Australian Government

NATIONAL **LUNG** CANCER **SCREENING** PROGRAM

Lung Foundation Australia

The National Lung Cancer Screening Program

HEALTHCARE PROVIDER EDUCATION AND TRAINING HANDBOOK

CONTENTS

*The imagery featured in this workbook has been supplied by the Department of Health, Disability and Ageing, unless otherwise specified.

About the National Lung Cancer Screening Program

The National Lung Cancer Screening Program (the program) is a targeted screening program using low-dose CT scans to look for lung cancer in high-risk people without any signs or symptoms suggestive of lung cancer. Screening is recommended every two years, unless a screen-detected abnormality is found, and is targeted to people between 50 and 70 years of age with a history of tobacco cigarette smoking.

Purpose of the handbook

In the lead up to the launch of the program, Lung Foundation Australia in collaboration with the Australian Government and the National Aboriginal Community Controlled Health Organisation (NACCHO), developed comprehensive 3.5 CPD accredited health workforce eLearning modules, as a part of a consortia with the Daffodil Centre, Cancer Council Victoria and Melbourne University.

This handbook has been developed as a condensed version of the eLearning, designed to support both knowledge retention and practical application. It offers clear summaries of key concepts, reinforces learning outcomes, and provides quick-reference resources for everyday clinical use to support confident, evidence-based decision making.

Intended audience

The handbook has been developed to support general practitioners, nurse practitioners, medical specialists and other medical practitioners authorised to request low-dose CT scans under the program. It also supports a wider group of healthcare professionals as outlined in the health workforce roles and responsibilities diagram.

MODULE 1

LUNG CANCER IN AUSTRALIA

1

Introduction
Lung cancer in Australia

Lung cancer is the fourth most commonly diagnosed cancer in Australia and remains the leading cause of cancer-related death[1]. Among the five most common cancers, lung cancer has the lowest five-year survival rate, 27.3% between 2017 and 2021, compared to 71.6% for colorectal cancer, the next lowest.[1]

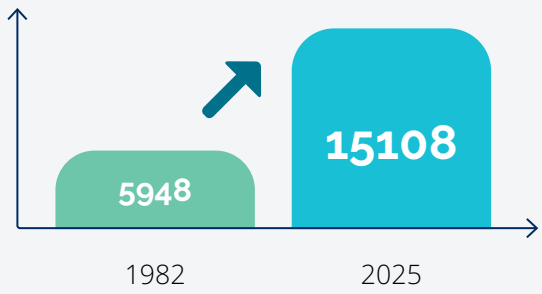
4th
most commonly diagnosed cancer in Australia

27.3%
survival rate between 2017 and 2021

Lung cancer incidence

Lung cancer incidence varies by age and sex, with the highest rates in 2025 expected among males and females aged 70–79.[1] Nationally, the number of diagnoses has risen from 5,948 in 1982 to an estimated 15,108 in 2025. By state and territory, the highest age-standardised incidence rates in 2021 were recorded in the Northern Territory and Queensland.[1]

Number of lung cancer diagnoses



Stage of lung cancer diagnosis

In 2011, 42.1% of the 10,134 lung cancer cases were diagnosed at Stage IV, with early-stage diagnoses (Stage I and II) being the lowest among the top five cancers.[1] Note that stage for 2,885 cases was classified as unknown.

Estimated lung cancer mortality

In 2025, lung cancer caused more deaths than breast and prostate cancer combined, with nearly 9,000 estimated deaths.[1]

Aboriginal and Torres Strait Islander people

From 2014–2018, Aboriginal and Torres Strait Islander people had twice the lung cancer diagnosis and mortality rates of non-Indigenous Australians. During this period, Aboriginal and Torres Strait Islander peoples recorded 9,262 new cancer cases, with lung cancer the most common cancer type at 1,404 cases (15% of all new cancer cases).[2]

[1]Australian Institute of Health and Welfare. (2025). Cancer Data in Australia 2025: Web report and supplementary data tables. Canberra: AIHW. Retrieved from: https://www.aihw.gov.au/reports/cancer/cancer-data-in-australia/data

[2]Australian Institute of Health and Welfare. (2025). Aboriginal and Torres Strait Islander Health Performance Framework. Canberra: AIHW. Retrieved from: https://www.indigenoushpf.gov.au.

People living in rural and remote areas

People living in rural and remote areas faced higher age-standardised lung cancer incidence and mortality and lower survival rates than those in major cities (2012–2016)[3].

In 2020, age-standardised mortality per 100,000 was 27.1 in major cities, 35.7 in remote areas, and 41.1 in very remote areas.[3]

People living in lower socioeconomic areas

Between 2012 and 2016, age-standardised lung cancer incidence was 1.8 times higher in the most disadvantaged areas (54.9 per 100,000) compared with the least disadvantaged areas (31.2 per 100,000).[3]

Age standardised five-year survival during this period was also lower in the most disadvantaged areas (14.0%) than in the least disadvantaged (19.9%). [3] People living in lower socioeconomic areas may also belong to other priority populations, which can compound barriers to equitable and appropriate care.[4]

[3]Australian Institute of Health and Welfare. (2021). Cancer in Australia 2021. Retrieved from: https://www.aihw.gov.au/reports/cancer/cancer-in-australia-2021/data
[4]Cancer Australia. (2025). Australian Cancer Plan. Retrieved from: https://www.australiancancerplan.gov.au/populations

MODULE 2

THE NATIONAL LUNG CANCER SCREENING PROGRAM

2

Overview of the program

The program is a targeted screening program using low-dose CT scans to look for lung cancer in high-risk people without signs or symptoms suggestive of lung cancer. Screening is recommended every 2 years, unless a screen-detected abnormality is found and is targeted to people between 50 and 70 years of age with a history of tobacco cigarette smoking.

The National Lung Cancer Screening Program Guidelines

The National Lung Cancer Screening Program Guidelines are designed to support healthcare providers in guiding participants through the screening program. They aim to ensure the program is safe, effective and evidence-based, while also standardising delivery across health systems, promoting equitable access for eligible populations, including priority population groups, and enabling continuous monitoring and improvement.

Roles of healthcare providers in the program

Healthcare providers support the program in various roles. Requesting practitioners, such as general practitioners, nurse practitioners, medical specialists and other medical practitioners, can request a low-dose CT scan under the Medicare Benefits Schedule (MBS).

Nurses, Aboriginal Health Workers/Practitioners, allied health professionals, practice staff and support workers can assist with eligibility assessment, appointments, reminders and care coordination. Radiographers perform the low-dose CT scans, and radiologists interpret and report results to the National Cancer Screening Register (NCSR) and to requesting practitioners.

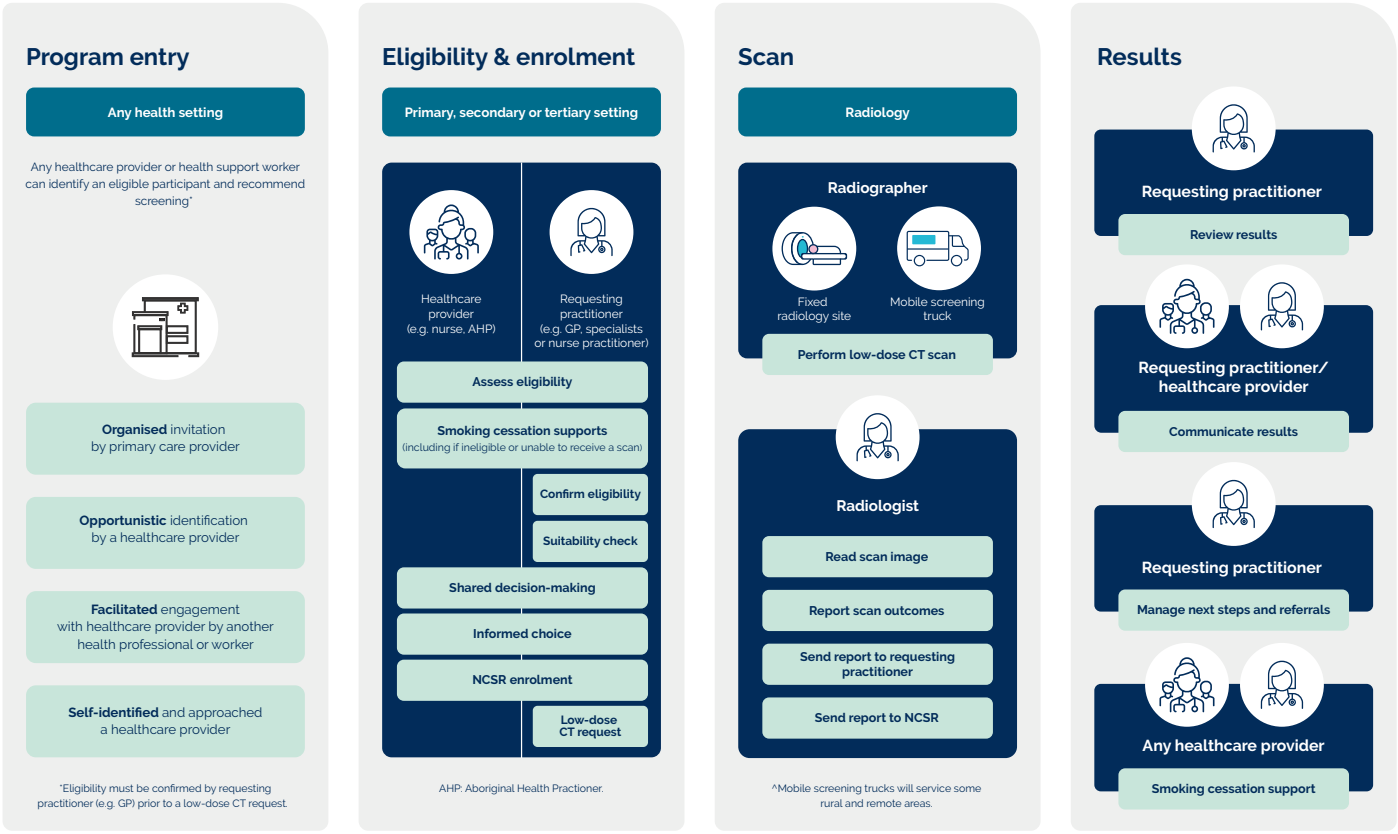


Figure 1: Simplified pathway summarising the program healthcare setting and roles and responsibilities.

Low-dose CT scans and MBS items

The program uses low-dose CT scans via fixed participating radiology service providers in the private and public sector. It also offers mobile services with Heart of Australia in certain rural and remote communities.

New MBS items cover the bulk billed program specific low-dose CT scans. Item 57410 is for the initial low-dose CT scan, and item 57413 is for follow-up scans as needed. Eligibility must be confirmed on the radiology request. More details are found on the MBS website and a factsheet is also available.

The National Cancer Screening Register (NCSR)

The NCSR will support the program by maintaining a national database of lung cancer screening records. It will not store scan images; these must be accessed through usual practice. The NCSR will also provide reminders to participants and healthcare providers when screening or follow-up is due, supporting but not replacing usual care. A welcome letter is sent from the NCSR to participants upon enrolment into the program.

Requesting practitioners (or their delegates) are required to complete the Healthcare Provider eligibility and enrolment form via the NCSR before a participant can undergo a low-dose CT scan as part of the program. The NCSR can be accessed anytime via the Healthcare Provider Portal or integrated clinical software (e.g. Best Practice). Primary care providers, radiologists and respiratory physicians will contribute reports to the register. Delegated access enables approved staff, like practice nurses or admin staff without a provider number, to access the NCSR.

A range of specific NCSR forms have been created for use by healthcare providers at various points in the screening and assessment pathway. These are described in Table 3, page 49 of 117 of the Program Guidelines.

If a patient is not enrolled via the NCSR, they may still receive a bulk-billed scan, but they won't be included in the program and won't have results recorded on or receive follow-up via the NCSR.

Telehealth

Face-to-face consultations are preferred for assessing program eligibility and sharing key results with participants. However, telehealth can support participation in the program, especially for eligible participants living in rural and remote areas.

Offering lung cancer screening

A Getting Ready for the National Lung Cancer Screening Program factsheet has been developed to ensure practices are ready to promote the program and enrol eligible participants.

Lung Cancer Screening Helpline

Funded by the Department of Health, Disability and Ageing, Lung Foundation Australia operates the Lung Cancer Screening Helpline (1800 654 301 - Option 2, or contact lungscreening@lungfoundation.com.au).

The helpline is a free service for individuals and healthcare professionals seeking to understand the program. The Helpline encourages participation by answering questions about eligibility and stages of the screening and assessment pathway, addressing concerns, supporting shared decision making and connecting people to resources and support. Translating and interpreting services are available through TIS National.

MODULE 3

PROGRAM RECRUITMENT AND ELIGIBILITY

3

Program recruitment

Program recruitment occurs across health services to reach those at highest risk. As eligibility is based on lung cancer risk, healthcare providers should regularly update smoking history in electronic records. This helps identify participants and aid smoking cessation, and may include smoking status, age of initiation and cessation, duration, and daily cigarette consumption.

There are four entry pathways: organised (identifying participants through patient records), opportunistic (during healthcare consultations), facilitated (supported via community or allied health workers and/or family), and self-identified (potential participants seek an eligibility assessment themselves).

Promotion and awareness

Low awareness is a barrier to lung cancer screening participation.[5]Promoting the program through a national communications campaign, education, and healthcare provider involvement, such as using plain language, multilingual resources, displaying posters and resources and outreach seeks to boost engagement and reduce stigma. Tailored resources are available for Aboriginal and Torres Strait Islander people.

Screening and assessment pathway

The screening and assessment pathway defines the structure of the program.

[5]Sands, J., Tammemägi, M. C., Couraud, S., Baldwin, D. R., Borondy-Kitts, A., et al. (2021). Lung Screening Benefits and Challenges: A Review of the data and Outline for implementation. Journal of Thoracic Oncology, 16(1):37–53. https://doi.org/10.1016/j.jtho.2020.10.127.

Eligibility assessment

Participants are eligible for screening if they are aged 50–70, show no lung cancer symptoms or signs, currently smoke or quit within the last 10 years and have smoked the equivalent of 30 or more pack-years.

Tobacco cigarette smoking includes packaged cigarettes and roll-your-own cigarettes (rollies). It does not include other forms of tobacco or nicotine smoking or consumption, such as vaping.

Pack-year calculations

Pack-years are calculated by multiplying the number of packs smoked per day (20 cigarettes = 1 pack) by the number of years smoked in the person's lifetime. Healthcare providers should ask about years smoked and daily cigarette use, using clinical judgement if history is unclear, noting it is an "imperfect science".

Involving trusted staff such as an Aboriginal and Torres Strait Islander Health Worker or Practitioner or an interpreter can help. NACCHO has also developed a 'proxy for pack-years calculation' resource.

While not required, recording smoking pack-year estimates in patient records helps identification of patients who may be eligible for future lung cancer screening. If a patient is not currently eligible, discussing the program can support risk reduction, and the offering of tailored smoking cessation advice and resources.

Example of an eligible case study:

Susan is a 60-year-old female with a history of smoking. She smoked 1 pack of 20 cigarettes per day for 40 years, and she quit 5 years ago.

- Packs per day: 1
- Number of years smoked: 40

Pack-years = Packs per day × Years smoked

= 1 × 40

= 40 pack-years

Therefore, Susan is eligible for the National Lung Cancer Screening Program due to her age, smoking history and being asymptomatic.

Low-dose CT scan suitability

Patients may be unsuitable for a low-dose CT scan if they:

- Weigh over 200 kg (scanner limits vary, check with provider)
- Cannot lie flat for 5 minutes or raise arms
- Had a recent symptomatic lung infection (within 12 weeks)
- Had a full chest CT in the past 12 months or have one planned in the next 3 months for clinical reasons

Severe co-morbidities (e.g. advanced COPD or poor performance status) may also make screening inappropriate. Suitability should be recorded on program forms, such as the Healthcare Provider Eligibility and Enrolment form and updated on the Participation Management form (accessible via the NCSR Healthcare Provider Portal or via integrated clinical software) at follow-up appointments.

Symptoms suggestive of lung cancer

For the purpose of the program, a patient is asymptomatic if they have no signs or symptoms suggestive of lung cancer.

Any unexplained, persistent symptoms or signs lasting more than three weeks, or earlier in high-risk patients, should be investigated according to the Investigating Symptoms of Lung Cancer Diagnostic Tool.

After appropriate investigation, if lung cancer is ruled out, the patient may be eligible to enter or re-enter the program.

Shared decision-making

People who are assessed as eligible and suitable for a low-dose CT scan should be engaged in a shared decision-making discussion by their healthcare provider to make an informed choice about lung cancer screening. Resources are available to support healthcare providers to engage with patients including Aboriginal and Torres Strait Islander patients, in shared decision making.

MODULE 4

EFFECTIVE COMMUNICATION STRATEGIES

4

Effective communication strategies can address barriers to lung cancer screening, which may include stigma, fear, limited access, and lack of culturally safe health services.[6]

Stigma associated with lung cancer

Stigma surrounding smoking and lung cancer may cause shame, delays in care and lowers screening and tobacco treatment support. Healthcare providers can reduce stigma by recognising nicotine dependence as a treatable condition, addressing social factors, and using non-judgemental, supportive, positive, person-centred terminologies to improve screening uptake. Healthcare providers are encouraged to review their understanding of smoking behaviour, cultural norms, stigma, and lung cancer survival and treatment options to maximise program participation and smoking cessation conversations.

Motivating patients to screen

Using person-first language reduces labelling and stigma. Additionally, addressing common pessimistic attitudes, such as nihilism and fatalism with positive messages about early detection, advances in treatment, and real success stories can encourage participation and hope.

Healthcare providers are encouraged to adopt patient-centred, non-judgemental approaches, involve support persons, and offer interpreters to facilitate informed decision-making. Clear decision aids, like flow charts and simple information, reduce anxiety, build trust, and supports informed choice.

Smoking cessation

It is predicted that

7 in 10

people eligible for the program will be smoking at program entry.

Healthcare providers should follow the Ask, Advise, Help smoking cessation model and can refer patients to Quitline (13 7848) and Quitline for Aboriginal and Torres Strait Islander Communities.

[6]Bevilacqua, L. A., Evans, N. R., & Okusanya, O. (2023). Stigma and fatalism in lung cancer. In Springer eBooks (pp. 15–24). https://doi.org/10.1007/978-3-031-33596-9_3.

[7]Wade, S., Ngo, P., He, Y., Caruana, M., Steinberg, J., Luo, Q., David, M., McWilliams, A., Fong, K. M., Canfell, K., & Weber, M. F. (2024). Estimates of the eligible population for Australia's targeted National Lung Cancer Screening Program, 2025–2030. Public Health Research & Practice. https://doi.org/10.17061/phrp34342410

Supporting priority populations

All healthcare providers involved in the program share responsibility for delivering culturally safe, respectful and flexible care that addresses each participant's individual needs and context. Research shows that racism, along with social, cultural, economic, and commercial factors, significantly influences health outcomes and contributes to lung cancer disparities.[8,9,10]

The priority populations for this program detailed below may experience a higher risk of lung cancer alongside challenges in accessing culturally safe healthcare.[5,6,7]

Aboriginal and Torres Strait Islander people

Aboriginal and Torres Strait Islander people may face barriers in accessing screening such as travel, financial pressures, fear, language differences, and distrust of mainstream healthcare services. These challenges are compounded by the ongoing impacts of intergenerational trauma and experiences of systemic racism within healthcare systems, which can influence how safe and supported people feel when engaging in screening.

Healthcare providers should collaborate with Aboriginal Health Workers/Practitioners, interpreters, families, Elders, and Community leaders to build trust, support culturally safe communication, and respect collective decision-making. Encouraging self-determined care, supporting patient routines, arranging travel companions, and ensuring gender-appropriate care that respects Men's and Women's Business are essential. Linking screening appointments to local events may also aid recall and support participation.

Ensuring that data collection processes respect privacy and confidentiality, with informed consent and clear communication about how information will be used, is also essential.

People living in rural and remote areas

People living in rural and remote areas of Australia may face limited access to local health services, longer travel distances to care, and socioeconomic disadvantages. Flexible care options such as telehealth and mobile screening services may assist to improve access.

People from multicultural backgrounds

People from multicultural backgrounds may face language, cultural and healthcare navigation barriers. Healthcare providers are encouraged to use interpreters and translated program resources, verify patient understanding, and offer culturally appropriate support.

People with disability

People with disability may require individualised support and accessible services. Healthcare providers are encouraged to use tailored communication methods and involve carers or authorised support representatives when required to ensure effective care.

[8]Pandeya, N., Wilson, L. F., Bain, C. J., Martin, K. L., Webb, P. M., & Whiteman, D. C. (2015). Cancers in Australia in 2010 attributable to tobacco smoke. Australian and New Zealand Journal of Public Health, 39(5):464–470. https://doi.org/10.1111/1753-6405.12446.

[9]Cancer Council Australia. (2012). Cancer doesn't discriminate by culture - nor should we. Retrieved from:https://www.cancer.org.au/blog/cancer-doesnt-discriminate-by-culture-nor-should-we

[10]Tosetti, I., Kuper, H. (2023). Do people with disabilities experience disparities in cancer care? A systematic review. PLOS ONE. 18(12):e0285146. https://doi.org/10.1371/journal.pone.0285146

People experiencing mental health challenges

People experiencing mental health challenges may face stigma, social isolation and cognitive challenges that can limit their participation in screening programs. Healthcare providers should offer flexible appointments, psychological support, involve case managers and foster integrated physical and mental health care.

People in the Lesbian, Gay, Bisexual, Transgender, Intersex, Queer and Asexual (LGBTIQA+) community

People in the LGBTIQA+ communities may face discrimination and unsafe healthcare environments. Healthcare providers should use inclusive language, undertake appropriate training and refer patients to specialised support services.

Navigating program ineligibility

Some patients not eligible for lung cancer screening may still seek screening. The program currently targets only those at highest risk, and there is insufficient evidence to expand to other groups. For ineligible patients, healthcare providers should review eligibility regularly, promote smoking cessation and provide advice as part of normal care outside of the program.

Psychological impact of participating in lung cancer screening

Psychological support for program participants is crucial. Healthcare providers should acknowledge any present challenges, offer resources, coping strategies, and encourage follow-up appointments to address concerns throughout the screening and assessment pathway.

MODULE 5

LOW-DOSE CT SCAN, ASSESSMENT AND RESULTS

5

Low-dose CT scan

The non-contrast low-dose CT scan is the recognised screening tool for early diagnosis of lung cancer.[11] It uses lower radiation than standard CT scans but still provides high-quality images that are more effective than chest x-rays in detecting lung cancer.

Table 1 summarises the requirements to be met before baseline and follow-up screening:

Requirements	Baseline (first) screening	Biennial / follow-up screening
Eligibility Assessment	Yes	Need to confirm they do not meet exit criteria (see Program Exit and Re-entry)
Suitability check for low-dose CT scan	Yes	Yes
Shared decision-making	Yes	Yes
Low-dose CT scan request*	Yes	Yes
Smoking history	Yes	No - does not need to be re-assessed after the first scan
Registration for the program within NCSR	Yes	No - Confirm participant information and contact details

*Requires participant to make an appointment to see requesting practitioner to obtain the low-dose CT request

Low-dose CT scan form

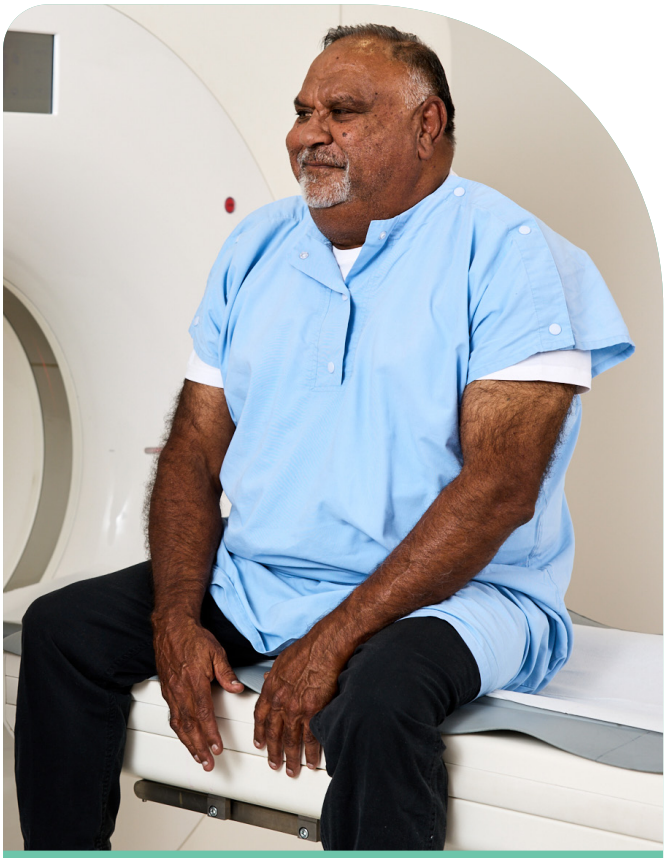
Requesting practitioners are encouraged to use the program-specific low-dose CT scan form. Standard radiology request forms can also be used, but they must clearly state that the scan is for lung cancer screening and include details such as scan type (e.g. first scan or 24 month follow-up), family history in any first-degree relative (e.g. parent, sibling or child), previous chest CTs, any personal history of previous cancer and participant eligibility. Low-dose CT requests for screening do not expire and are valid until the scan has been performed.

[11] Gierada, D. S., Black, W. C., Chiles, C., Pinsky, P. F., & Yankelevitz, D. F. (2020). Low-Dose CT Screening for Lung Cancer: Evidence from 2 Decades of Study. Radiology Imaging Cancer, 2(2): e190058. https://doi.org/10.1148/rycan.2020190058.

Booking the low-dose CT scan

Healthcare providers should prompt participants to book their low-dose CT scan promptly and assist with finding a participating radiology provider, scheduling, or accessing support if needed.

Some Primary Health Networks (PHNs) may also support this process. Contact your local PHN for more information.



Screening results and reporting

Radiologists follow the Nodule Management Protocol to report lung nodule findings and provide management recommendations. Structured reporting must be used to ensure consistent results and guide next steps.

Lung cancer screening nodule risk is categorised as:

- Category 0 (Incomplete): Repeat scan (a poor-quality scan may need to be repeated as soon as possible. Same MBS item and request is used) or additional imaging in 1–3 months.
- Category 1 (Very low risk): No follow-up needed until the next biennial scan (24 months).
- Categories 2-4 (Low to Moderate risk): Repeat scan in 3, 6, or 12 months.
- Category 5-6 (High risk/Very high risk): Refer to a respiratory physician or relevant specialist for further investigation; participant may exit or re-enter program after investigation.
- Category A (Actionable additional findings): Non-cancer findings (e.g. emphysema, heart disease) are managed through usual care, per relevant guidelines. Findings are recorded alongside the participant's program outcome category (Categories 0–6) and should not be documented in isolation.

It is important to explain to participants that these categories reflect their current level of risk based on scan findings. A very low risk result is reassuring, but it does not rule out future risk, which is why continued participation in regular screening and smoking cessation support (if required) is recommended.

Scan outcomes and communication

Low-dose CT scan results are sent to the NCSR and the requesting practitioner. Participants are unable to view full results via the NCSR. If results are above very low risk, the NCSR advises them to see their requesting practitioner.

The requesting practitioner is responsible for communicating results and should not wait for NCSR reminders.

If a nodule is found, a face-to-face discussion is preferred; phone or video may be suitable for participants living in rural and remote areas. Healthcare providers should confirm the participant's communication preferences (default is letter) and encourage them to make any update via the NCSR.

Discussing results

Hearing that a nodule has been detected may cause anxiety. Healthcare providers should communicate low-dose CT scan results clearly, compassionately and without judgment, acknowledging participants' feelings and reassure them that early detection improves the chance of survival. Communication should be tailored to age, education, culture, and language, and supported with written or visual materials and opportunities for follow-up questions.

Program exit and re-entry

Participants remain eligible until they exit the program due to:

- Medical reasons, such as a lung cancer diagnosis
- Turning 71
- No longer being able to undergo a low-dose CT scan
- Opting out
- Death (with Services Australia notifying the NCSR to stop correspondence).

After a participant exits the program, healthcare providers should continue usual care, monitor for symptoms or signs suggestive of lung cancer and offer smoking cessation support.

Re-entry is allowed after exit if a person remains eligible or becomes eligible again.

Eligible participants enrolled in the program who become temporarily unsuitable for a low-dose CT scan do not exit the program. The requesting practitioner (or their delegates) can nominate a date for when they expect the patient to resume screening and receive NCSR correspondence.

MODULE 6

KNOWLEDGE BANK

6

National Lung Cancer Screening Program Information and Resources

For more information on the Program, including about how lung cancer screening works and to access Program resources, visit the Department of Health, Disability and Ageing website.

Health professional resources

For links to the health professional and provider resources, including publications and videos related to the program, visit resources for the health sector.

For The Royal Australian and New Zealand College of Radiologists (RANZCR) resources, including guidelines, training, and education materials to support the radiology sector for the program, visit the RANZCR website.

Public resources

For links to participant and general public resources, including publications and videos related to the program, visit resources for the public.

Translated resources

For program resources in other languages, visit translated resources.

Aboriginal and Torres Strait Islander people resources

For program resources for Aboriginal and Torres Strait Islander people, visit the NACCHO website.

Lung Cancer Screening Helpline

Funded by the Department of Health, Disability and Ageing, Lung Foundation Australia operates the Lung Cancer Screening Helpline (1800 654 301 - Option 2, or contact lungscreening@lungfoundation.com.au). The helpline is a free service for individuals and healthcare professionals seeking to understand the program.

"It's Good to Know" website

To access the National Lung Cancer Screening Program awareness campaign, visit the "It's Good to Know" website.

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