GP RESOURCE GUIDE

Contents

Australian Government

NATIONAL LUNG CANCER SCREENING PROGRAM

National Lung Cancer Screening Program overview

Lung cancer is the leading cause of death from cancer for both men and women in Australia. The number of new cases of lung cancer diagnosed is continuing to increase year by year. While survival rates for people with lung cancer are improving, they remain low as many lung cancers are first diagnosed at an advanced stage of disease. The key to improving survival and quality of life of Australians affected by lung cancer is to diagnose lung cancer early.

The National Lung Cancer Screening Program commences in July 2025 and is for those most at risk of lung cancer. The aim of the program is to achieve better health outcomes for Australians by detecting lung cancer early and reducing deaths from lung cancer. Early detection can lead to more effective treatment options and improved outcomes for participants.

The program is an Australian Government initiative being implemented in partnership with the National Aboriginal Community Controlled Health Organisation.

The program is being co-designed in partnership with communities and the healthcare workforce to be person-centred, equity-focused, accessible, and culturally safe. It aims to improve lung cancer outcomes for those disproportionately impacted, including Aboriginal and Torres Strait Islander peoples and other at-risk communities.

Eligible participants will undergo low-dose CT scans every two years. Participants with lung cancer will exit the program and be managed according to the lung cancer Optimal Care Pathway. High-risk or very high-risk findings will need referral out of the program to a respiratory physician or other specialist with relevant expertise linked to a lung cancer multidisciplinary team for further investigations.
See **Optimal Care Pathway for people with lung cancer**

Key evidence for the National Lung Cancer Screening Program

- Lung cancer is Australia's leading cause of cancer-related death.[1]
- It is estimated that there were more than 15,000 new cases of lung cancer and nearly 9,000 deaths from lung cancer in Australia in 2024.[2]
- Aboriginal and Torres Strait Islander peoples are twice as likely to be diagnosed with and die from lung cancer.[3]
- Detecting lung cancer at early stages, prior to the development of symptoms, reduces deaths from lung cancer.[4,5]
- Large international randomised trials have shown at least a 20% reduction in deaths from lung cancer when participants are screened using low-dose CT scans, and that up to 70% of lung cancers are detected at early stages.[4,5]
- Lung cancer incidence is higher for those living in rural and remote areas[6] and people from culturally and linguistically diverse backgrounds.[7] Other priority populations with an increased risk of lung cancer related to smoking prevalence and healthcare access barriers include the LGBTIQA+ community, people living with a disability,[8,9] and people living with a mental illness.[10]
- By the time patients present with symptoms, lung cancer is often diagnosed at an advanced stage. If it is found early, treatment options are greater and are more likely to be effective.[11]
- A shift in the stage at diagnosis has been shown following the introduction of lung cancer screening, with more lung cancers diagnosed at stage 1 and 2.[12,13,14]
- Tobacco smoking is the biggest risk factor for lung cancer.[15,16]
- The eligibility criteria for the program were chosen to ensure those at highest risk are able to access screening, and to minimise risk.[17]
- Lung cancer screening has been shown to have favourable cost-effectiveness estimates in Australia.[17,18]
- The provision of smoking cessation support is an important component of any effective and equitable lung cancer screening program, with evidence from trials showing that participants have higher quit rates than the general population.[19]

The National Cancer Screening Register

The program is supported by the National Cancer Screening Register (NCSR). The NCSR maintains a single digital record for each person in Australia participating in cervical, bowel and lung cancer screening. They will need to be enrolled into the NCSR for lung cancer screening if they opt in, even if they already have a profile for bowel and/or cervical screening.

The NCSR acts as a safety net for the program and will support delivery of the program and continued participation by maintaining a national database of low-dose CT scan results. The NCSR will remind participants and healthcare providers when screening is due or when action is needed after a scan. Healthcare providers can access the NCSR by registering to use the **Healthcare Provider (HCP) Portal** (using a Provider Digital Access **PRODA** login) or by integrating eligible practice software (including MedicalDirector, Communicare and Best Practice).

The NCSR does not replace usual care arrangements; it is a support to assist a participant's lung cancer screening journey. Participants can't see their results in the NCSR.

The NCSR will send out a follow-up reminder to participants who do not attend their initial scan or interval scans or visit their healthcare provider if required. Notifications will also be sent to the healthcare provider. The NCSR will also send reminders when participants are due for their regular low-dose CT scan by method of their chosen correspondence (text message or letter).

To register for the NCSR HCP Portal you need a **PRODA account**

The NCSR's HCP Portal and clinical software integration makes helping participants with their lung cancer screening even easier. Through the HCP Portal, healthcare providers can:

- ✓ access a participant's lung cancer screening results and histories online
- ✓ submit lung cancer screening related forms, results and reports electronically
- ✓ update participant information, including nominating a healthcare provider or personal representative, defer the participant's next screening scan, or opt the participant in or out of the program.

Further information on the NCSR, HCP Portal and clinical software integration is available at **www.ncsr.gov.au/hcp**

If you or your patient choose to defer their participation in the program:

1. notify the NCSR to reschedule by phone or by completing the online form on the **Portal**
2. state how long the patient should be deferred for. This allows the NCSR to send reminders at the right time.

Further information on the NCSR is available at **www.ncsr.gov.au**

Role of primary care providers

General practitioners are essential to the National Lung Cancer Screening Program. Their role includes:

- identifying and inviting patients in their practice who might be eligible for lung cancer screening (with support from other practice workforce) to have an eligibility assessment
- undertaking eligibility assessments for patients as well as those who self-refer and are identified opportunistically during consultations
- checking low-dose CT scan suitability for participants eligible for the program
- supporting eligible participants with their decision-making
- enrolling eligible participants in the National Lung Cancer Screening Program via the NCSR
- providing support/resources for patients who are eligible (including for possible outcomes) and who are ineligible (which may be temporary)
- providing a low-dose CT scan request form
- providing smoking cessation support
- communicating results to participants
- providing the required referral (if required) to a respiratory physician (or other specialist) linked to a lung cancer multidisciplinary team
- managing actionable additional findings according to existing pathways and guidance
- providing and organising social, emotional and wellbeing support.

Who is eligible for lung cancer screening?

People are eligible for the program if they:

- ✓ are aged 50 to 70 years, **and**
- ✓ have no symptoms or signs that suggest lung cancer (for example, unexplained persistent cough, coughing up blood, shortness of breath for no reason), **and**
- ✓ smoke tobacco cigarettes or have a history of cigarette smoking (having quit within the last 10 years), **and**
- ✓ have a history of tobacco cigarette smoking of at least 30 pack-years (for example, a pack a day for 30 years, 2 packs a day for 15 years).

Once an individual is participating in the program, their smoking history eligibility criteria does not need to be re-assessed.

One pack-year is equal to smoking 20 tobacco cigarettes (one pack) per day for one year or tailored to the patient's smoking history – for example, 2 packs a day for 6 months is also one pack-year.

When calculating your patient's smoking history you will need to work with them to estimate the average number of cigarettes smoked per day and over how many years. This means that calculating pack-years is an 'imperfect science' and healthcare providers will need to use clinical judgment and best estimates to determine if a person is eligible to participate in the program.

Encourage participants to feel comfortable sharing their smoking history and work with them to estimate an average number of cigarettes smoked per day and over how many years.

People with symptoms suggestive of lung cancer should not be referred to the program. Instead, their symptoms should be investigated according to the Cancer Australia guide to investigating symptoms of lung cancer.
See **www.canceraustralia.gov.au/ISLCguide**

Participants who self-refer for lung cancer screening will still need to have their eligibility and suitability assessed and, if eligible, get a low-dose CT scan request form from a requesting practitioner.

People do not have to quit smoking to participate in the program.

It is important to regularly assess your patient's smoking history as they may become eligible in the future. Even if they are not currently eligible they can still take steps to reduce their risk such as quitting smoking. You should check their eligibility again in the future and provide smoking cessation advice and support if applicable to reduce risk.
See **quitcentre.org.au**

Consider the cultural perspective of each patient you see before talking about lung cancer screening.

Consider involving Aboriginal and/or Torres Strait Islander Health Practitioners and Aboriginal and Torres Strait Islander Health Workers where possible when speaking with a patient who identifies as an Aboriginal and/or Torres Strait Islander person. Consider accessing **interpreter services** for culturally and linguistically diverse people.

It is important to remember that many different aspects can make up a person's identity and their experiences. This can include cultural identity, race, religion, gender identity, sexual orientation or sexuality, where a person lives, age, ability or disability, and migration status, as well as the context they are experiencing.

Healthcare providers are encouraged to learn how to engage with community members who are disproportionately impacted by lung cancer and/or less likely to engage with a screening program. Healthcare providers can play a role in removing the barriers to screening for people.

Eligibility assessment

Step 1:
Confirm eligibility

Step 2:
Assess low-dose CT scan suitability

Screening may not be suitable for your patient. Plan with your patient when they can re-check their suitability and encourage future participation.

Examples of a participant not being suitable include:

- They have had a full chest CT scan within the last 12 months or have one planned for clinical reasons in the next 3 months.
- They have had a symptomatic lung infection (for example, COVID-19, pneumonia, acute bronchitis) within the previous 12 weeks.
- They are unable to lie flat for a minimum of 5 minutes and hold their hands above their head for a low-dose CT scan.
- Their weight exceeds the restrictions of the scanner (greater than 200 kg). Healthcare providers and/or program participants can check suitability with the radiology provider.

Link to Requesting Practitioner flow chart for eligibility and CT scan referral

Step 3:
Participate in shared decision-making to decide together if screening is right for them.

Provide patients with a shared decision-making for lung cancer screening pamphlet.

Shared decision-making materials

Step 4:
Provide the National Lung Cancer Screening Program privacy information notice.**

Step 5:
Complete the lung cancer screening program low-dose CT scan request form

Healthcare providers can complete the form and enrol a participant in the NCSR either through the NCSR interface integrated with clinical software or through the NCSR Healthcare Provider Portal.

NLCSP low-dose CT Scan Request Form Healthcare Provider Portal

All participants need a request for screening. Complete a low-dose CT scan request form including information that the scan is for the program and if the participant has a first-degree family history of lung cancer.

Step 6:
Provide smoking cessation advice and support.

People do not have to quit smoking to participate in the program. Encourage and support the participant to quit smoking; if appropriate, follow the Ask, Advise, Help model.

Quit Centre: Clinical tools and guidelines on smoking cessation (quitcentre.org.au)

Refer to the Program Guidelines for a comprehensive explanation of the steps of the National Lung Cancer Screening Program.

**Please note that if a patient does not consent to participation in the NCSR they are still eligible and their journey will be managed by you. They are also able to opt in to the NCSR at any time through you.

Low-dose CT scan

Two new Medicare Benefits Schedule (MBS) items have been created to provide free low-dose CT scans under the program. These are mandatory bulk-billing items.

There is no MBS item for consultations to assess eligibility for lung cancer screening, only for the low-dose CT scan. Existing MBS items for consultations will need to be used.

Medicare covers one low-dose CT scan every two years for those eligible for the program and interval scans for any follow-up needed. All low-dose CT scans within the program will be bulk-billed.

The program uses low-dose CT scans to look for the presence of nodules in eligible people.

The low-dose CT scan is a non-contrast CT. The participant will lie on the CT table for 5 to 10 minutes. Assure participants that the scan is not painful.

Low-dose CT scans are available for eligible people at any facility that provides radiology services for the program. Heart of Australia will deliver mobile lung cancer screening services to some rural and remote communities across Australia. Heart of Australia uses fully equipped trucks to reach these areas.

The low-dose CT scans will be reported by a radiologist to the NCSR.

Benefits and potential harms

The National Lung Cancer Screening Program is for people who are most at risk of lung cancer and are the most likely to benefit from screening. The Medical Services Advisory Committee (MSAC) considered all the benefits and harms of lung cancer screening with different screening criteria. People who will be eligible to participate in the program are at higher risk of lung cancer due to their age and smoking history, so MSAC assessed that the benefits of screening outweigh any potential harms.

Benefits of low-dose CT screening

Finding lung cancer early: There are more treatment options and a better chance of a cure when cancers are found early.

Peace of mind: Screening rules out lung cancer but also other lung diseases. A low-dose CT scan can provide assurance of your patient's lung health.[20,21]

Gives your patient: an opportunity to discuss smoking history and for you to provide support if they choose to quit.

Potential harms of low-dose CT screening

False positives: Of all people screened, around 3% will have a high-risk or very high-risk nodule found. To see if a high-risk or very high-risk nodule is cancer, more tests such as a follow-up CT scan, PET scan or lung biopsy may be needed. Around 48% of those with a high-risk or very high-risk nodule will turn out to have lung cancer.[22]

Worry: Getting a scan and waiting for results might make your patients or people close to them worried. Around 22-51% of those who have lung cancer screening will have a nodule and may need follow-up scans.[23]

Overdiagnosis and unnecessary treatment: Some cancers are very slow growing and may not cause problems during your patient's lifetime, particularly if they have other significant health problems. This is expected with screening. This kind of overdiagnosis happens for around 1 in 30 cancers found during lung cancer screening.[24]

Actionable additional findings: The scan can also see other parts of the body, in the neck, chest and upper abdomen. Sometimes this can show things either in the lungs (something other than cancer, such as emphysema) or outside of the lungs (something like heart disease).

If there are actionable additional findings they will be reported in the radiology report and guidance regarding next steps will be provided. This can be a benefit because clinically significant problems are found earlier. It can also be a harm because it might be a false alarm or overdiagnosis.

Exposure to radiation: The CT scanners used for lung cancer screening use the smallest amount of radiation possible while still getting a high-quality image. This is lower than one year of exposure to natural radiation in regular life. If your patient has a nodule, they may need interval scans to observe the nodule. This is a low level of radiation that is safe and can improve early diagnosis.

Potential time costs: Your patient may need to spend time travelling and away from home/Country, family and employment.

Potential out-of-pocket costs: Your patient may incur costs for GP consultations, travel and accommodation.

Smoking cessation

While participants do not need to quit smoking to participate in the program, healthcare providers should speak with participants about the importance of smoking cessation at all interactions throughout the screening and assessment pathway, including participants with no significant findings.

This should be done in a clear, non-confrontational and personalised way. It is important to be conscious of the stigma associated with lung cancer and smoking.

The Quit Centre provides healthcare providers with information, education and resources on smoking cessation. You should encourage all people who want to quit smoking to consider referral to behavioural interventions through Quitline **(quit.org.au)** and support them by prescribing pharmacotherapy (if clinically appropriate). Ensure they have provided informed consent for the Quitline request and agree to be contacted by Quitline.

Additional cessation support, including tools and tips, is available through the **National Cessation Platform (quit.org.au)** and via the **MyQuitBuddy mobile app**

Screening results

If you have enrolled your patient with the NCSR and if the scan has no significant findings, the NCSR will let you and your patient know through their preferred communication method. You and your patient will receive a reminder from the NCSR in two years time to screen again.

For any nodules or additional findings that require action, you will receive the results. The patient will not receive the results but will be advised by the NCSR to schedule an appointment with you to discuss the findings and book another follow-up scan if required.

If you have not enrolled your patient with the NCSR, or they have ceased correspondence or opted out of the NCSR, the results will be sent directly to you, but the patient will not receive notification that the results are ready. Accordingly you will need to notify your patient that their results have been received in accordance with usual practice. Follow up any findings according to the Optimal Care Pathway standard care protocols.

Category	Category descriptor	Findings	Management
0	**Incomplete**	This means there is suggested inflammation or infection on the lungs, or part or all of the lung cannot be evaluated.	It is important that your patient returns for a follow-up scan when they receive a reminder.
1	**Very low risk**	This means that no significant abnormality was found in the scan.	It is still important for your patient to get screened every **2 years** if they remain eligible.
2	**Low risk**	Most people will have lung nodules which are unlikely to be cancer and are considered normal. Some people have small nodules found that are unlikely to be cancer but still concerning enough to not wait 2 years to check again.	A **12-month** interval scan will need to be arranged by the participant and their requesting practitioner.

Category	Category descriptor	Findings	Management
3	**Low to moderate risk**	This means a lung nodule has been found that requires short-term surveillance.	A **6-month** interval scan will need to be arranged by the participant and their requesting practitioner.
4	**Moderate risk**	This means a lung nodule has been found that requires short-term surveillance.	A **3-month** interval scan will need to be arranged by the participant and their requesting practitioner.
5/6	**High-risk / very high-risk**	This means a lung nodule has been found that requires referral to a respiratory physician (or other specialist) linked to a lung cancer multidisciplinary team for assessment and possible investigation.	The participant's requesting practitioner will need to arrange a referral to a specialist linked to a multidisciplinary team for further investigation and treatment where appropriate.
A	**Actionable additional findings**	The scan can see other parts of the body in addition to the lungs, including the neck, chest and upper abdomen. Sometimes this can show findings either in the lungs (something other than cancer, such as emphysema), or outside of the lungs (something like heart disease). The NCSR will encourage the participant to see their doctor to discuss next steps.	The requesting practitioner will need to talk to the participant about the need for any further tests or a referral to a specialist. An additional finding does not necessarily mean the participant cannot continue in the lung cancer screening program.

References:

1. Sung, H. et al. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA: A Cancer Journal for Clinicians* 71, 209–249 (2021).
2. Australian Institute of Health and Welfare. Cancer data in Australia. *Lung Cancer.* https://www.aihw.gov.au/reports/cancer/cancer-data-in-australia/contents/cancer-incidence-by-age-visualisation (2024).
3. Australian Institute of Health and Welfare. Cancer in Aboriginal and Torres Strait Islander peoples of Australia 2018. Canberra: AIHW. https://www.aihw.gov.au/reports/cancer/cancer-in-indigenous-australians/contents/about
4. Aberle, D. et al. National Lung Screening Trial Research Team. Reduced lung-cancer mortality with low-dose computed tomographic screening. *New England Journal of Medicine* 365, 395–409 (2011).
5. De Koning, H. J. et al. Reduced lung-cancer mortality with volume CT screening in a randomized trial. *New England Journal of Medicine* 382, 503–513 (2020).
6. Australian Cancer Atlas 2.0 (https://atlas.cancer.org.au). Cancer Council Queensland and Queensland University of Technology. Version 05-2024. Accessed 28/08/2024.
7. Little, A. et al. Country of birth and non-small cell lung cancer incidence, treatment, and outcomes in New South Wales, Australia: a population-based linkage study. *BMC Pulmonary Medicine* 22, 366 (2022).
8. Lung Foundation Australia. https://lungfoundation.com.au/wp-content/uploads/2023/03/LBGTIQA-community-factsheet.pdf (2023).
9. Tosetti I. and Kuper, H. Do people with disabilities experience disparities in cancer care? A systematic review. *PLOS ONE* 13; 18(12), e0285146 (2023).
10. Lin, J. et al. The Impact of Pre-Existing Mental Health Disorders on the Diagnosis, Treatment and Survival among Lung Cancer Patients in the U.S. Military Health System. *Cancer Epidemiology, Biomarkers & Prevention* 25 (12), 1564–1571 (2016).
11. Australian Institute of Health and Welfare. *Cancer data in Australia*. https://www.aihw.gov.au/reports/cancer/cancer-data-in-australia/contents/cancer-incidence-and-survival-by-stagedata-visual (2024).
12. Potter, A. L. et al. Association of computed tomography screening with lung cancer stage shift and survival in the United States: quasi-experimental study. *BMJ* 376, e069008 (2022).
13. Silvestri, G. A. et al. Outcomes From More Than 1 Million People Screened for Lung Cancer With Low-Dose CT Imaging. *Chest* 164(1), 241–251 (2023).
14. Vachani, A. et al. Stage Migration and Lung Cancer Incidence After Initiation of Low-Dose Computed Tomography Screening. *Journal of Thoracic Oncology* 17(12), 1355–1364 (2022).
15. Weber, M. F. et al. Cancer incidence and cancer death in relation to tobacco smoking in a population-based Australian cohort study. *International Journal of Cancer* 149(5), 1076–1088 (2021).
16. Laaksonen, M. A. et al. The future burden of lung cancer attributable to current modifiable behaviours: a pooled study of seven Australian cohorts. *International Journal of Epidemiology* 47(6), 1772–1783 (2018).
17. Medical Services Advisory Committee. 1699 – National Lung Cancer Screening Program Public Summary Document [Internet]. Canberra, Australia: Australian Government Department of Health; 2022 Jul [cited 2024 Mar 28]. Report No.:1699. http://www.msac.gov.au/internet/msac/publishing.nsf/Content/1699-public.
18. Behar Harpaz, S. et al. Updated cost-effectiveness analysis of lung cancer screening for Australia, capturing differences in the health economic impact of NELSON and NLST outcomes. *British Journal of Cancer* 128(1), 91–101 (2023).
19. Kauczor, H. U. et al. ESR/ERS statement paper on lung cancer screening. *European Respiratory Journal*, 55(2), 1900506 (2020).
20. Carter-Harris, L. et al. Lung cancer screening: what do long-term smokers know and believe? *Health Expectations*, 20, 59–68 (2017).
21. Schapira, M. et al. How Patients View Lung Cancer Screening. The Role of Uncertainty in Medical Decision Making. *Annals of the American Thoracic Society* 13(11), 1969–1976 (2016).
22. Williams, A.M. et al. PL02.14 Triaging ILST Screening Participants at Program Entry: Comparative Performance of PanCan versus LungRADSv1.1 Protocol. *Journal of Thoracic Oncology* 19(10), S3 - S4 (2024).
23. Walter, J.E. et al. Small pulmonary nodules in baseline and incidence screening rounds of low-dose CT lung cancer screening. *Translational Lung Cancer Research* 6(1), 42-51 (2017).
24. National Lung Screening Trial Research Team. Lung Cancer Incidence and Mortality with Extended Follow-up in the National Lung Screening Trial. *Journal of Thoracic Oncology* 14(10), 1732–1742 (2019).