21 times higher in females compared to non-First Nations residents. For cervical cancer, First Nations females had a 1.84 times higher risk compared to non-First Nations residents. Overall, First Nations people experience poorer overall cancer survival rates compared to non-First Nations people and further data linkage, surveillance and study is critical to identify ways to enhance quality and continuity of cancer care for Indigenous peoples and communities in B.C.

[1] McGahan, C. E., Linn, K., Guno, P., Johnson, H., Coldman, A. J., Spinelli, J. J., & Caron, N. R. (2017). Cancer in First Nations people living in British Columbia, CANADA: An analysis of incidence and survival from 1993 to 2010. *Cancer Causes & Control, 28*(10), 1105–1116.

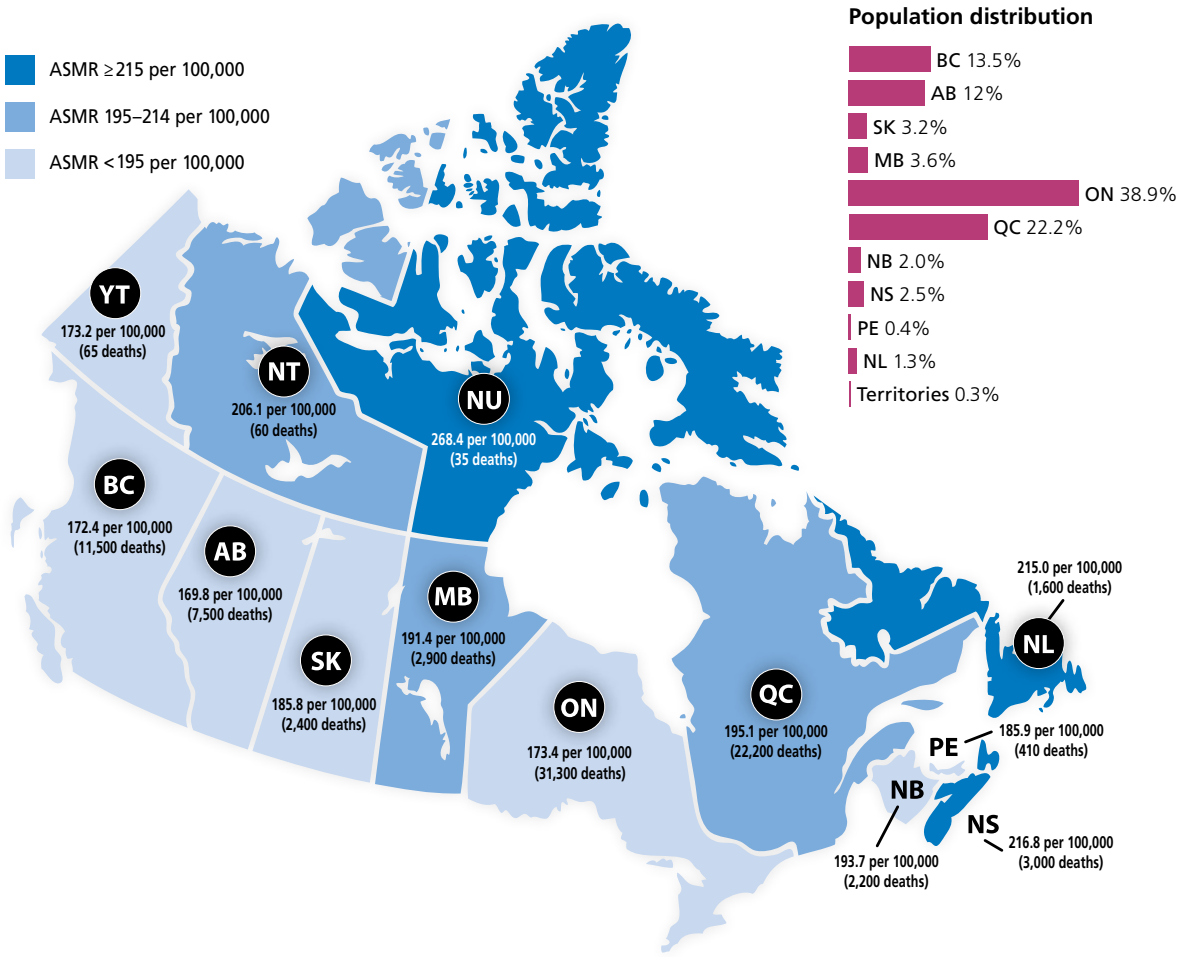

Figure 3: Age standardized mortality rates (ASMR) by province and territory, both sexes, Canada 2021 and projected cancer deaths in each province.

ASMR=age-standardized mortality rate; BC=British Columbia; AB=Alberta; SK=Saskatchewan; MB=Manitoba; ON=Ontario; QC=Quebec; NB=New Brunswick; NS=Nova Scotia; PE=Prince Edward Island; NL=Newfoundland & Labrador; YT=Yukon; NT=Northwest Territories; NU=Nunavut

Source: Canadian Cancer Society, Canadian Cancer Statistics 2021, p.38.

First Nations Health Authority, Metis Nation British Columbia, British Columbia Association of Aboriginal Friendship Centres BC Cancer have worked collaboratively to develop a joint strategy and approach to address disparities in cancer incidence and survival among Indigenous peoples in B.C. and to improve the access and quality of care. The work reflects the voices of Indigenous people with cancer, survivors, and their families, and presents a path forward to improving the Indigenous cancer journey and experience. This effort is recognized as an integral part of the 10-year cancer action plan.

The In Plain Sight: Addressing Indigenous-specific Racism and Discrimination in BC Health Care report documented that 84% of Indigenous people described personal experiences of racism and discrimination that discouraged them from seeking necessary care.

Geography is also important. Like the rest of Canada, patients in rural and remote communities may also have a higher incidence of cancer (Figure 4), with evidence pointing to factors such as age and socio-economic status as contributors. Living in a rural area also has economic consequences and personal implications that may affect their ability to travel for diagnosis or treatment.

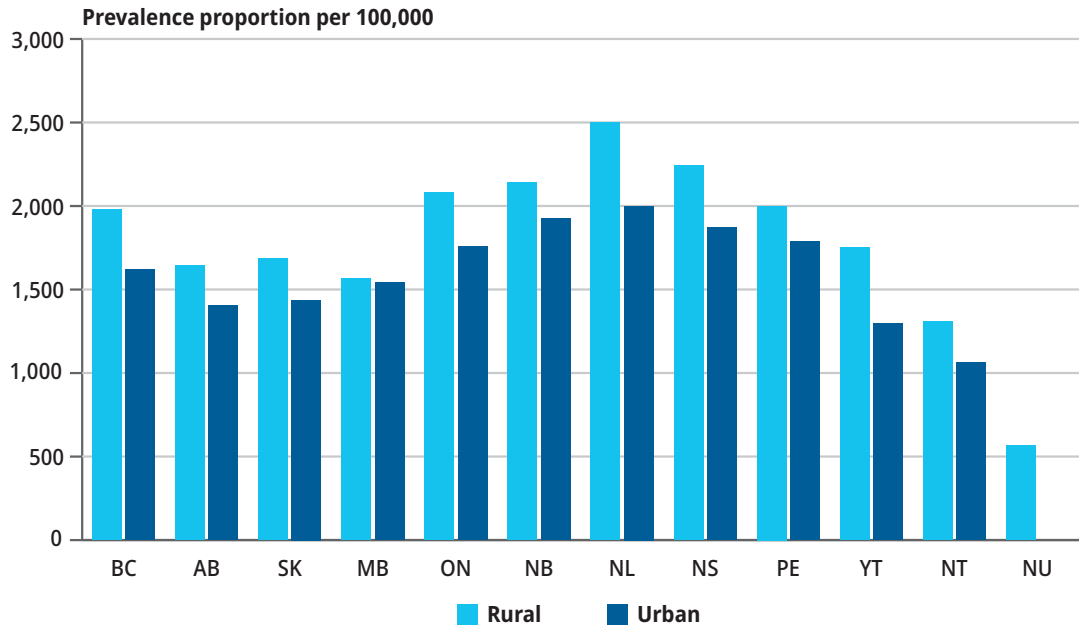

Figure 4: Crude two-year prevalence (number of people living with cancer) per 100,000 people for all cancers combined by urban and rural status and geographic region (excluding Quebec), January 1, 2018

Source: Canadian Cancer Society, Canadian Cancer Statistics: A 2022 Special Report on Cancer Prevalence, p.17.

The Cancer Care Continuum

The cancer care continuum (Figure 5), describes the various stages – from cancer prevention, to early detection, to diagnosis, to treatment, to survivorship, and end of life. The continuum involves the whole health system to ensure support for patients along their journey.

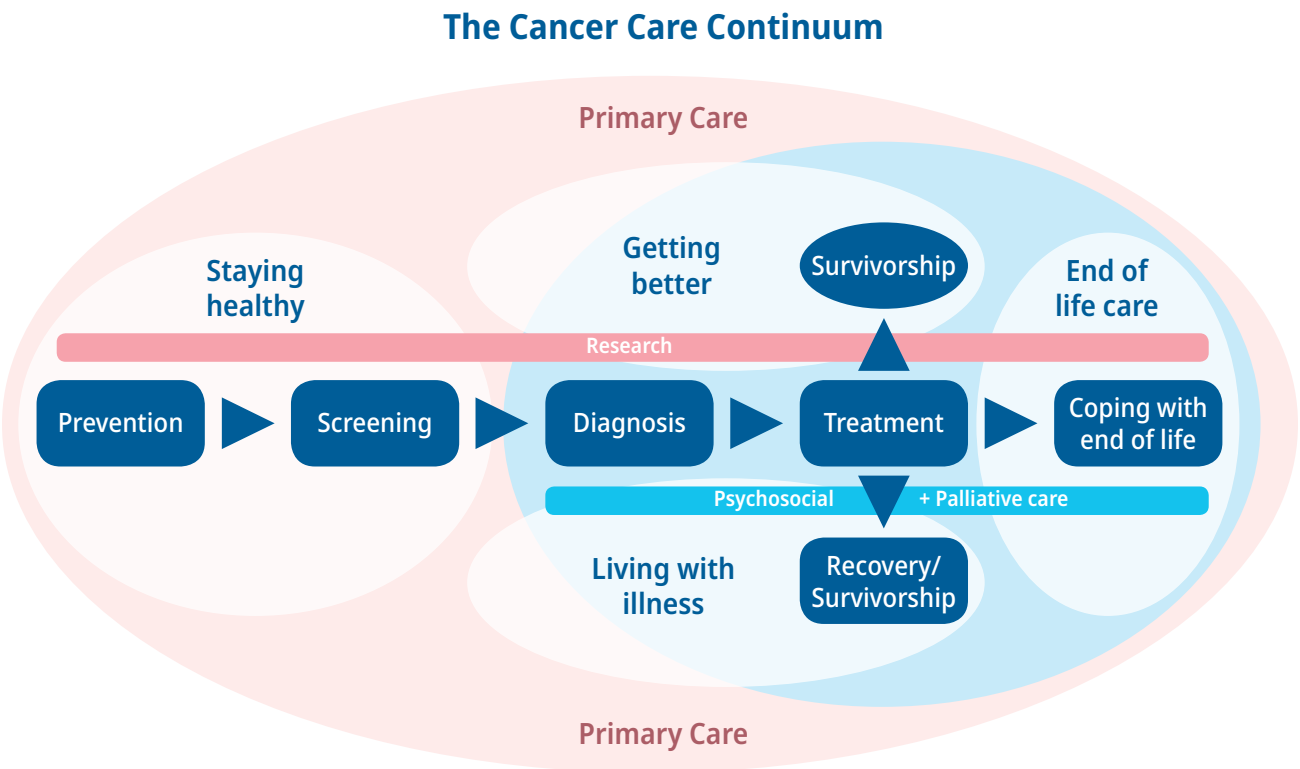

Figure 5: The Cancer Care Continuum in support of patients

Source: BC Cancer, 2022

Prevention

Prevention provides the best chance of lowering the risk of developing and dying from cancer. Addressing risk factors can not only reduce the risk of cancer but can improve overall population health and help to reduce inequities.

Preventing cancer starts with living a healthy, active lifestyle and addressing modifiable risk factors such as smoking, obesity, diet, viral infections, alcohol consumption, and exposure to ultra-violet radiation from the sun.

Stopping smoking remains one of the most important prevention activities, having a direct relationship to prevention of lung cancer both for those who are smokers and those exposed to secondhand cigarette smoke. Lung cancer remains a common cancer in B.C. and is associated with poor outcomes.

As of 2021, Statistics Cancer estimates that in B.C., 9.6% people aged 12 and over (431,900 people) smoke cigarettes.

Cervical cancer is now known to be associated with infection by the Human Papilloma Virus (HPV) and is also associated with an increasing incidence of rectal cancer and throat cancer. Vaccination against HPV is one of the most significant opportunities in cancer prevention in our lifetime. Vaccinating adolescents is one of the most effective ways to reduce and move to elimination of HPV-related cancers. The World Health Organization has set the goal to eliminate cervical cancer worldwide this century and Canada's Minister of Health committed the country to achieving this. The first component of realizing the WHO goal is achieving immunization rates of 90% for girls by age 17.

HPV immunization was first available for girls in B.C. beginning in the 2008-2009 school year, and became available for all youth beginning in 2019. B.C.'s HPV immunization rate for girls reached 66% in 2019. Youth who do not get their vaccine before graduation from high school remain eligible for the free vaccine if they start their vaccine series before their 19th birthday and complete it before their 26th birthday. HPV vaccine is also provided free to HIV positive people 9-26 years and other high-risk populations.

Screening

Early detection of cancer is critical to increasing the number of people cured and reducing the impact of cancer on the population. Screening programs use laboratory or imaging test to detect cancer as early as possible before any symptoms develop and are based on rigorous evidence for their impact at a population level. Primary care plays a critical role in encouraging and enabling patients to participate in cancer screening programs. In all screening programs there is a recognized need to pay particular attention to under-screened population groups, including Indigenous communities, those living in rural and remote areas, culturally diverse communities and those living with socio-economic disadvantage. Under-screened groups have higher mortality rates and poorer survival outcomes.

The COVID-19 pandemic also presented new challenges for cancer screening. Around the world including in Canada and B.C. decreased participation and access to screening programs occurred.

The key screening programs delivered in most developed nations include screening for breast, colon, cervical, lung, prostate cancers. BC Cancer has province-wide screening programs for breast,

cervical, colon and lung cancer; however, screening rates in B.C. remain lower than optimal.

Breast cancer screening using mammography has been definitively shown to lower the risk of dying from breast cancer.

Colon (bowel) cancer screening tests for small amounts of blood in the stool using fecal immunochemical test (FIT testing). When detected by FIT screening, 9 out of 10 colon cancers are curable.

Cervical cancer screening was introduced in B.C. where, in 1955, by Dr David Boyes of BC Cancer who introduced the Pap smear, leading the world in the early detection and prevention of cervical cancer. As noted above, it is now recognized that HPV is the major cause of cervical cancer.

Lung cancer screening in high-risk populations done by computer tomography (CT scan) has been recommended by the Canadian Task Force on Preventative Health Care and by BC's Lifetime Prevention Schedule. If lung cancer is detected at its earliest stages, the five-year survival is 80% or more. Without early diagnosis through screening, 60% of all lung cancers are diagnosed at an advanced stage, making lung cancer the number one cause of cancer death in both men and women in B.C., surpassing the total number of deaths caused by breast, prostate and colorectal cancer combined in B.C.

A blood test to measure prostate-specific antigen (PSA) is used to assist in the diagnose of prostate cancer in people with symptoms or signs of prostate cancer. Prostate cancer screening with PSA in asymptomatic people with no signs of prostate cancer is currently not recommended by the Canadian Task Force on Preventive Health Care, particularly because of the risks of over diagnosing slow growing cancers which would not affect a man in his lifetime.

Finally, our understanding of hereditary cancers has greatly expanded in recent years. Hereditary genetic alterations increase a person's risk for developing cancer. Hereditary cancers often appear earlier in life and tend to be more aggressive. Our ability to detect genetic abnormalities which predispose to cancer and get passed down from generation to generation has improved immensely, and B.C. has been a leader in this area. Screening and early detection of cancer is even more important in people who have been identified with a hereditary cancer predisposition.

Diagnosis

Delays from the time of suspicion of cancer (either from a positive screening test or from symptoms) to diagnosis of cancer not only causes considerable stress for patients and their families but can result in a cancer that is diagnosed at a later stage when cure is not possible, and more aggressive treatment is required.

Key components to cancer diagnosis include knowledgeable primary care practitioners; timely access to diagnostic imaging, laboratory testing, and procedures e.g. endoscopy and biopsy; and efficient access to relevant specialists.

Primary care providers have an important role in prevention and screening, and are involved in recognizing early symptoms of cancer, ordering appropriate diagnostic tests, and facilitating specialist referral as required for diagnosis and management. The provision of tumour specific evidence-informed and standardized pathways that map a patient's diagnostic and treatment journey are powerful tools in facilitating the right path of investigation and care for primary care providers, helping ensure they are equipped to facilitate rapid diagnoses.

Pathways and guidelines have been developed through collaboration between primary care providers and BC Cancer, most recently updates have been finalized regarding diagnosis and management of lung cancer and prostate cancer. This work will continue and be expanded to address other cancers and as the science related to diagnosis and management of cancer continues to evolve.

Access and capacity for diagnostic imaging and laboratory services for those suspected of having cancer is another key element. Medical imaging is critical to diagnosing and staging cancer which is necessary to plan treatment. It is also important to assess response to cancer treatment, and for following people with cancer to monitor for progression or recurrence. Standard and specialized laboratory and pathology services are similarly critical elements to cancer diagnosis and care. Increasingly, specialized laboratory testing such as genomics is key to choosing the right treatment and requires specialized infrastructure and staff (including scientists, clinicians, and technicians).

Access to necessary procedures by relevant specialists is critical in performing more specialized testing, such as endoscopies and diagnostic (surgical or radiological) biopsies. Timely access to these practitioners and their additional knowledge is also key to rapid diagnosis of cancer.

Expedited access to diagnostic imaging and diagnostic procedures remains a focus for all the health authorities who provide many of these services.

A rapid cancer diagnosis and assessment hub is a concept recently being used in other jurisdictions in Canada and elsewhere. The concept facilitates patients needing a range of tests and multiple specialist physician consultations to be coordinated within a short period of time. Quick movement through the hub is coordinated and a navigator, tracks and supports the patient. This concept can be facilitated through either a single location or virtual coordination leveraging existing and new diagnostic capacity to expedite diagnosis and staging.

Treatment

The goals of cancer treatment are to cure the cancer whenever possible, to prolong survival and to provide the highest possible quality of life during and after treatment. Treatment for cancer varies by tumour type, stage of disease, the person's general health status, age and increasingly their genetic and molecular information.

The three mainstays of treatment are surgery, radiation therapy and systemic therapy (e.g. chemotherapy and immunotherapy).

SURGERY

Surgery may be provided as a curative approach to cancer and also as a preventative measure, for diagnostic purposes, reconstruction, or for improved comfort/to reduce pain (called palliation). Advances in surgical techniques and new technologies such as robotics and nano technology will mean that less invasive procedures may be undertaken, with fewer days in hospital and easier and quicker recovery after surgery. In addition, data, genomics, and artificial intelligence will increasingly drive developments in what and how surgery is undertaken.

The Provincial Government's commitment to Surgical Renewal is focused on addressing both the impact of the COVID-19 pandemic response on scheduled surgeries and meeting the long term patient demand. It prioritizes urgent surgeries to ensure patients most in need will have surgery first. Most cancer surgeries are considered urgent with wait-time targets of 28 days or less. Wait-times for cancer surgery have decreased since 2017 (Figure 6.). This data shows that for almost every tumour type, except breast surgery, the number of days waiting for surgery has improved over the five years. In 2021, for every tumour type except breast, B.C.'s wait-times are the same or better when compared to the whole of Canada's 50th percentile wait time. However, the range of wait-time for 90% of patients waiting to receive their cancer surgery in B.C. was still between 41 to 84 days depending on the tumour type.

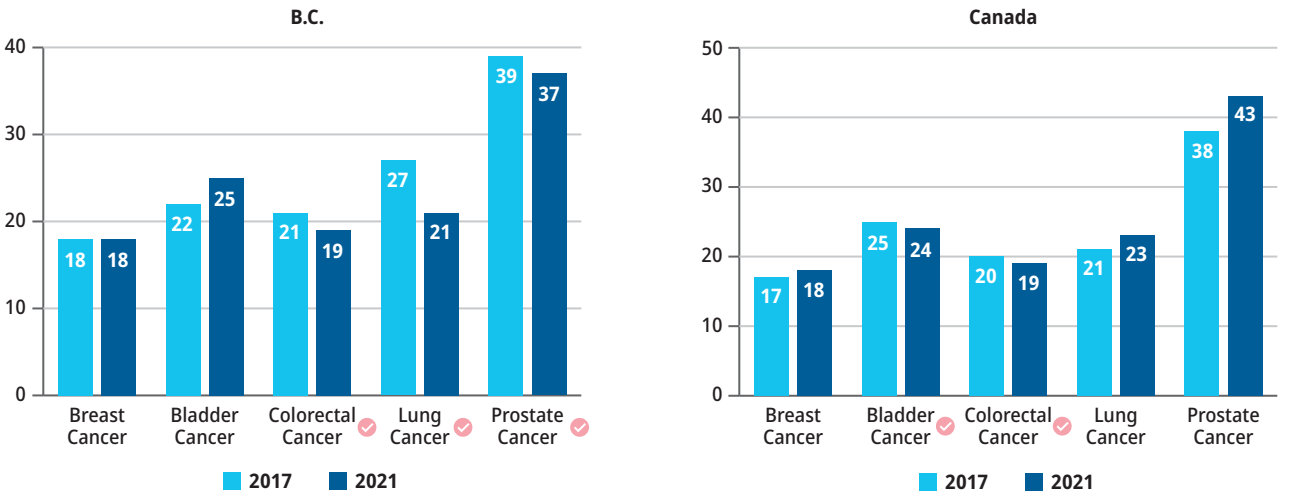

Figure 6: 50th percentile wait times (in days) for cancer surgery in B.C. and Canada, 2017 and 2021

In B.C., with our vast geography, there are many hospitals – 61 based on 2021 data – undertaking surgeries for cancer. There is work to be done to better coordinate and standardize the approach to cancer surgeries for the array of cancers across the province, optimizing outcomes.

RADIOTHERAPY

Radiotherapy (sometimes called "radiation therapy") is a vital treatment option for people with cancer. Like other jurisdictions, approximately 50% of patients with cancer in B.C. currently receive radiotherapy and 65% of all radiation treatment courses are given with the goal of cure. It is estimated that by 2033, there will be a 51% increase in total demand for radiation oncology consults related to cancer incidence, new indications, and increased utilization related to improved access.

Radiotherapy is complex treatment that requires several steps by a coordinated team with specialized training, including patient assessment and sophisticated treatment planning by radiation oncologists, radiation therapists, and medical physicists who use CT or MRI scanners and powerful computers with advanced software to do this work. Depending on the cancer and the individual situation, radiotherapy treatments are delivered over differing timeframes, ranging from a single treatment to several weeks of treatments.

Radiation treatment is delivered by using linear accelerators (LINAC's) and other specialized equipment, or by brachytherapy, in which

radioactive 'seeds' are put in a patient's body directly into the cancer. This specialized equipment is housed only within BC Cancer regional centres and requires specialized infrastructure and ongoing support to house and maintain. Brachytherapy must be performed in operating rooms or specialized procedure rooms with adjacent radiotherapy planning facilities.

There are many recent advances in radiotherapy that are improving results for cancer patients globally. These include the use of MRI scanners to map out and deliver therapy instead of different instruments for these processes. Proton beam therapy delivers radiotherapy using different particles that can target cancers in certain parts of the body in a very precise way and therefore limiting damage to adjacent normal tissues. There are no proton beam facilities in Canada and these treatments are currently accessed in the U.S.A. or Europe.

Radiotherapy equipment (LINAC's and CT-simulators) typically have a 10-year life span, and treatment planning and delivery software is constantly evolving and improving. There is need for a clear rolling replacement approach for these machines and associated software, and ongoing staff training. In addition, to take advantage of the evolving precision and adaptive radiotherapy techniques requires specialized LINAC's with advanced capabilities e.g. integration with PET, MRI, or artificial intelligence capabilities.

Radiotherapy in B.C. is delivered through BC Cancer at the six regional centres with a total of 31 LINAC's.

Brachytherapy is also evolving, being used for more diverse patient populations and with added precision. Dedicated operating room facilities or procedure rooms with up-to-date equipment, with adjacent radiotherapy planning facilities, e.g., MRI-simulators must be available, maintained and updated to keep up with current international standards.

Brachytherapy procedures are performed at four of the regional cancer centres. Modern techniques such as stereotactic radiotherapy are delivered at all centres.

Radiotherapy is very data intensive and will only become more so as the full benefits of automation and data science are realized. Sophisticated computer hardware and software and ongoing training and support for team members are critical to ensuring that radiotherapy treatments are delivered safely and efficiently.

SYSTEMIC THERAPY

In recent years, there has been rapid expansion of new systemic treatments that are tailored to target a specific molecular vulnerability in cancer and immunotherapies that harness a patient's own immune system to attack the cancer. These are exciting new therapies which have introduced more complexity to cancer care compared to traditional chemotherapy, although traditional chemotherapy continues to play an important role in the treatment of most cancers. This complexity forms the basis of a precision medicine approach to cancer whereby an individual' s treatment is tailored to the specifics of their cancer. This results in a greater need for molecular diagnostics and genomics, advanced imaging, specialist physicians and multidisciplinary care, and more complex toxicity management which can necessitate in-patient management of severe and life-threatening events. Furthermore, an increasing proportion of patients treated with these agents have long-term survival, resulting in an increased need for supportive care and chronic toxicity management.

In B.C., systemic therapies are delivered by both the regional cancer centres (governed by BC Cancer) as well as through the Community Oncology Network (CON) sites in the regional health authorities. CON sites are most typically staffed by General Practitioner Oncologists (GPOs) who deliver the patient care in collaboration with a medical oncologist at a regional cancer centre.

In 2021, the CON delivered approximately 50% of the systemic therapies across the province.

With the tremendous progress in the number of systemic therapy options for cancer, B.C. has experienced an annual growth in demand for systemic therapy of 5-6% which exceeds the annual cancer incidence growth of 2-3%. Not only is there increased volume, but as new evidence emerges, the complexity of the patients and of the expectations of their treatments has increased.

SPECIALIZED THERAPIES

Leukemia/Bone Marrow Transplant (L/BMT) Service and Malignant Hematology

Hematologic cancers (blood and bone marrow cancers) are a broad group of cancers such as leukemias and lymphomas which primarily affect the blood or the blood-producing organs. These cancers range in complexity and severity and treatment also ranges from surveillance, with treatment only in certain situations, to very intensive and complex treatments including stem cell transplantation and CAR-T therapy (see following section). Hematologic cancers tend to increase in frequency in an aging population. Coupled with incidence data, prevalence rates are increasing at an even greater rate as patients are surviving longer as a result of therapeutic advances.

One of the specialized services in blood cancers is the Leukemia/Bone Marrow Transplant program (L/BMT) at Vancouver General Hospital (VGH). For almost 30 years, almost all hematologic care has been centralized at VGH and BC Children's Hospital (BCCH). These highly sub specialized units provide intensive care to patients requiring intensive systemic therapy and/or stem cell transplant.

Chimeric antigen receptor T-cell therapy (CAR-T) and complex immunotherapy

Tremendous progress has been made in the past 10 years in harnessing the body's own immune system to fight cancer. Inhibitors of immune checkpoints which overcome how cancers can invade the immune system are already standard of care for many cancers in B.C. More complex immunotherapy has also been developed to manipulate the body's immune cells to attack cancer in a specific manner.

Chimeric antigen receptor cell therapy (CAR-T) is another new form of immunotherapy. With CAR-T therapies, a patient's white blood cells (T-cells) are taken from their blood and changed in specialized laboratories by adding a gene for a receptor (called a chimeric antigen receptor or CAR), which helps the T cells attach to a specific cancer cell antigen. The CAR-T cells are then given back to the patient. CAR-T has demonstrated improved outcomes in treatment of certain malignancies, and is Health Canada approved as a standard of care for the treatment of refractory or relapsed large B-cell lymphoma in adults and acute lymphocytic leukemia in pediatric and young adults.

The inherent complexity of these treatments requires specialized training and infrastructure for preparation and delivery of the treatment, including individualized processing and manufacturing of treatment molecules for each and every patient, and management of side effects that are frequently severe and life-threatening. CAR-T therapy can only be delivered by specialized physicians and hospital units like a Leukemia/Bone Marrow Transplant (L/BMT) unit. Many hospital areas and clinical laboratories are impacted in the delivery of this therapy requiring L/BMT system-wide funding.

Functional imaging and theranostics

Functional and molecular imaging is increasingly being used in cancer management. A positron emission tomography (PET) scan is a test which can help to find abnormal metabolic or biochemical function or molecular marker in the body's tissues or organs, using a radioactive drug (a tracer). For many cancers, the scan can often detect the abnormal metabolism or molecular marker of

the tracer before the disease shows up on other tests such as a CT scan or an MRI scan. The scans require careful consideration as other non-cancer conditions can also be highlighted on a PET scan. The scanner is typically combined with a CT scanner to improve accuracy in identifying where the abnormality is in the body, called PET/CT.

PET/CT imaging is standard of care for the diagnosis, staging and treatment response assessment in a growing number of cancer indications. Timely access to this imaging modality is required to enable high-quality, appropriate, and timely cancer treatment. In addition to being used in cancer care, PET scans can be used for some aspects of non-cancer related brain disorders and cardiovascular disease.

"Theranostics" is the combination of the terms "therapeutics" and "diagnostics". Theranostics describes the combination of using one radioactive drug to identify (diagnose) and a second radioactive drug to treat the main tumour and metastatic tumours. This approach is an area of tremendous research for cancers such as prostate cancer and neuroendocrine tumours, where two such radiopharmaceuticals have already received Health Canada approval. The role of theranostics is anticipated to continue to grow.

CANCER TREATMENT FOR CHILDREN AND YOUTH

Cancer treatment in children is viewed as a pediatric emergency. There is very close collaboration across Canada and around the world through the "Children's Oncology Group" (COG) where evidence regarding this important, relatively small group of patients is shared and developed through their joint scientific efforts. It is through such efforts that advancements have been made for successful treatment of some childhood cancers. Clinical trials are – the gold standard of care – for pediatric cancers. Treatments, like in adults, are tailored to the range of tumour types, and include all the similar modalities to adults.

The overall outlook for children and adolescents with cancer in B.C. has improved greatly over the last half-century. In the mid-1970s, 58% of children diagnosed with cancer survived at least 5 years. In 2017, 84.7% of children and 85.9% of adolescents diagnosed with cancer survived at least 5 years.

A very important area for cancer and young people is "survivorship." Given scientific breakthroughs and improved survival, more young people are surviving and living with cancer related or treatment–related side effects. This improved survival comes with a cost; as significant late effects experienced by survivors of pediatric cancer require life-long surveillance because of their risk of complications related to the disease or its treatment, that can last for, or arise, many years after they complete treatment for their cancer.

As of 2022, there are more than 3,000 survivors of childhood cancer in the province and this number will continue to increase, given that the incidence of childhood cancer has been rising slightly and, with improved therapies, and survival rates. The Long-term Evaluation and Follow up (LEAF) clinic at BC Cancer has provided the expert care these survivors need and supports primary care providers with guidance for specific surveillance.

Survivorship and End of Life Care

Many people are surviving their cancer and living well. For some, their cancer has a long standing impact. Survivorship provides a focus on health and well-being for people living with and beyond cancer. It aims to reduce and manage the effects of treatment and to sustain recovery. Around the globe different models for survivorship care and support are emerging and work to define the key quality elements is underway. Implementation models also vary, with the goal of learning to understand the patients' needs and focusing on rehabilitation and returning to as near normal life as is possible for the patients and their families. Building the workforce's knowledge and skills in survivorship care is an effort being made in many cancer systems.

Survivorship is particularly important for children who have many years of life in front of them after life-saving treatment; however, these survivors need follow-up care and enhanced medical surveillance for the rest of their lives because of the risk of complications related to the disease or its treatment that can last for, or arise, many years after they complete treatment for their cancer.

For some patients, their cancer journey brings them nearer to the end of their life. Early access to palliative care can improve quality of life and reduce pain and suffering. There is research evidence that early referral to palliative care, particularly for those with poor-prognosis cancers leads to increased survival rates. Internationally, there is recognition that linking cancer patients and their families to palliative care services in a meaningful way has significant benefits.

As of January 1, 2020, there were more than 195,000 British Columbians alive in the province who had experienced a cancer diagnosis in the past 20 years. These survivors are at different points in their survivor journey and experience different needs. Among these survivors, breast cancer remains the most common diagnosis, followed by prostate and colorectal cancers. While primary care supports most survivorship care for British Columbians, the LEAF clinic at BC Cancer sees the most challenging of these patients.

In 2019, 10,470 British Columbians died of cancer. Adult palliative care is delivered across the province with health authorities offering in-patient and community-based programs. Community based hospices offers support to patients and their families. Provincial palliative care services for children and adolescents are coordinated by Canuck Place Children's Hospice. Ensuring early, appropriate referral to supports for those needing palliative care services continues to be an area of focus for BC Cancer and BCCH.

Providing and coordinating cancer care across the continuum

Cancer care is complex and requires the full health system to support action – as primary care providers, specialists, imaging, laboratories, surgeons as well as cancer experts all have roles to play.

Partners Working Together Across the System

The complexity of cancer care is acknowledged as needing strong linkages across systems of care and across the continuum, reflecting the patient's journey. Meeting the full range of needs of a patient and a community is beyond the capability of one provider, team or organization. In systems with vast geographical and ethnic diversity, there is further need to ensure connection between providers as these connections directly influence the success of delivering cancer care to patients.

Cancer-specific services in B.C. are currently governed through partnerships between BC Cancer (Provincial Health Services Authority or PHSA) and the Regional Health Authorities. Regionally, partnerships have been formalized between a BC Cancer - Regional Cancer Centre(s) and a Regional Health Authority to ensure and improve equitable access to appropriate evidence based and coordinated cancer care services across an identified region. Provincially, BC Cancer's main accountabilities are focused on system planning, setting evidence based standards and best practice, coordination of cancer care services, performance management and funding for all cancer drugs and a proportion of the services (e.g., provision of systemic and radiation therapy) across the province.

Driving Care Quality through Multi-disciplinary Core Elements

The need for multiple disciplines to come together in very structured and specific ways in support of patients in modern cancer care is clear.

Cancer centres have two very structured manners through which they do this: at the system level, through "tumour groups" which drive standards and expectations of care; and at the patient level

through "tumour boards" which review individual patients' needs with a multi-disciplinary lens to ensure the best care is provided.

With respect to system level direction for care, given the multi-dimensional and rapidly changing evidence regarding cancer care, structured teams of experts come together to create evidence-based expectations of care. Their guidance is then used by providers not only in cancer-specific care, but also by primary care, diagnostic specialists, and surgeons to drive to the best patient outcomes.

These groups of experts come together around a particular type of tumour and each group is called a "tumour group." There are different groups for different types of tumours, such as for breast cancer, lung cancer, and urologic cancers.

Each group traditionally works based on the requirements of their area of service, but common tasks include areas such as: best practice timed referral pathways from referral to post-treatment; developing quality expectations and metrics, embedding national and international guidance in guidelines to drive care; examining equity and quality and identifying areas for service improvement.

With respect to patient level direction for care, "tumour boards" are created for multi disciplinary review. A tumour board is a meeting made up of specialized doctors across all the specialties relevant to a particular patient – such as a surgeon, pathologist, radiologist, and oncologist – who regularly gather to discuss cancer patients, especially those that are unusual or challenging. Their goal is to decide on the best possible treatment plan for the patient as a group. This is especially important when a patient has a less common type of cancer or when the usual treatments are not being as effective as expected. The range of expertise around the tables share their perspectives to create the best advice for the patient.

Integrating Care and Research

All the improvements in cancer care are driven by research. The improvements in cancer care today have all been fueled by a greater understanding of what drives cancer which are then translated to patients through clinical trials. Research is a key element of a cancer control system as research provides opportunity for innovation, driving improvements in diagnostics and treatments that can ultimately lead to better outcomes for patients.

In addition to the opportunity to offer patients emerging potentially life-saving or life-lengthening treatments, there are clear advantages that stem from research: it advances disease knowledge with the promise of new discoveries and innovative person-centred therapies, and catalyzes their integration into high quality care; it offers a competitive edge in staff recruitment and retention where health care staff, researchers, and trainees can be embedded in a supportive and mind-expanding culture; it creates an active research program that affords a more vibrant and stimulating work environment, and fortifies staff with pride and purpose. It has also been shown that patients have better outcomes when they are seen at a cancer centre that engages in clinical research and clinical trials, even if those patients do not directly participate in research themselves.

There are a number of types of research critical to cancer care.

Translational research: This can be defined as applying findings from basic science to enhance human health and well-being, which in a health research context aims to 'translate' findings in fundamental research into medical and nursing practice and meaningful health outcomes. Translational research is particularly important in cancer and is critical to improving patient

outcomes by bridging research into standard guidelines, treatment protocols and other clinical care activities.

Clinical trials: Prospective clinical trials remain essential to improving cancer care and should be considered as a standard part of the range of treatment of options that patients can access.

Cancer control research (Outcomes and Health Services Research): The goal of cancer control research (CCR) and health services research is to reduce cancer incidence, morbidity and mortality in the population through innovative research projects. It provides support for the planning, monitoring, and evaluation of cancer control strategies and for identification of public health priorities related to cancer. This need for support, particularly in health economics, has been growing rapidly in recent years.

BC Cancer is recognized as one of Canada's leading cancer research organizations, internationally known for its expertise in the different domains of research and for new discoveries that benefit patients with cancer. Within the province, there is also considerable cancer research strength at academic institutions, including the University of BC (UBC), Simon Fraser University and other universities, as well as at the Vancouver Coastal Health Research Institute and the BC Children's Hospital Research Institute.

Enabling the cancer care system

Key system enablers are required to ensure a strong system which can deliver on a sustainable basis. These span across our workforce, our data and our capital and information management infrastructure.

Workforce

There are two key issues that must be tackled in ensuring wrap-around care for patients and ensuring a strong workforce: team-based care including enhanced supportive and wrap around care for patients; and growing demand on the workforce including addressing threats to recruitment and retention.

TEAM-BASED AND ENHANCED SUPPORTIVE CARE FOR PATIENTS

The multi-disciplinary approach to cancer care is now utilized around the globe. Teams, which include medical specialists, nurse practitioners, nurses, radiation therapists, pharmacists, dieticians, and other allied health professionals who work together to provide holistic care to the patients. With the increased number of treatment options and longer survival while still receiving cancer care, the need to have multiple disciplines and greater coordination amongst them is even more important.

The involvement of multiple disciplines in caring for patients also adds to the efficiency of teams, allowing providers to work at the top of the practice scope.

An essential benefit of team-based care is supportive care to patients. The cancer journey is understandably overwhelming for most patients. The providers are multifold and the difficulty of the decisions along the way can be overwhelming. These decisions are serious and potentially life-altering for the patient and important to the provider.

B.C.'s cancer care system has historically relied heavily on physicians. Expansion of a team-based model of care approach is needed to ensure patients receive timely access to continuous, comprehensive care and appropriate services to support their health needs across the province. Ensuring wrap around care and guidance through the journey and the system is an essential element of caring for the patient and their

family. A "one team my team" approach to care, especially for those who are complex, will support families through their challenges.

In systems with vast geographical and ethnic diversity, there are even further considerations, opportunities, success or failure in the patient's experience.

While the elements of each component of care described above are essential, care and outcomes will not be optimized if the components do not come together in a smooth, well timed and well coordinated manner, facilitated by the eradication of racism and cultural safety, strong communication and meaningful engagement with the patient and between team members, linkage with community and primary care and optimizing performance of the teams.

GROWING THE WORKFORCE AND ADDRESSING CHALLENGES TO RECRUITMENT AND RETENTION

Redesign of care and team-based care is important, but workforce will also need to grow to keep pace with patient demand. The discrepancy between increasing demand and capacity will require several years of recruitment in order to create enough workforce capacity.

Strategic investments of $66M between 2021/22 and 2022/23 have been made to begin early implementation of team based care and hire additional physicians, with focus on recruiting oncologists.

BC Cancer has recently hired more than 325 full-time equivalent positions, including physicians and clinical support staff, to implement a new team-based care model in all six regional cancer centres.

Data and Quality Improvement

Ensuring high quality care that improves the experience of care, the health of populations, the experience of the health care team and the value of health care requires constant assessment performance and continuous quality improvement. Data will increasingly drive performance and drive quality of care and improvements to patient experience. Cancer care is also very data dependent. Radiotherapy planning, for example, requires precise measurement and calculation. Understanding our effect on patients – both their outcomes and experience – require collection of quantitative, but also qualitative data, including from Indigenous people.

Data and analytics ensure that the cancer system comprehensively monitors for performance, ensuring the needs of both the population and individuals are being met at each stage of the cancer journey.

Further, the cancer system is under significant pressures with rapidly escalating costs of new therapies and technology, significant growth in cancer incidence and prevalence from an aging population, recruitment challenges for key medical staff, and a need to prioritize investments across the cancer continuum. Decisions related to cancer control need to be based on strong evidence informed by data.

Data is critical to the cancer quality improvement. Quality improvement will improve patient safety and overall quality of care across the cancer care continuum by focusing on relevant and measurable steps towards best practices.

Capital and IMIT Infrastructure

Cancer care is very dependent on core facilities. The delivery of specialized diagnostics and treatments such as radiation require very specialized core infrastructure and technological advances are evolving at a rapid rate.

There are also evolutions occurring in care expectations that require our attention for the future focus. Many cancer systems have web-based patient portals that collate patient facing information, for self-management and understanding, with specific appointment and clinical guidance for the patient. These portals help to provide the wrap around care for a patient, reducing to some extent the need for clinical help with navigation.

Implementing virtual and digital health care models has been an area of focus for BC Cancer. Remote patient monitoring was initiated during COVID-19 and has been shown to add value and there is room for growth in this area. Remote patient monitoring empowers patients to manage their health from the comfort of their homes and with support of their communities. By identifying and acting on further opportunities to streamline and coordinate remote patient monitoring throughout B.C., there are anticipated increases in quality and efficiency of patient care. Real time monitoring and alerting of patient symptom self-reporting through virtual means and patient portals has been demonstrated to substantially improve overall survival of patients with advanced cancer to the same degree as the introduction of new drugs.

These virtual and digital health solutions will play a critical role in advancing patient and provider experience, improving care access including for rural communities, and delivering high-quality, appropriate, cost-effective, and timely health care services.

Digital transformation in British Columbia's health sector is underpinned by the Ministry of Health's Digital Health Strategy (DHS), which provides the vision and foundation to create a digitally enabled sustainable health system that promotes health and wellness for all British Columbians.

Delivering Cancer Care People Can Count On – BC's 10-Year Cancer Action Plan

Cancer care for people in B.C. is delivered across a person's lifetime with efforts first focused on preventing cancer supported by public health. Efforts then focus on screening and diagnosis to detect early signs of cancer supported by primary care providers, medical specialists, radiology, laboratory, and surgical services. When cancer is found efforts focus on treatments supported by teams of experts in medical oncology and radiotherapy who plan, deliver and monitor the effectiveness of cancer treatments every day, making changes specific to the individual and their response to treatment along the way. Finally efforts to support survivors of cancer back in their communities who may have complex new health risks as well as ensuring palliation for those whose cancer journey brings them closer to the end of their life are important elements of the cancer continuum of care.

Across this continuum, the capacity to undertake research and integrate the scientific advances, which are occurring at an extraordinary rate, is also critical for providing the best care.

Cancer specific treatments are becoming much more precise and personalized using genetic information specific to the individual and their cancer to determine the treatment course. Technologies for delivering new techniques in radiotherapy, new precision cancer drugs, novel immunotherapies, where the body's own immune system is used to fight cancer, are already standard of care for many cancers in B.C.

This plan is the necessary full system response to provide the best cancer care when and where it is needed for people in B.C.

There continues to be an urgent need for the expedited development of new cancer infrastructure, procurement of new technology, and advanced therapeutics as well as the cancer professionals and other staff to support the growing demand for cancer care.

Without a significant response over the coming years, families, communities and the province will face worsening outcomes and a greater cancer burden.

10-Year Goals

Through this plan we are setting 10 year goals – goals that will guide us and drive us towards excellence. As the preceding pages have described a long term strategic plan is required for cancer care in B.C. given demand now and in the future, the need for specialized infrastructure and people, and the rapidly evolving cancer treatment landscape.

Our 10-year goals are:

1. Reduce the incidence of cancer.

Reducing the incidence of cancer could be the biggest contributor to overall equitable cancer outcomes in our future. Efforts to reduce smoking and to address modifiable risk factors and identifying people with a hereditary high risk of developing cancer will reduce cancer incidence in the future. Importantly, and more specifically, as a result of specific focus on prevention and screening, over the course of this 10-year plan, we will have moved to the elimination of cervical cancer in B.C.

2. Improve cancer survival, cure rates and quality of life.

Over the course of this plan, we will cure and increase length and quality of life for thousands of British Columbians with cancer. Important components of achieving this goal will be increased participation in screening programs as well as, importantly, meeting or exceeding provincial and federal wait time benchmarks for times to consultation and treatment, including access to novel and state of the art treatments.

3. Ensure a strong system delivering modern, evidence-based province-wide cancer care.

Delivery of cancer services across B.C.'s vast geography and diversity will be different in 10 years. We will have a strong, robust network, modern cancer system powered by evidence, analytics, technology and research. We will consider the patient from a wholistic and caring perspective throughout their cancer journey. We will have narrowed the gap for those living in rural areas, those who are Indigenous and others who are underserved, with improvement in their access, outcomes and experience.

The principles that will guide us

Our Plan's action will be guided by strong principles of person-centredness and personalized, integration across providers, equity of access and quality and evidence and data driven.

Placing patients and their families, no matter where they live or their ethnicity, at the centre of the Plan. Ensuring the voices of providers are respected and the experiences of both patients and providers are continually improved. Ensuring equity. Using personalized approached to their care and their genome.

Collaborating with patients and communities, including rural and Indigenous communities, in our work. Coming together as one provincial system at the regional, service and care team levels with clear commitments, roles and accountabilities.

Committing to equity, those who live in rural and remote areas, those who are Indigenous and those who are underserved will be at the forefront of all our efforts.

Creating and translating new research evidence, including regarding precise and personalized care is recognized as the only path to optimized outcomes now and in the future.

Advancing the plan

Our 10-year goals are attainable. To achieve them required immediate and assertive action. This is why we have set incremental three-year targets against four areas of focus:

1. **Prevent cancer and find cancer earlier;**
2. **Ensure timely access to cancer treatments;**
3. **Optimize care through collaboration and partnership; and**
4. **Revitalize our cancer care system through essential enablers.**

1. Prevent cancer and find cancer earlier

The actions we take now in our daily lives, directly impact our risk of cancer in the future. Prevention provides the best chance of lowering the risk of developing or dying from cancer. Approximately one-third of all cancer cases can be prevented through healthy behaviours, vaccinations and reduced exposure to known risks. While the overall numbers of people getting and living with most cancers will increase due to our expanding and ageing population, the cancer prevention measures we take will reduce the risk for us all as individuals, working to eliminate cervical cancer as a top of mind priority.

Finding cancer earlier and expediting diagnosis means that, for many cancers including some of the most common like lung, breast and bowel cancer, the disease will be less severe and less deadly. Helping those with cancers that run-in families – that is, hereditary cancers – to understand their risk and take action to prevent cancer or get early diagnosis will save lives.

Our priority actions under this goal are about reducing the risks and helping people live longer, healthier lives.

PRIORITY 1.1 Our plan will **enhance prevention strategies with emphasis on at risk populations.**

Actions

1.11 Implement health promotion activities with a specific focus on lung cancer moving B.C. towards a lower smoking rate, in alignment with the Government of Canada's Tobacco Strategy.

Lung cancer currently causes more cancer-related death than breast, prostate and colorectal cancers combined. In addition to continuing the population focus on general healthy lifestyle behaviours which can lower the risk of cancer, this plan includes a special focus on lung cancer prevention. Purposeful continued actions and programs focused on tobacco and vaping avoidance and cessation will reduce lung cancer in the future. This action includes the continued commitment to Indigenous specific culturally safety tobacco-cessation efforts.

1.12 Increase the uptake of HPV vaccine achieving the National Advisory Committee on Immunization (NACI) target of 90% HPV vaccination coverage (two or more doses) of adolescents by 17 years of age, moving to the elimination of cervical cancer in B.C.

The HPV vaccine is recommended and provided free of charge in B.C. for those in Grade 6 to age 26, as well as for special populations. This vaccine protects against the most important strains of the HPV and these actions to increase uptake of the vaccine will be key to preventing cervical cancer over the next three years and eradicating cervical cancer in the next ten. Cervical cancer is anticipated to be the first cancer to be eliminated in B.C. and around the globe.

What success will look like

For people with or at risk of cancer: Fewer people will be smoking, reducing their risk of lung cancer and other tobacco related cancers later in life. Improved uptake of HPV vaccines in key populations will reduce risk of cervical cancer.

For the health system: Province-wide, indicators regarding tobacco use and vaping initiation will show decreases. HPV vaccine uptake will be increasing. In the next three years, increasing uptake of this vaccine from the current 66% to the desired 90% is the target.

PRIORITY 1.2 Our plan will **strengthen and expand best practice screening programs.**

Actions

1.21 Introduce personalized screening invitations for established screening programs for high risk and underserved populations increasing the participation in screening programs.

Detecting cancer at the earliest stages increases the rate of cure and reduces the burden of cancer treatment. The present system for generating awareness of and participation in screening programs depends heavily on public awareness campaigns and on individual primary care providers reminding and/or providing requisitions for screening. Planned in conjunction with primary care, this action will create centrally organized and where appropriate, technology-enabled and/or personalized screening invitations for high risk and underserved populations to increase awareness of and ease of access to screening programs, ultimately increasing participation rates. In addition, through population specific efforts including with Indigenous populations, efforts to invite

participation in culturally safe ways will be undertaken to strive for health equity.

1.22 Complete the transition to Human Papilloma Virus (HPV) screening for cervical cancer.

Building on the pilot work completed in B.C., we will implement HPV testing in support of the global WHO goal of eliminating cervical cancer. HPV testing done in a primary care setting or through a self-taken vaginal sample is expected to be more acceptable to some of the under-screened group who currently have low participation rates in the existing screening programs, possibly related to fear of having the testing done through a pap smear by a health provider.

1.23 Continue to expand lung cancer screening.

B.C'.s Lung Cancer Screening Program was launched in May 2022. This action will primarily focus on stabilizing and resolving human resources related issues for lung cancer screening. In addition, through continuous quality improvement activities, access and quality will be monitored and undertaking the necessary improvement steps based on those findings will be undertaken for this new screening program.

1.24 Provide timely access to hereditary cancer screening services.

The human genome is at the core of cancer and understanding differences in the genome that indicate cancer risk, particularly for those with familial cancers is a key to early detection for those individuals. Genetic and genomic testing also helps identify those who are eligible for life-prolonging and life-saving treatments.

In support of these efforts, in 2021/2022 and 2022/2023, additional funding was provided to create 10 new full-time equivalents (FTEs) including Genetic Counsellors, Genetic Counsellors Assistants, Medical Geneticists and Co-op students in support of hereditary counsellors. Further additions of these clinical resources, will be needed to serve all of the high-risk patients living across B.C. In addition to ongoing support for human resources, further mitigation strategies to address long wait times include the implementation of the Hereditary Cancer Program Patient Portal.

What success will look like

For people at risk of or affected by cancer: Improved awareness of screening programs. Underserved populations have a greater uptake in screening programs.

Expanded access to genetic/genomic testing and counselling to identify people with a high risk of getting cancer.

For the health system: A greater proportion of eligible participants will be using screening programs across all programs. The transition to HPV testing for cervical screening, including through self-sampling, is completed. Lung cancer screening is well established with monitoring established and demonstrating an increasing uptake and effectiveness. Expanded genetic testing to a greater proportion of families affected by cancer, human resources for hereditary cancer screening programs have been secured and patient portal is launched.

PRIORITY 1.3 Our plan will **optimize an expedited pathway from suspicion of cancer to diagnosis and staging.**

Actions

1.31 Developing evidence-based care pathways to support primary care providers in proactively identifying and effectively supporting cancer diagnosis.

Primary care, with its revitalization now underway, is well and critically situated to support early diagnosis of cancer for their patients. Supporting the continued building of primary care providers' knowledge and capability to improve cancer outcomes is a key element. Supported by BC Cancer's Tumor Groups, the further development of diagnostic care guidelines and pathways to provide guidance on diagnostic best practices for primary care in both urban and rural settings (as well as for specialist physicians and providers) will enhance and expedite decision making. A minimum of twelve new pathways (guidelines) will be developed over the three-year period focused on the most common tumor types and areas of greatest diagnostic need. In keeping with current evidence-based practices, developing and implementing knowledge translation tools for these will further ensure uptake and utilization of this knowledge. A key element of efforts to reduce inequity in cancer care needs to include improved access to timely an accurate diagnosis.

1.32 Developing rapid diagnosis and assessment hubs.

The development of new diagnostic and assessment hubs (which will be physical sites as well as virtual hubs) will focus on speeding up diagnosis, consultation and treatment planning through a single point of access to a care pathway for people with an urgent symptom that would indicate cancer and a personalized, accurate and rapid diagnosis of their symptoms by integrating existing diagnostic provision and utilizing networked expertise. The hubs will also support newly diagnosed patients who require additional urgent tests and consultations for treatment.

1.33 Partnering to support and inform medical imaging strategies that build this capacity and improve wait times for cancer patients.

The majority of imaging and laboratory services are delivered through hospitals in each of B.C.'s health authorities and community clinics. Building capacity – both physical and human resources – for radiology services (medical imaging) and laboratory services will be necessary as cancer prevalence increases. A first essential element of this action relates to better collection and new sophisticated analyses of data related to patient flow and prioritization across the province for cancer patients using and needing these diagnostics from the vast array of providers across the province. This action's effort will be incorporated into the province's diagnostic imaging and laboratory activity and planning strategies. Capital investment and human resource planning will be essential to this effort.

1.34 Implementing a tumour first genomics strategy.

Building on our success and leadership in cancer genomics and recognizing the critical importance of genomics in cancer for diagnosis and management, provincial care and scientific partners will work together to plan and begin implementation of the tumour first universal genomics strategy. The "tumour first" goal is to have at full implementation genomic information on all patients' tumours which will guide treatment planning and care options, as well as help to find future treatments and discoveries.

What success will look like

For the people at risk of or affected by cancer: better patient experience and more timely access to the diagnosis process. More patients having genomic informed cancer care.

For the health system: Increased access to knowledge and increased ability to move forward cancer diagnostics in the primary care sector. Improved wait times for diagnostics. Improved information about the link between screening and clinical symptoms and diagnostics to enhance access to diagnostics. Movement to more equitable access to diagnostics. Incorporation of specific needs and integration of cancer-specific requirements into future imaging and laboratory planning.

2. Ensure timely access to cancer treatments

When people receive a cancer diagnosis, they want the right treatment fast.

Our priorities actions begin with a focus to achieve or exceed the wait time standards for therapy, radiology, surgery and specialized treatment, so more people get care as soon as possible.

PRIORITY 2.1 Our plan will **strengthen equity of access in cancer surgery services.**

Action

2.11 Reducing unwarranted variation and continuing to reduce wait times for cancer surgery under the surgical renewal commitment.

Through collaboration across health authorities and providers, this action will require several focused elements. First, the establishment of the capacity to undertake the detailed, multi-sectoral analyses related to cancer surgery for diagnostic and/or treatment will occur. Based on the findings, specific improvement work to rectify access will be undertaken. In addition to the focus on surgery, broader establishment of mechanisms to systematically understand unwarranted variation will be undertaken with the goal of decreasing surgical wait times and improving surgical effectiveness with respect to cancer. It will be critical that this element is completed by and with surgeons, including surgical oncologists and surgeons from across B.C., who will be key to identifying areas for focus and the quality improvement strategies that will be successful.

What success will look like

For people at risk of or affected by cancer: Improved access to appropriate cancer surgery.

For the health system: Enhanced metrics and improvement in the results measured by those metrics regarding access to surgeries. With respect to cancer surgeries for treatment of cancer, reduced wait times. Action to reduce unwarranted variation in surgical access and outcomes across rural and urban settings.

PRIORITY 2.2 Our plan will **expand access to evidence-based radiotherapy services.**

Action

2.21 Stabilizing capacity to deliver, improve access and maintain radiotherapy services, achieving access benchmarks.

Radiotherapy is a vital treatment option for people with cancer. Similar to other jurisdictions, approximately 50% of patients with cancer currently receive radiotherapy. Critical action for this treatment mainstay with growing pressures will support capacity for radiotherapy, including through: the further development of precision radiotherapy, increasing the human resources (including radiation oncologists, physicists, nurses, radiation technologists); ensuring sufficient physical/capital resources (including standard LINAC's, MRI-LINACs, MRI-Simulators, specialized equipment and facilities (including for brachytherapy) ; and regularly updating treatment planning and contouring software. Working together as a multi-disciplinary team wrapped around the

patient will be a key facet of these services. These elements are required to deliver contemporary radiotherapy services within benchmarks.

2.22 Ensure ability to offer lower volume and innovative radiotherapy services to B.C. patients and increase volumes for modern radiotherapy treatment.

Increasing the capacity to deliver newer innovative therapies being used globally will occur over the course of these three years, to ensure that B.C. patients are not left behind as radiotherapy advances accelerate. This will include expansion of precision and adaptive radiotherapy, expansion of breast brachytherapy and interprovincial planning for proton therapy treatment in Canada.

What success will look like

For people at risk of or affected by cancer: Improved access time to appropriate radiotherapy services.

For the health system: Enhance workforce and stability of services to delivering 90% of mainstay treatment services within benchmark. Regional centres working collaboratively to ensure province-wide equity. Expansion of precision radiotherapy provision.

PRIORITY 2.3 Our plan will **expand access to evidence-based systemic therapies.**

Action

2.31 Stabilize capacity to deliver, improve access and maintain systemic services, achieving access benchmarks.

Similar to radiotherapy, building capacity for systemic therapies will include increasing the human resources (including medical oncologists, nurses, allied health providers) and the physical capacity including "chair capacity" required to deliver mainstay systemic therapies.

This will have at least two important benefits. It will provide more holistic care to patients, wrapping around them as one team. It will also ensure that care is effective and efficient, with providers supported to practice at the top of their scope.

Finally, this action will bring together regional cancer centres in moving forward so that the changes in this area are truly provincial in nature with focus on reducing unwarranted variation in access to services.

What success will look like

For people at risk of or affected by cancer: Improved access time to appropriate systemic therapy services.

For the health system: Enhance workforce and stability of services to delivering 90% of services within benchmark. Enhanced multi-disciplinary teams. Regional centres working collaboratively to ensure province-wide equity.

PRIORITY 2.4 Our plan will **expand specialized cancer services (malignant hematology, immunotherapy, theranostic, and pediatric oncology services).**

Action

2.41 Increase capacity to deliver Leukemia/Bone Marrow Transplant (L/BMT) services and malignant hematology services.

We will establish a province-wide infrastructure and a long-term strategy for malignant hematology care to ensure services are coordinated, streamlined and

closer to home. We will increase capacity in the L/BMT program of B.C. at Vancouver General Hospital and BC Children's Hospital to meet growing current and near-future demand. Planning for expansion of services to additional health authorities, with specific consideration of Fraser Health Authority will be completed.

2.42 Establish a provincial CAR-T program.

This action will establish an in-province CAR-T program so that patients do not need to travel outside B.C. for this care. Efforts will include operational planning, establishing and launching of the program.

2.43 Increase functional imaging and theranostics capacity.

Ensuring renewal and sustainment of existing PET/CT will include planning the increase in the number of PET-CT scanners and cyclotrons and initiating implementation of the plan to increase capacity. We will initiate planning and delivery of theranostics for indicated cancers.

2.44 Ensure modern effective pediatric cancer services.

While the key immediate issues for the next three years for pediatric cancer services are related to pediatric L/BMT services noted above, a robust pediatric action plan to address the needs and continued growth of the pediatric program and services will be completed by the end of the first three years of this plan to ensure services into the future and to reflect the scientific advances specific to pediatric cancer care.

What success will look like

For people at risk of or affected by cancer: Improved ability to access state of the art and low volume treatments without leaving B.C.

For the health system: Expanded capacity for L/BMT will be present for children and adults. A CAR-T program in B.C. will be established. Wait times for PET will be reduced. A pediatric cancer action plan to take us to the end of the 10 years of this plan will be completed.

PRIORITY 2.5 Our plan will **enhance connection to palliative care and survivorship services.**

Action

2.51 Enhance linkages to palliative care and survivorship programs for cancer patients and their families.

Through wrap around care to patients who are nearing the end of their life, efforts to ensure smooth connections to provincial palliative care services will be enhanced. In addition, over the period, a detailed, forward-looking needs assessment regarding survivorship and palliative care will be completed with provincial partners for both adult and pediatric populations.

What will success look like

For people at risk of or affected by cancer: Smoother transitions to palliative care and survivorship care occur.

For the health system: Collaboratively developed forward looking needs assessment regarding palliative care and survivorship care is completed.

3. Optimize care through collaboration and partnership

We achieve the best in cancer care when we partner to support patients in each step of their cancer journey. The priority actions associated will help connect patients to care close to home and with the newest treatment options, driven by scientific advances.

In addition to embedding actions in support of Indigenous people throughout this plan, these specific actions will build cultural safety and reduce inequities.

PRIORITY 3.1 Our plan will **strengthen provincial reach through networks with primary care and community providers.**

Action

3.11 Enhance the Community Oncology Network (CON) and its sites to expand appropriate, safe delivery of systemic therapy.

Enhancing the Community Oncology Network (CON) and its sites to deliver local and regional systemic therapy in an appropriate and safe manner is important for those patients needing medical oncology treatment and living further from a regional cancer centre, or not requiring frequent connection with the subspecialty teams of a regional cancer centre. In keeping with the Tiers of Service approach, a refreshed CON governance structure and additional chair capacity and hours will enhance its ability to deliver systemic therapies closer to home but in a networked manner with regional and provincial cancer services.

3.12 Leverage new primary care models to better integrate cancer care.

In close collaboration with primary care, BC Cancer will plan and execute on additional means to ensure seamless support for cancer patients. Cancer care coordinators from regional centres will be identified as liaisons to primary care networks and regions, building out an organized and networked approach.

What will success look like

For people at risk of or affected by cancer: better access to safe systemic therapy as close to their community as possible occurs. Patients report an improved experience, including those living further from regional cancer centres.

For the health system: Clear roles and responsibilities are outlined and acted upon in support community based systemic therapies in a safe and appropriate manner within the CON's. Primary care providers and oncologist both experience better connection around patients.

PRIORITY 3.2 Our plan will **strengthen and expand multi-disciplinary cancer teams**

Action

3.21 Standardize and enhance the province-wide system using a tiers of service approach.

With respect to province-wide delivery of cancer therapy, BC Cancer, together with regional partners and communities, will coordinate the planning and delivery of cancer services through an organized and provincially supported clear networked approach developed with the goal of equity.

The Regional Cancer Networks will standardize and organize cancer management across the province by introducing the developed tiers of service framework. The Regional Cancer Network

will also strengthen coordination across the continuum of cancer care through the establishment of a centralized intake system based on population need.

3.22 Enhance the multi-disciplinary Tumour Groups.

Multidisciplinary provincial "Tumour Groups" will develop additional provincial cancer management guidelines and patient care pathways that will identify areas of potential risk for fragmented care, such as significant transitions. The multidisciplinary provincial Tumour Groups will provide enhanced leadership, ensuring that cancer care is standardized across the province based on current evidence and providing guidance on best practices for primary care, specialist physicians and other health care providers. Over the three years, the twelve formal tumour groups will be delivering evidence-based cancer management guidelines and care pathways for the province for the major cancer conditions.

3.23 Optimize multi-disciplinary cancer patient review across the province.

In state-of-the-art cancer care, at the individual level for patients, thorough, efficient multi-disciplinary assessment and review of patients' cancers occurs. Teams of providers across sites in B.C. will contribute to this collaborative care planning and hold the same information for review with patients.

What will success look like

For people at risk of or affected by cancer: Shortened wait times. More wholistic care experience. Equitable and high-quality care wherever a patient is in the province.

For the health system: Primary care providers and specialty care providers involved in cancer care will experience better support in providing care. Multi-disciplinary teams will effectively and efficiently participate in review of individual patients, sharing information and collaborating across B.C. enabled by technology where necessary.

PRIORITY 3.3 Our plan will **integrate research and care.**

3.31 Expand capacity for clinical trial participation.

In modern cancer care, access to clinical trials can offer patients opportunity to new treatments, on the cutting edge, and the opportunity to contribute to new advances that will help future patients. Cancer care is perhaps that most universally recognized care of health care where care and research are intertwined in service to patients. This plan will support, through existing professional practice, allied health, nursing, research, and academic leaders and structures, the expansion of clinical trials capacity so that additional patients get offered the opportunity to participate in trials across B.C., including through culturally safe approaches.

What will success look like

For people at risk of or affected by cancer: Patients will have enhanced access to discoveries only available through clinical trials and will have the opportunity to contribute to life-supporting research.

For the health system: B.C.'s system will keep pace with other world-class systems where research is an essential pillar of modern cancer care. Where research and trials occur, rigour in clinical care quality is, from the literature, generally higher.

PRIORITY 3.4 Our plan will **ensure culturally safe and equitable care for Indigenous cancer patients.**

3.41 Immediately establish additional Indigenous Patient Support positions.

With the goal of ensuring Indigenous patients are treated with dignity and respect, patient support providers, or navigators, will directly support patients on their cancer journey, easing the burden and helping to facilitate actions with the care team involved, even across agencies and communities, to enhance cultural safety and wellness and incorporate traditional practices.

3.42 Enhance cultural competence by increasing uptake of formal cultural competency training, such as the San'yas Indigenous Cultural Competency training, amongst BC Cancer staff across all health authorities and in the CON's.

The San'yas training (or similar formal programs) is one step on a journey of understanding. It will be made accessible for all staff and physicians with the goal of 100% being supported to complete the program over the first three years of this plan.

3.43 Collaborate with Indigenous partners to develop robust Indigenous data and reporting for quality improvement.

The previously co-developed strategy identified the need for further data and analytic development. Through this action, co-developed and implemented with Indigenous people and communities, the Indigenous people and communities, health providers and health service organizations will better able to understand and plan services including reducing inequities in screening program participation and associated cancer care for Indigenous people.

What will success look like

For people at risk of or affected by cancer: Indigenous patients have improved cultural safety, including the ability to access a dedicated Indigenous patient support resource person.

For the health system: Clear Indigenous patient support provider roles will be developed, recruited and will be effectively supporting patients. Providers in the roles will have satisfaction/positive experience with the roles. Patient- reported experience as a result of the roles will be positive. All staff and physicians have enhanced knowledge and understandings of the impact of colonialism on Indigenous Peoples and their own role in eliminating racism. Additional analytics to guide quality improvement and informing action.

4. Revitalize our cancer care system through essential enablers

Key system enablers are required for a strong cancer care system – they include the care teams and supporting staff, the data and research and the capital and IT infrastructure that makes it possible to deliver care. In addition, cancer care is delivered across the continuum of care, including but well beyond BC Cancer centres.

Priority actions will support enhancement of the province's providers of cancer care – including through BC Cancer, specialist physicians including those specializing in diagnostics, nurses and allied health members, public health and importantly, primary care. In addition, we will ensure the data and analytic engine required for modern cancer care as well as digital and physical infrastructure needed to accelerate our success and meet our goals are established and maintained.

PRIORITY 4.1 Our plan will **stabilize and enhance the cancer care workforce.**

Actions

4.11 Build treatment capacity for systemic therapies and radiation treatment across regions.

To address patient, wait-times for systemic therapy and radiation therapy delivery, this action will focus building access and capacity across the cancer centres through increasing hours of operations. Extending current hours of operations on weekdays and expanding to the weekends will help address wait-time performance and allow for full utilizing of existing physical space and equipment. This priority action is one of the most critical areas of the plan requiring immediate action in addition to actions already underway.

4.12 Fully implement team-based care wrap around care across the six regional cancer centres, including care coordination.

This action will build and enhance multi-disciplinary roles into the cancer care teams. This will focus on providing better coordination and wrap around care for patients, especially those with complex needs, and will drive more holistic, effective care to patients. Adding multi-disciplinary care teams also adds to the efficiency of care. This collaborative model will boost provider satisfaction by enabling the team to work to the top of their scope and support patients through their journey.

4.13 Create an evergreen comprehensive provincial workforce plan focused on future needs.

This action will see efforts from Human Resources (HR) teams in all health authorities and the Ministry of Health, as well as university and college partners, developing a robust feasible longer term human resource strategy to identify training needs of the future workforce, to attract workforce into cancer care and retain existing team members.

What success will look like

For people at risk of or affected by cancer: The cancer system will be sustainable.

For the health system: Staffing levels will continue to increase and will continue to grow to in keeping with the three-year targets. Multi-disciplinarity of teams will be enhanced. A clear health human resource plan for the longer term will be created and maintained.

PRIORITY 4.2 Innovate and advance data and digital means to inform and improve care.

Actions

4.21 Develop and implement a province-wide quality improvement cancer action plan.

Using B.C. data and focused on key quality metrics, we will work with partners from across B.C. to develop and deliver on a feasible, staged approach to quality improvement that uses as close to real-data time as possible and responds to pressing service and patient needs.

4.22 Establish a real-world outcomes data platform and health economics core to support care decisions and serve as an engine for policy and practice.

Through advanced analytics and collaboration between clinicians, data scientists and patients, will plan and initiate building a technical platform to facilitate use of real-world data in decision making. The platform will incorporate artificial intelligence into the health information to improve the quality of care and of service planning.

4.23 Expand digital health solutions to improve access to and quality of care.

Utilizing and expanding electronic health record utilization, virtual health platforms and patient portals will allow better communication between clinicians and patients and enable patients to become more empowered and engaged in their care. Implementing virtual health care models that are easy-to-use, clinically led and person-centred can provide patients and providers with improved transparency and access to services as well as information, regardless of geographic location.

What success will look like

For people at risk of or affected by cancer: A patient portal will be introduced. The cancer system will be stronger due to continuous quality improvement.

For the health system: B.C. will have real-time data and planned action to directly influence care quality, service quality and assess impact on outcomes and effect of investments.

PRIORITY 4.3 Plan and deliver capital and IMIT infrastructure to support key priorities.

Actions

4.31 Create evergreen IMIT and capital plans.

Cancer care requires significant technology and capital infrastructure to deliver diagnosis and treatment. A comprehensive strategy to implement the required capital and IMIT infrastructure over the 10-years will be developed in partnership with our provincial partners.

4.32 Advance immediate capital and IMIT needs.

Immediate capital and immediate IMIT needs for the first three years of the plan have been identified. These will be implemented over the first three years of the Plan.

What success will look like

For people at risk of or affected by cancer: Equipment and facilities will ensure that care can be provided.

For the health system: Equipment, IMIT and facilities development will ensure that the other aspects of this plan can be delivered.

Conclusion

BC's 10-Year Cancer Action Plan is comprehensive. It has been developed with patients at the centre of our actions. It aims to better support the many providers and teams involved in cancer care. It is forward looking building for the future but also sustainable. It will drive knowledge, quality and innovation with respect to cancer care in B.C.

This plan represents cancer care that all British Columbians can count on.

Appendix A: Strategies, Priorities and Actions

Over the next three years, outcomes for each of these strategies and their associated priorities will be driven through a series of actions. The following table provides details regarding the specific actions that will drive efforts over the next three years.

10-year Cancer Plan: Strategies, Priorities and Actions	
Priority	**Three Year Action**
Strategy One: Prevent cancer and find cancer earlier	
1.1 Enhance prevention strategies with an emphasis on at risk populations	**1.11** Implement health promotion activities with a specific focus on lung cancer
	1.12 Increase uptake of HPV vaccine
1.2 Strengthen and expand best practice screening programs	**1.21** Introduce personalized screening invitations for established screening programs for high risk and underserved populations
	1.22 Complete transition to Human Papilloma Virus (HPV) screening for cervical cancer, including through self-sampled screening
	1.23 Continue to expand lung cancer screening
	1.24 Provide timely access to hereditary cancer screening services
1.3 Optimize an expedited pathway from suspicion of cancer to diagnosis and staging	**1.31** Develop evidence-based care pathways to support primary care providers in proactively identifying and effectively supporting cancer diagnosis
	1.32 Develop rapid diagnosis and assessment hubs
	1.33 Partner to support and inform medical imaging strategies that build capacity and improve wait times for cancer patients
	1.34 Plan and implement a tumor-first genomics strategy leading to universal genomics testing for patients with cancer

10-year Cancer Plan: Strategies, Priorities and Actions	
Priority	**Three Year Action**
Strategy Two: Ensure timely access to cancer treatments	
2.1 Strengthen equity and access to cancer surgery services	**2.11** Reduce unwarranted variation and decrease wait times for cancer surgery under the surgical renewal commitment
2.2 Ensure and expand access to evidence-based radiotherapy services	**2.21** Stabilize capacity to deliver, improve access and maintain radiotherapy services
	2.22 Ensure ability to offer lower volume and innovative radiotherapy services to B.C. patients
2.3 Expand access to evidence-based systemic therapies	**2.31** Stabilize capacity to deliver, improve access and maintain evidence-based systemic therapies.
2.4 Expand specialized cancer services (malignant hematology, immunotherapy, theranostic, and pediatric oncology services)	**2.41** Increase capacity to deliver Leukemia/Bone Marrow Transplant (L/BMT) services and malignant hematology services
	2.42 Establish a provincial CAR-T program
	2.43 Increase functional imaging and theranostics capacity
	2.44 Ensure modern effective pediatric cancer services
2.5 Enhance connection to palliative care and survivorship services	**2.51** Enhance linkages to palliative care and survivorship programs for cancer patients and their families
Strategy Three: Optimize care through collaboration and partnership	
3.1 Enhance provincial reach through strengthened networks with primary and community care	**3.11** Enhance the Community Oncology Network (CON) and its sites to expand appropriate, safe delivery of systemic therapy
	3.12 Leverage new primary care models to better integrate cancer care
3.2 Strengthen and expand multi-disciplinary cancer teams in enhancement of service delivery practices	**3.21** Standardize and enhance the province-wide delivery using a tiers of service approach
	3.22 Enhance the multi-disciplinary Tumor Groups
	3.23 Optimize multi-disciplinary cancer patient review across the province

10-year Cancer Plan: Strategies, Priorities and Actions	
Priority	**Three Year Action**
3.3 Integrate research and care	**3.31** Expand capacity and enhance clinical trials participation
3.4 Ensure culturally safe and equitable care for Indigenous cancer patients	**3.41** Immediately establish additional Indigenous patient support positions
	3.42 Enhance cultural competence by increasing uptake of formal cultural competency training, such as the San'yas Indigenous Cultural Competency training, amongst BC Cancer staff and in the CON's
	3.43 Collaborate with Indigenous partners to develop robust Indigenous data and reporting for quality improvement
Strategy Four: Revitalize the provincial cancer care system through essential system enablers	
4.1 Stabilize and enhance the cancer care workforce	**4.11** Build treatment capacity for systemic therapies and radiation treatment across regions
	4.12 Fully implement team-based care wrap around care across the six regional cancer centres, including care coordination
	4.13 Create an evergreen comprehensive provincial workforce plan focused on future needs
4.2 Innovate and advance data, quality and digital means to inform and improve care	**4.21** Develop and implement a province-wide quality improvement action plan
	4.22 Establish a real-world outcomes data platform and health economics core to support care decisions and enable policy and practice
	4.23 Expand digital health solutions to improve access to and quality of care
4.3 Plan and deliver capital and IMIT Infrastructure to Support Key Priorities	**4.31** Create evergreen IMIT and capital plans
	4.32 Advance immediate capital and IMIT infrastructure needs

Appendix B: Summary of Achievements

This *Plan* builds on the over $1 billion investment and significant efforts and already undertaken since 2017 to support the creation of a strong cancer system in B.C. including:

- **2022** – In 2021/22 and 2022/23, BC Cancer received targeted investments to address workload pressures and implement a team-based care model. The team-based care model is now being adopted at all six regional cancer centres and as of October 31, 2022, BC Cancer has hired 288 of the 397 FTE positions they have created (73%). This includes physicians (oncologists, General Practitioner Oncologists and specialists) and clinical support (nurses, pharmacists, counsellors and support staff).
- **2022** – As of October 31, 2022, BC Cancer has created 109.6 FTE oncologist positions and has filled 70.34 FTEs.
- **2022** – Eliminated the 4,000-person wait list for the Hereditary Cancer Program
- **2022** – Launched the Lung Cancer Screening Program. The target population for this new cancer screening program is adults aged 55 to 74 who smoke or have a smoking history of 20 years or more.
- **2021** – Added 6 Indigenous Patient Navigators to help patients who identify as First Nations, Métis or Inuit receive supportive care that is trauma informed and culturally safe.
- **2021** – Launched the first at home HPV cervix screening pilots. Pilots are now underway across B.C. in four divisions of family practice in the Lower Mainland and on Vancouver Island. Northern Health, with BC Cancer, is leading a pilot in Indigenous communities.
- **2021** – Provided $10M to the Centre for Cancer Prevention and Support to support research and innovation for cancer prevention and survivor support by connecting discoveries more rapidly to prevention and support programs.
- **2020** – Opened of the PET/CT scanner at BC Cancer – Kelowna, marking the 4th publicly funded PET/CT unit in the province.
- **2020** – BC Cancer Research became a formal UBC Senate-approved and Provincial Health Authority Services Authority-approved (PHSA) research institute.
- **2019** – Launched a 10-point Youth Vaping Provincial Action Plan to address the rise in youth vaping.
- **2019** - Opened the PET/CT scanner at BC Cancer – Victoria marking the 3rd publicly funded PET/CT unit in the province.
- **2018** – Opened eligibility for all youth to be eligible for B.C.'s publicly funded human papilloma virus (HPV) vaccine. HPV vaccination is key to working towards the eradication of cervical cancer.
- **2017** – Developed, in partnership with FNHA, MNBC, BCAAFC and BC Cancer, an Indigenous Cancer Care strategy to address disparities in cancer incidence and survival among Indigenous peoples in B.C. and to improve access and quality of care.

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