



## Suspected Lung Cancer in Primary Care

DRAFT FOR EXTERNAL REVIEW

Online questionnaire available at: <https://surveymoh.health.gov.bc.ca/public/survey/gpac-lung-cancer>

Effective Date: TBD

### Scope

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This guideline provides recommendations for primary care providers, for the investigation and management of adult patients ( $\geq 19$  years of age) who present with signs or symptoms that could lead to a diagnosis of lung cancer. Recommendations include the clinical assessment and appropriate referral of patients to a specialist.

This guideline was developed in collaboration with the BC Cancer Primary Care Program (Family Practice Oncology Network) and was based on a guideline adaptation approach including a recent systematic review of the evidence.

### Key Recommendations

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- Tobacco remains the most significant cause of lung cancer, contributing to 70% of mortality due to lung cancer in men and 55% in women.<sup>1</sup> Smoking after a cancer diagnosis increases the risk of all-cause and cancer specific mortality, adverse effects on treatment outcomes, and increases the risk of recurrence or secondary cancers. Efforts should be focused on supporting patients to quit smoking and to reduce exposures to second-hand smoke.
- Although smoking represents the largest risk factor, there is increasing recognition of the rise in number of cases of lung cancer in never-smokers.<sup>2</sup> Health care providers should be aware of potential bias based on assumptions about smoking history when communicating with patients with lung cancer.
- **Regardless of smoking history**, patients with persistent, atypical, or otherwise unexplained cough or chest infection should be sent for a chest X-ray.
- The following require an **urgent referral to the emergency department**: stridor, massive hemoptysis, new neurological signs suggestive of brain metastases or cord compression, superior vena cava syndrome/obstruction, or a large unilateral pleural effusion.

### Epidemiology

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Lung cancer accounts for one of the top three of all cancers diagnosed in B.C. each year.<sup>3</sup> In 2020, an estimated 3855 British Columbians will be newly diagnosed with lung cancer.<sup>4</sup> It is estimated that almost 100% of those diagnosed with lung cancer will be over the age of 40 when they are diagnosed.<sup>4</sup> One in 13 females and one in 14 males are expected to develop lung cancer during their lifetime, and one in 19 will be expected to die from the disease.<sup>4</sup> In 2017, the age-standardized incidence rate for lung cancer was 60.5 in men, and 58.4 in women (per 100,000 population).<sup>3</sup> Approximately two-thirds of newly diagnosed lung cancers will be detected at stage 3 or 4.<sup>3</sup> The 1, 3, and 5-year age-standardized relative survival rates for lung cancer in B.C. are 50.5%, 32.5%, and 26% respectively.<sup>5</sup>

## Risk Factors

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The following are important risk factors for lung cancer.

- **Tobacco remains the most significant cause of lung cancer**, contributing to 70% of mortality in men and 55% in women.<sup>1</sup> Smoking after a cancer diagnosis increases the risk of all-cause and cancer specific mortality, adverse effects on treatment outcomes, and increases the risk of recurrence or secondary cancers. Efforts should be focused on supporting patients to quit smoking and to reduce exposures to second-hand smoke.
- Lung cancer in non-smokers is also a significant cause of mortality, with estimates of 11% of men and 16% of female never-smokers succumbing to the disease.<sup>2</sup> Although smoking represents the largest risk factor, there is increasing recognition of the rise in number of cases of lung cancer in never-smokers.<sup>2</sup> Most cases are related to occupation and environmental exposure to carcinogens. Health care providers should be aware of potential bias based on assumptions about smoking history when communicating with patients with lung cancer. Regardless of the underlying cause, all cancer patients should be treated with the same level of compassion.
- The Occupational Cancer Research Centre has estimated the cancer burden for 44 occupational carcinogens, of which 12 contribute to the burden of lung cancer in Canada.<sup>6</sup> **The carcinogens in the order of magnitude of workers exposed are: asbestos, diesel engine exhaust, silica, welding fumes, nickel compounds, chromium (VI) compounds, radon, and second-hand smoke.**<sup>6</sup>
- The following occupations/exposure settings may have an increased risk of exposure to carcinogens and may contribute to an increased risk of lung cancer: miners, rubber industry workers (especially women), welders/metal workers, painters, or exposure to bis(chloromethyl)ether (textile industry prior to 1980), arsenic (manufacturing or construction industries), polycyclic aromatic hydrocarbons (accounts for 0.6% of all lung cancers; cooks, chefs and food and beverage servers, mechanics, firefighters, machinists, service station attendants and retail cashiers).<sup>6,7</sup>
- Radon is an invisible, odourless, tasteless, radioactive gas formed by the disintegration of uranium in rocks and soil. Epidemiological studies show a causal relationship between occupational exposure to radon gas at high doses and an increased incidence of lung cancer, particularly in tobacco smokers.<sup>8</sup> **Levels in B.C. workplaces are generally not high enough to exceed the maximum safe dose**, but some workplaces in radon-prone areas of the province have moderately elevated levels. **The risk of lung cancer in tobacco smokers is 25x greater (16 per 100 workers) for those exposed to radon levels as high as 400Bq/m<sup>3</sup>, when compared to non-smokers exposed to similar levels (0.7 per 100 workers).**<sup>6</sup> For information on radon

### **Risk Factors For Lung Cancer**

#### **Tobacco**

Smoking is an independent risk factor; Smoking PLUS additional risk factors / carcinogen exposure (e.g., Radon) further increases risk

#### **Occupational carcinogens**

Asbestos, diesel engine exhaust, silica, welding fumes, nickel compounds, chromium (VI) compounds, radon, and second-hand smoke

#### **Occupations/exposure settings**

Mining, rubber industry, welding, textile industry, construction industries, firefighting

#### **Radon**

25x more in smokers exposed to radon

including radon-testing guidelines and testing kits, as well as strategies to reduce radon exposures, refer to the **Appendix B – Practitioner Resources** section.

- The following criteria should be considered when assessing risk for lung cancer *in individuals who had ever smoked*:<sup>9</sup>
  - Race or ethnic group
    - Native Hawaiian or Pacific Islander
    - Black
  - Personal history of cancer
  - Family history of lung cancer
  - Chronic obstructive pulmonary disease
  - Smoking status (current vs. former)
  - Smoking quit time (3% risk reduction per year since stopped)
- Previous chemo and/or radiation exposure.
- Infections (e.g., tuberculosis, human immunodeficiency virus [HIV]).
- Meta-analysis of the prevalence of human papillomavirus (HPV) infection in tumour lung tissue compared to normal tissue showed a significant association (OR 5.38, CI 3.21-9.00).<sup>10</sup> As the frequency of occurrence of HPV in lung tumour tissue varies greatly, the causal role of HPV infection in lung cancer is currently unknown.<sup>10</sup>
- Long-term exposure to air pollutants (e.g., motor vehicle exhaust, residential fireplace, wood stoves, agricultural burning) significantly increased the risk of cancer mortality.<sup>11</sup>
- Pulmonary fibrosis and diseases that may cause pulmonary fibrosis (e.g., lupus, rheumatoid arthritis, systemic sclerosis [scleroderma]).<sup>12</sup>

The following factors are associated with the risk of lung cancer, but the association is less clear.

- From a meta-analysis, coffee intake is associated with an increased risk of lung cancer in men (not in women), in American and Asian populations (not in European), and in smokers (not in non-smokers).<sup>13</sup> The role of coffee or any of its constituents in lung cancer is currently uncertain.<sup>13</sup>
- Pro-inflammatory/metabolic diseases (i.e., diabetes, periodontal disease, dyslipidemia).
- Asthma has been shown to be an associated risk factor for lung cancer after adjustment for smoking.<sup>14</sup>
- The evidence on the causal role of waist obesity versus BMI in non-smokers is currently uncertain, with a greater associated risk for waist obesity and a lower risk with higher body mass index (BMI).<sup>15,16</sup>
- Vaping of substances other than tobacco/nicotine products (e.g., marijuana, e-cigarette) as well as the consequences of long-term or higher concentrations of use is currently unclear.<sup>17</sup>

## Prevention

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Tobacco remains the most significant cause of lung cancer, contributing to 70% of mortality due to lung cancer in men and 55% in women.<sup>1</sup> Continuation of smoking after a cancer diagnosis increases the risk of all-cause and cancer specific mortality, adverse effects on treatment outcomes, and increases the risk of recurrence or secondary cancers.<sup>18–20</sup> Second-hand smoke exposure has also been demonstrated as a risk factor for lung cancer.<sup>21</sup>

Quitting smoking at the time of a cancer diagnosis is an important first step for cancer treatment. This can improve the results of treatment and reduce the side effects patients may experience from chemotherapy, radiation therapy and/or surgery. Efforts should be focused on supporting patients to quit smoking and to reduce exposure to second-hand smoke. The BC Cancer Smoking Cessation Program is designed to screen all patients for current smoking, provide advice on the benefits of quitting and automatically refer all current smokers for cessation support. Refer to the **Appendix B – Practitioner Resources** for information on how to help patients to quit.

## Screening

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Two large randomized controlled trials demonstrated a lung cancer mortality benefit of 20-24% in current or former heavy smokers who were screened using low-dose computed tomography (CT).<sup>22,23</sup> Although there are currently no formal organized screening programs available in Canada, planning for the implementation of a provincial high-risk lung cancer screening program is now underway in B.C., and is expected to be publicly available in 2022. In the interim, the provincial lung cancer screening trial [BC Lung Health Check](#) can be accessed with a physician referral, and patient eligibility criteria can be found through the study website (see **Appendix B – Practitioner Resources**).

It is important not to screen outside of an organized program as this must be delivered in a controlled health care setting, to improve lung cancer outcomes and minimize the potential risks.

Symptomatic patients should be assessed based on the clinical pathway for work-up including a CT scan or chest X-ray depending on regional availability (see **Diagnosis and Investigations** section below).

For the most up-to-date information refer to [BC Cancer Screening/lung](#).

## Signs and Symptoms

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Clinical Presentation:

- Hemoptysis
- Persistent and prolonged cough that is not otherwise explained\*
- Chest infection symptoms that are not resolving or recurring\*
- Unexplained changes in existing symptoms in patients with underlying chronic respiratory problems\*
- Shortness of breath
- Unexplained chest, rib, or shoulder pain
- Hoarseness
- Dysphagia
- Weight loss/loss of appetite

- Horner’s syndrome
- Suspicious lymphadenopathy
- Abnormal chest signs including pleural effusion on chest X-ray
- New finger clubbing
- Thrombocytosis, anemia, and leukocytosis
- Unexplained thromboembolism (i.e., deep vein thrombosis [DVT] or pulmonary embolism [PE])
- Features suggestive of lung cancer that has metastasized elsewhere, or other cancers that have metastasized to the lung (e.g., breast, colorectal, prostate, bladder and kidney cancer are among the more common, however most cancers have the capacity to spread to the lungs)
- Features suggestive of paraneoplastic syndromes

\*Increased level of clinical suspicion in patients with persistent, atypical, or otherwise unexplained cough or chest infection; patients should be sent for a chest X-ray if CT scan is not urgently available.

## Indications for Urgent or Emergent Referral

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A person should be referred urgently to the emergency department for the following indications:

- Stridor
- Massive hemoptysis
- New neurological signs suggestive of brain metastases or cord compression
- Superior vena cava syndrome/obstruction
- A large unilateral pleural effusion

## Diagnosis and Investigations

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Patients presenting to primary care with **any** suspicion of a malignancy should have urgent medical imaging:

- A chest X-ray is often the first step to diagnosis but may have a false negative rate of at least 20%.<sup>24</sup>
- A contrast enhanced CT of chest scan to include adrenals should be ordered (this is the gold standard for diagnosis)

Refer to the [BC Guidelines: Computed Tomography \(CT\) Prioritization guideline](#) for information on imaging prioritization and appropriate imaging guidance for primary and emergency care. (See **Appendix B – Practitioner Resources – Diagnostic Imaging**).

If a pleural effusion is present, a diagnostic and therapeutic thoracentesis should be performed to determine if the fluid is an exudate or transudate. Send samples immediately for pH, protein, lactate dehydrogenase (LDH), glucose and cytology, with serum samples of LDH, protein and glucose. Prior to referral, specialists may request other diagnostic investigations.

***Sputum cytology is of low yield and is not recommended for the investigation of lung cancer.***

Advances in molecular testing have led to the development of treatments that target specific molecular pathways, and biomarkers are used to estimate the potential efficacy in select patients. Newly diagnosed patients with advanced lung cancers are eligible for OncoPanel™, and consideration of the site and biopsy technique is important to ensure that the tissue biopsy is sufficient to run the panel. There is no single algorithm for the diagnosis and staging of lung cancer, therefore urgent referral to respiratory or thoracic surgery for tissue biopsy and a comprehensive work-up is recommended. The most appropriate biopsy site and technique will be determined by the specialist; however, common techniques include:

- endobronchial ultrasound (EBUS) for biopsy of the primary lesion
- CT guided biopsy if the lesion is not amenable to bronchoscopy biopsy
- staging of the mediastinal and hilar lymph nodes

Other staging modalities may also be required such as PET scan, and brain imaging, and this will be organized by the specialist team if required.

Refer to [Pathways](#) (available to members and teams of a Division of Family Practice) for local referral information including wait times and areas of expertise of specialists and specialty clinics. ***The [Rapid Access Consultative Expertise \(RACE\) line provides access to virtual Respiriology specialty expertise for advice to primary care providers when determining next steps in diagnostic work up and management \(see Appendix B – Practitioner Resources for more information\). For urgent symptoms, consider consulting the specialist on call through your local/regional hospitals.](#)*** Fee codes are available for both specialty and family physicians to support virtual communication (see ***Appendix B – Practitioner Resources***).

## Referral to a Specialist

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Patients should be referred to a specialist (see ***Appendix B – Practitioner Resources – General - Pathways™*** for local referral center pathways) if they have any of the following:

- Persistent hemoptysis
- A chest X-ray or CT suggestive or suspicious of lung cancer including:
  - A nodule (<3cm ) or mass (>3cm)
  - Multiple pulmonary nodules
  - Non-resolving pleural effusion
  - Mediastinal or hilar adenopathy
  - Interstitial infiltrates
  - Slowly or non-resolving pneumonia or consolidation
  - Unexplained elevated diaphragm
- A normal chest X-ray, but a high suspicion of lung cancer based on clinical judgement should be referred for a contrast-enhanced CT chest scan including adrenals.
- In conversation with specialists there may be other diagnostic investigations that are requested prior to referral.

## Communication Along the Continuum of Care

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### ***During Referral from Primary Care***

Referring practitioners should include clear, pertinent clinical history on referral letter/requisitions to assist the triaging/prioritizing of examinations and the interpretation of images. Consider directly noting the priority where possible.

To expedite the diagnosis and avoid duplication of investigations, include the following:

- Patient history, including ***all risk factors*** and ***signs or symptoms suspicious of lung cancer***
- ***Provide all pre-existing imaging results***, including chest X-rays and CT scans (films and digital images should be available at the time of consultation)
- All other ***relevant medical conditions*** and patient ***medications***
- All ***recent bloodwork***

If promptly accessible, a chest CT scan can be simultaneously ordered with the referral while waiting for the specialist's consultation. This will depend on locally available resources. Refer to the [BC Guidelines Computed Tomography Prioritization guideline](#) (see ***Appendix B – Practitioner Resources***) for further information and guidance.

### ***Immunizations and cancer management***

While there are currently no specific recommendations on immunizations for patients with Lung Cancer, BC Cancer recommends that providers should offer an age-appropriate [COVID](#) and [inactivated influenza vaccine](#) to all patients without contraindications to the vaccine.<sup>27</sup> Patient immunization status should be included as part of the referral information.

### ***Communications between Specialty and Primary Care***

- ***Goals of care*** (i.e., curative or palliative) and ***changes*** in goals of care are clearly stated
- Clear written communication to convey what the patient understands about the goals of care
- Outline current treatments, timeframes, side effects and late effects resulting from treatments
- All other ***relevant medical conditions*** and patient ***medications*** (e.g., common side effects the family physician should watch for; potential medication interactions for existing and future medical comorbidities as a result of cancer treatment etc. and include this information in the consultation notes). Refer to BC Cancer's [Symptom and Side Effect Management Resource](#) for information relevant to the specific patient (see ***Appendix B – Practitioner Resources***)
- ***Consider offering primary care providers virtual participation in cancer care multidisciplinary team meetings, or the ability to contact the oncologist directly by phone, to enable the family physician/primary care provider to support the patient/family during treatment or palliation.*** Fee codes are available for both specialty and family physicians to support virtual communication (see ***Appendix B – Practitioner Resources***).

### ***Special Considerations***

The Firefighters' Occupational Disease Regulation lists nine cancers including lung cancer that are prescribed occupational diseases that are causally related to the occupation of firefighting (see

**Appendix B – Practitioner Resources**). Physicians who have a patient who is a firefighter, and who is diagnosed with one of the prescribed occupational diseases should advise their patient about the occupational disease presumption for [firefighters in the Workers Compensation Act](#), and the worker’s compensation coverage (see **Appendix B – Practitioner Resources**).

In B.C. workers with occupational diseases, including cancer related to carcinogen inhalation, can apply for benefits through [WorkSafeBC](#).

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## Palliative Care and Advance Care Planning

Patients with a potentially life-limiting disease or illness may benefit from the development of an advance care plan (ACP) that incorporates the patient’s values and personal goals, indicates potential outcomes, and identifies linkages with other health care professionals that would be involved in the care, as well as their expected roles. The ACP is an opportunity to also identify the patient’s alternate substitute decision-maker or legal health representative. For information and tools on advance care planning refer to the **Appendix B – Practitioner Resources** section below. For information on palliative care, including tools for identifying patients who would benefit from palliative care at earlier stages of the illness, refer to the **Appendix B – Practitioner Resources – Palliative Care and Advanced Care Planning** section below.

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## Resources

### References

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## • Appendices

- Appendix A – Guideline Development Methodology
- Appendix B – Practitioner Resources

## • Associated Documents

- Patient Health Questionnaire (PHQ-9), [www2.gov.bc.ca/assets/gov/health/practitioner-pro/bc-guidelines/depression\\_patient\\_health\\_questionnaire.pdf](http://www2.gov.bc.ca/assets/gov/health/practitioner-pro/bc-guidelines/depression_patient_health_questionnaire.pdf)

## • Diagnostic Code: 162 (malignant neoplasm of trachea, bronchus and lung)

## • Abbreviations

ACP – advance care plan

AGREE – Appraisal of Guidelines for Research and Evaluation

BMI – body mass index

CCO – Cancer Care Ontario

CT – computed tomography

DVT – deep vein thrombosis

EBUS – endobronchial ultrasound

HIV – human immunodeficiency virus

HPV – human papillomavirus

OR – odds ratios

PE – pulmonary embolism

PM – particulate matter

PM<sub>2.5</sub> – fine inhaled particulate matter

PM<sub>10</sub> – inhaled particulate matter

PHQ-9 – Patient Health Questionnaire

This guideline is based on scientific evidence current as of May 2020 (see *Appendix A – Guideline Development Methodology*).

The guideline was developed by the BC Cancer Primary Care Program (Family Practice Oncology Network), and the Guidelines and Protocols Advisory Committee.

#### THE GUIDELINES AND PROTOCOLS ADVISORY COMMITTEE

**The principles of the Guidelines and Protocols Advisory Committee are to:**

- encourage appropriate responses to common medical situations
- recommend actions that are sufficient and efficient, neither excessive nor deficient
- permit exceptions when justified by clinical circumstances

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**Disclaimer**

The Clinical Practice Guidelines (the guidelines) have been developed by the Guidelines and Protocols Advisory Committee on behalf of the Medical Services Commission. The guidelines are intended to give an understanding of a clinical problem, and to outline one or more preferred approaches to the investigation and management of the problem. The guidelines are not intended as a substitute for the advice or professional judgment of a health care professional, nor are they intended to be the only approach to the management of clinical problem. **We cannot respond to patients or patient advocates requesting advice on issues related to medical conditions. If you need medical advice, please contact a health care professional.**



## Appendix A: Guideline Development Methodology

The **BC Guideline, *Suspected Lung Cancer in Primary Care***, was developed by a working group of practicing BC physicians and was based on the [ADAPTE Collaboration guideline](#) adaption methodology. Clinical recommendations were developed based on the sourced guideline, an updated systematic review of the clinical literature, as well as expert clinical consensus where evidence was insufficient or unavailable. The source guideline was chosen following an environmental scan of internationally available guidelines. Inclusion criteria for potential adaptation included guidelines published after 2013 and a systematic review of the literature that included at least one outcome of interest. Guidelines were chosen for adaptation following an evaluation using the [AGREE tool](#).

The recommendations in this guideline were adapted with permission from **Cancer Care Ontario's Program in Evidence Based Care, *Referral of Suspected Lung Cancer by Family Physicians and Other Primary Care Providers***.<sup>25</sup> This guideline includes a systematic review of the evidence addressing specific clinical questions, which builds upon and expands Cancer Care Ontario's evidence strategy, to address the signs, symptoms, and referral process for patients presenting to primary care with suspected lung cancer.

Clinical databases searched included MEDLINE (OVID, 2018 June–2020 May 15) and Embase (OVID, 2018 week 22–2020 week 20) which included the Cochrane Library, for clinical questions related to the signs, symptoms, risk factors, testing, and referral of suspected lung cancer. Additionally, a full literature search was completed to address diagnosis and treatment-related challenges and opportunities in lung cancer. Databases searched included MEDLINE (OVID, 1946–2020 Aug 18), and Embase (OVID, 1974 week 1–2020 week 34) including the Cochrane Library. A full literature search was completed to address the appropriate information to communicate throughout the patient journey, including at referral and other transitions in care. Databases searched included MEDLINE (OVID, 1946–2020 Aug 28), and Embase (OVID, 1974 week 1–2020 week 35) including the Cochrane Library. No attempt was made to search unpublished literature. The complete search strategy, clinical questions, outcomes of interest, and inclusion/exclusion criteria are available upon request by contacting the BC Cancer Primary Care Program (Family Practice Oncology Network).

The guideline development process included significant engagement and consultation with primary care providers, specialists and key stakeholders, including with BC's Agency of Pathology and Laboratory Medicine, BC Cancer Screening & Prevention Program, BC Cancer Lung Tumour Group, and the Ministry of Health Lifetime Prevention Schedule Expert Committee. For more information about the GPAC engagement and consultation process, refer to the GPAC handbook available at [BCGuidelines.ca](#).



## Appendix B: Practitioner Resources

### Referral Supports

- [Pathways Online Referral tool](#)  
Pathways is an online resource that provides physicians and their office staff/teams quick access to current and accurate referral information, including wait times and areas of expertise of specialists and specialty clinics. Pathways also provides access to hundreds of patient and physician resources, as well as community service and allied health information that is categorized and searchable.

#### [RACE Line \(Rapid Access to Clinical Expertise\)](#)

RACE is a virtual model of shared care where primary care providers can call one phone number and choose from a selection of specialty services for real-time telephone advice. In the Rapid Access to Consultative Expertise (RACE) model, the telephone call is routed directly to the specialists cell phone or pager for “just in time” advice.

Fee codes are available for both specialty and family physicians when providing/accessing advice. For details and requirements, please refer to the online information [GP Services Committee Conferencing and Telephone Management](#) or the [Specialist Services Committee](#).

### Virtual Care

With the shift toward including more virtual care in the healthcare system, many primary care providers and specialists have incorporated this into their workflow. Virtual care enables the provision of care remotely through technologies that increase access to quality patient-centered care and lower disease transmission risk, while reducing wait and commute times. Conferencing between primary care practitioner, patient (and family) with the specialist together in real time instead of the traditional referral pathway can result in higher quality and more efficient discussion where everyone can learn, especially those located in rural and remote communities who lack access to primary care services. This approach may also support information sharing and reducing gaps as well as duplication and can ensure there is a clear consensus on next steps in management plans. Refer to [Doctors Technology Office \(DTO\) at Doctors of BC](#) for more information. Fee codes are available for both specialty and family physicians to support virtual communication.

### Diagnostic Imaging

[BC Guidelines: Computed Tomography Prioritization](#)

[Canadian Association of Radiologists](#)

[2012 CAR Diagnostic Imaging Referral Guidelines](#)

### **General**

- BC Cancer
  - [Hereditary Cancer Program](#)
  - [Screening](#)
  - [BC Lung Health Check – a Vancouver General Hospital and BC Cancer lung cancer screening study](#)
  - [Cancer Management Guidelines – Lung Cancer](#)
  - [Lesbian, Gay, Bisexual and Transgender with Cancer Websites](#)
  - [Symptom and Side Effect Management Resource Guide](#)
- [Canadian Cancer Society](#)
- [Lung Cancer Canada](#) – Lung cancer education, patient support, research, and advocacy

### **Radon and Occupational Exposure Resources**

- [BC Center for Disease Control, Radon Testing](#)
- [British Columbia Lung Association](#)
- [Healthy Indoor Environments Program](#)
- [RadonAware](#) – Information and resources for the public, building professionals, researchers and others including publicly available radon kits.
- WorkSafeBC, Occupational Disease Services: 604-279-8158
- [WorkSafeBC Radon](#)
- [Workers Compensation Act, Firefighters’ Occupational Disease Regulation](#)

### **Smoking Cessation**

- [QuitNow](#) – Referral program, continuing education, supporting evidence and downloadable materials
- [BC Smoking Cessation Program](#) – helps eligible B.C. residents who wish to stop smoking or using other tobacco products
- [BC Cancer Smoking Cessation Program](#) – Quitting Smoking after a Cancer Diagnosis [Video](#)
- [BC Cancer Smoking Cessation Patient Brochure](#)

### **Survivorship**

- [BC Cancer Survivorship resource](#)
- BC Cancer – Emotional support, exercise support, complementary and alternative therapies, and life after cancer resources:
  - [Advance care planning](#)

- [Complementary & Alternative Therapies](#)
- [Coping with cancer](#)
- [Emotional Support](#)
- [Exercise Support](#)
- [Life after cancer](#)
- HealthLink BC, 8-1-1 (toll free in B.C.), or 7-1-1 (for the hearing impaired)
  - [Dietitian Services](#)
  - [Eating Guidelines for After a Cancer Diagnosis](#)
  - [Health Eating Guidelines for Cancer Survivors](#)
  - [Nutrition for People with Cancer](#)
  - [Physical Activity Services](#)
- Palliative Care and Advance Care Planning***
- BC Guidelines
  - [Advance Care Planning: Resource Guide for Patients and Caregivers](#)
  - [Palliative Care for the Patient with Incurable Cancer or Advanced Disease - Parts 1-3](#)
  - [B.C. Ministry of Health – Advance Care Planning](#)
  - [My Voice – Expressing My Wishes for Future Health Care Treatment](#)
  - [Cancer Care Ontario](#)
  - [A Palliative Care Approach for Primary Care](#)
  - [HealthLink BC – Advance Care Planning](#)
- Provincial Health Services Authority
  - [Trans Care BC - A Primary Care Toolkit - Gender-affirming Care for Trans, Two-spirit, and Gender Diverse Patients in BC](#)