**Questions**

[Overview of the program 2](#_Toc6037)

[What is the Alberta Lung Cancer Screening Program? 2](#_Toc6038)

[Why should I screen my patients for lung cancer? 2](#_Toc6039)

[Eligibility 2](#_Toc6040)

[Who is eligible for screening? 2](#_Toc6041)

[Who is NOT eligible for screening? 3](#_Toc6042)

[Risks 4](#_Toc6043)

[What are potential risks of LDCT screening? 4](#_Toc6044)

[Referral Process 4](#_Toc6045)

[How do I refer my patient for lung cancer screening? 4](#_Toc6046)

[How can I connect my patient to tobacco cessation? 5](#_Toc6047)

[Results 5](#_Toc6048)

[How will my patient get their result? 5](#_Toc6049)

[How will I receive my patients’ results? 6](#_Toc6050)

[What are the possible results? 6](#_Toc6051)

[What are my responsibilities regarding screening results? 6](#_Toc6052)

[Other important information 7](#_Toc6053)

[What else can my patients do to reduce the risk of lung cancer? 7](#_Toc6054)

[How can I support my patient manage the stigma sometimes associated with lung cancer? 7](#_Toc6055)

[For more information, please contact the Alberta Lung Cancer Screening Program: 7](#_Toc6056)

[References: 8](#_Toc6057)

# Overview of the program

## What is Lung Cancer Screening?

Lung Cancer Screening is a program that checks for cancer or for abnormal cells that may become cancer in people who have no symptoms. Lung cancer screening is done by a ‘low dose’ CT scan. The scan itself takes about 15 seconds and doesn’t hurt. The patient doesn’t have to have an injection or drink a dye. The small amount of radiation that’s used can find very tiny spots (nodules).

Eligible participants aged 50 to 74 years old will undergo annual low dose computed tomography (LDCT) examinations, and lung nodule or possible lung cancer findings will be managed by the ALCSP.

A personalized lung cancer risk assessment will be performed. Individuals with a calculated risk of ≥1.5% over 6 years will be scheduled by Diagnostic Imaging (DI) for an LDCT. Tobacco cessation support will also be provided as appropriate.

## Why should I screen my patients for lung cancer?

* **1 in 13 Albertans** are expected to develop lung cancer in their lifetime.
* **Lung cancer is the leading cause of cancer deaths** in Alberta, with 1,780 deaths in 2024.
* Smoking causes more than 8 out of 10 lung cancers
* Currently 7 out of 10 new diagnoses are advanced stage (III-IV), which are associated with low cure rates.
* In published studies and trials of organized screening programs, more than 70% of cases detected are stages I-II1, which are associated with much higher cure rates.
* Large, randomized trials have demonstrated at least **25% reduction** in lung cancer **mortality when patients are screened with LDCT2, 3.**

# Eligibility

## Who is eligible for screening?

* Albertans between the ages of 50 and 74
* **And** who currently smoke cigarettes or quit smoking after smoking for many years.

The ALCSP uses a risk-based approach to lung cancer screening. Upon receipt of referral, the program will calculate the patient’s individual risk. Patients with a lung cancer risk of ≥1.5% over 6 years will be invited for LDCT screening.

## Who is NOT eligible for screening?

* Albertans who are under the age of 50 or over the age of 74
* Patients who have a smoking history of less than 15 years
* Patients who are demonstrating symptoms of lung cancer or have other clinical indications for chest CT examination - symptomatic patients should be managed per current clinical processes
* Patients who have had a chest CT in the past 12 months

A patient should not be referred to the ALCSP if, in the opinion of the referring physician, the individual has a life expectancy of less than 10 years or significant comorbidities that would preclude aggressive treatment if lung cancer were detected. Examples may include but are not limited to:

* Prior invasive cancer diagnosis active or present in the past 5 years
* Severe heart or lung disease (NYHA III-IV, mMRC score grade 3-4, requiring home oxygen)
* ECOG performance status of II-IV

## Collection of race and ethnicity data

Race or ethnicity data is being collected as this information has been shown to impact lung cancer risk independent of other factors. This information will not be used by AHS beyond the ALCSP. The collection of this information may make some individuals uncomfortable. Healthcare personnel requesting this information should be aware of culturally safe collection methods, and ensure:

* Patients are aware of why this information is being collected and understand that it is voluntary
* Patients self-identify their background (this should not be assigned by healthcare personnel).

# Risks

## What are the potential risks of LDCT screening?

Like other test or procedures, LDCT screening may have risks or unintended consequences. This may include:

* **Radiation dose from LDCT exams**: The radiation associated with this exam is similar to 6 to 12 months of natural environmental radiation, or about the same as getting 5 to 10 chest x-rays. The radiation dose is about 5 times less than for a standard chest CT. There is a very small chance that exposure to this additional radiation could lead to the development of a new cancer years later. This risk is felt to be very low compared to the benefits of detecting lung cancer early.
* **Early recall**: 5 to 8% of individuals will have abnormalities that are unlikely to be cancer but where an additional LDCT is recommended prior to the usual annual examination.
* **False positive results:** 2 or 3% of individuals will have findings concerning for lung cancer and will need additional tests, and in some cases biopsies or surgery. 1 to 2% will not be found to have lung cancer but would still have been exposed to the risks associated with these procedures. While our evaluation protocols aim to minimize such risks, they cannot be eliminated.
* **Over-diagnosis**: Some of the lung cancers diagnosed through screening may not have ever resulted in harm. This may be because they are slow growing and/or the patient has other health issues leading to death prior to a time when the cancer would have caused illness. Studies suggest that over a 10-year period, only 2 to 10% of screening- detected lung cancers are considered over-diagnosed, and current evaluation protocols have additional safeguards to reduce over-treatment of such lesions as much as possible.

# Referral Process

## How do I refer my patient for lung cancer screening?

1. Check your patient’s screening eligibility during their next appointment using the lung cancer screening referral form.
2. Discuss the risks and benefits of lung cancer screening using the patient decision- making tool (brochure) to help your patient make an informed decision.
3. If they meet initial eligibility requirements, **complete and fax the referral form** or Smart Referral Form: [Alberta Lung Cancer Screening Program (ALCSP) Lung Cancer Risk Calculator and Referral Form - Screening For Life | Screening For Life](https://screeningforlife.ca/for-health-providers/lung-screening-information/risk-calculator-and-referral-form/) to the **ALCSP (1-888-944- 3388).** If your patient is still smoking cigarettes, the ALCSP will refer them to Tobacco Cessation services.

## How can my patient self-refer for lung cancer screening?

1. If your patient meets the criteria, they can contact the ALCSP directly at 1-866-727-3926 to see if they are eligible to participate in lung cancer screening or they may visit: [Lung Cancer Self-Referral - Screening For Life | Screening For Life](https://screeningforlife.ca/lung-cancer-self-referral/) to see if they are eligible.

The ALCSP RN will call the patient to review the risks and to confirm their eligibility. If eligible, the RN will send a requisition to AHS Diagnostic Imaging to schedule an appointment for a low-dose CT (LDCT). Appointment set-up and any appointment changes will be handled by AHS Diagnostic Imaging. Both you and your patient will receive notification of eligibility.

## How can I connect my patient to tobacco cessation?

Quitting smoking is the best step someone can take to prevent lung cancer. All patients referred to the ALCSP who are currently smoking commercial tobacco products will be offered tobacco cessation supports, regardless of their eligibility for the low-dose CT. The ALCSP Nurse will refer all eligible patients who are currently smoking commercial tobacco products to Tobacco Cessation Services.

Cessation supports may include:

* **Counselling support:** Check if your PCN offers counselling support or encourage your patient to call 1-866-710-7848 to ask about personal 1-on-1 counselling support. It’s free for Albertans and available seven days a week from 8 am to 8 pm.
* **Text support:** Text ABQUITS to 123456.
* **Group support:** Call 1-866-710-QUIT (7848) and ask about QuitCore, a group to help you quit smoking.
* **Website:** AlbertaQuits [(albertaquits.ca)](http://www.albertaquits.ca/) provides resources to support people in quitting or reducing smoking.
* **Metis Nation of Alberta Tobacco Reduction Programs**: Metis Albertans can sign up for the MNA’s variety of support options to help reduce or quit commercial tobacco use. Patients can enroll by contacting health@metis.org or calling 780-455-2200

Please note: Tobacco cessation refers to the use of commercial tobacco. Traditional tobacco is an important part of many Indigenous cultures. It is considered one of four sacred medicines (along with cedar, sage and sweetgrass) given by the Creator. For more information on traditional tobacco, visit [Traditional tobacco and commercial tobacco (alberta.ca)](https://myhealth.alberta.ca/Alberta/Pages/Traditional-tobacco-and-commercial-tobacco-.aspx)

# Results

## How will my patient get their result?

Your patient will receive a letter in the mail from the ALCSP informing them of their result and the recommended next steps. Patients can also sign up for MyAHS Connect, a secure, online tool that lets them see some of their AHS health information.

In the case of **abnormal results**, the ALCSP Nurse Practitioner will also call the patient to discuss the results and answer any questions. You may want to contact your patient to discuss their results.

## How will I receive my patients’ results?

You will receive the usual radiologist CT report on all patients. In the event of an abnormal result, you will also receive a copy of the consultation report from the ALCSP Nurse Practitioner.

## What are the possible results?

LDCT examination results will be categorized as per the Lung-RADS system4.

**Normal results** **(Lung-RADS 1 or 2):** This means that nothing abnormal was found in the scan. In many people, very small spots are seen on the lungs which are unlikely to be cancer and are considered normal (Lung-RADS 2). It is still important for your patient to get screened every year they remain eligible. The ALCSP will generate a new LDCT requisition for the appropriate date and an examination will be scheduled by the AHS Diagnostic Imaging department with the patient.

**Unclear results (Lung-RADS 3)**: In some people, small spots are seen on the lungs that are unlikely to be cancer, but still concerning enough that we do not want to wait one year to check on them again. Patients will be booked for another LDCT in 6 months to make sure the abnormality is stable.

**Abnormal results (Lung-RADS 4a, 4b or 4x)**: This means a concerning lesion has been found on the lungs. It may or may not be a cancer, but other tests will be needed to determine this. These results will be reviewed by the ALCSP Nurse Practitioner. In some cases, a short term 3-month LDCT will be arranged. In other cases, a referral will be sent to the Alberta Thoracic Oncology Program to complete the required investigations and treatments.

If your patient has **abnormal results**, the ALCSP Nurse Practitioner will call the patient to discuss their results, answer any questions and help them to develop a care plan.

**Incidental findings**: LDCT screening may occasionally detect non-lung cancer-related abnormalities in the lungs or other organs. These will be described in detail in the radiologist report. Primary Care Providers will take responsibility for any required assessments and investigations for incidental findings.

## What are my responsibilities regarding screening results?

Any lung nodule or possible lung cancer findings on LDCT screening **will be managed by the**

**ALCSP**. You’re free to discuss such findings with your patient and the ALCSP will keep you informed of management plans. To avoid duplication, please **do not** request investigations or referrals for such findings.

**Primary care providers** will take responsibility for any required assessments and investigations for **incidental findings**. These will be communicated to you in the radiologist report, and screening participants will be told to schedule an appointment with you to discuss further.

# Other important information

## What else can my patients do to reduce the risk of lung cancer?

Lung cancer has many causes. Smoking cigarettes isn’t the only cause. Other risks include exposure to radon, asbestos, and outdoor air pollution. And some people have something in their genes that makes them more likely to develop lung cancer. Screening based on this exposure is not eligible at this time.

For more information, visit myhealth.alberta.ca (search “radon”) and evictradon.org

## How can I support my patient manage the stigma sometimes associated with lung cancer?

People who have lung cancer often deal with stigma. Stigma describes the negative attitudes that we have toward someone or something that we see as unacceptable or undesirable. It’s often based on unfair or inaccurate beliefs.

Lung cancer carries stigma today mainly because of its connection to smoking. Smoking is the main risk factor for lung cancer (and many other diseases). Research has shown that many people think people with lung cancer should have known better than to smoke and that they’re to be blamed for getting the disease.

People who have never smoked can develop lung cancer. Because smoking is so closely connected to lung cancer, even people with the disease who don't smoke can also feel the effects of stigma.

For more information, visit [Lung cancer and stigma | Canadian Cancer Society](https://cancer.ca/en/cancer-information/cancer-types/lung/supportive-care/lung-cancer-and-stigma)

## For more information, contact the Alberta Lung Cancer Screening Program:

Phone: 1-866-727-3926

Email: alcsp@ahs.ca

Website: [Home - Screening For Life | Screening For Life](https://screeningforlife.ca/)

# References:

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1. ACoR. Lung CT screening reporting & data system Lung-RADS Version 1.1., <https://www.acr.org/Clinical-Resources/Reporting-and-Data-Systems/Lung-Rads>(2019, accessed July 22 2021).