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National Screening, National Responsibility: Turning Promise Into Progress for Lung Cancer Care

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ABSTRACT

Lung cancer remains Australia's leading cause of cancer death, with a disproportionately high burden on Aboriginal and Torres Strait Islander peoples. The recent launch of the National Lung Cancer Screening Program (NLCSP) offers an exciting and critical opportunity to improve outcomes. However, the program's full potential may not be met due to substantial systemic shortfalls. Key challenges include inadequate access to multidisciplinary workforce, limited access to personalised medicine and a lack of a national clinical quality registry. To maximise the NLCSP's impact, strategic investment is urgently needed to strengthen clinical infrastructure, enhance research and ensure equitable access to care.

JEL Classification: Health services administration, Neoplasms, Respiratory tract diseases

1 | Introduction

Lung cancer remains Australia's leading cause of cancer death, accounting for more lives lost than breast and bowel cancer combined [1]. In 2025, more than 15,000 Australians were diagnosed with lung cancer, and this number is expected to continue to rise annually for at least the next 20 years [1, 2]. Lung cancer has the highest disease burden of any cancer, with about > 58,000 years of potential life lost in Australia each year [3], costing the nation billions of dollars annually [4]. The gravity of this challenge is particularly profound among Aboriginal and Torres Strait Islander peoples, who face lung cancer incidence and mortality rates twice those of non-Indigenous Australians [1].

Lung cancer is projected to cost the Australian economy $8.3 billion each year by 2031, yet it receives disproportionately low research funding relative to its burden—this cancer has an inversely proportional relationship of deaths to total research funding [4, 5]. This is reflective of a wider phenomenon of chronic underinvestment in respiratory research [6], which threatens efforts to develop and implement innovative service design, diagnostics and therapies for Australia's leading cancer killer.

There have been recent substantial advances in the management of lung cancer, with the potential to improve equity and outcomes for Australians. This article discusses issues and actions that Australia must address to realise such potential. Progress will require continued collaboration from all stakeholders across the lung cancer community, including non-government advocacy organisations, consumers, National Aboriginal Community Controlled Health Organisations (NACCHOs), clinicians, policymakers and research funding bodies.

2 | The National Lung Cancer Screening Program: A Critical Catalyst

July 2025 marked an exciting and transformative moment for lung cancer care in Australia: the launch of the National Lung Cancer Screening Program (NLCSP). This was a result of collaboration between Cancer Australia, consumer and advocacy

groups and NACCHOs and received bipartisan political support. The NLCSP is designed to identify and target high-risk individuals with a shift to detecting more early-stage cases of lung cancer where 5-year survival can approach 70%, compared with less than 5% at stage IV [7].

Yet, screening alone is not enough; strategic and urgent investment in clinical services and research infrastructure is essential if the program's full potential benefits are to be realised.

3 | The Landscape: Quality Services, Uneven Access

The 2023 Australia and New Zealand Lung Cancer Landscape Survey revealed a deeply concerning picture: only 41% of sampled Australian institutions that treat lung cancer reported having the recommended core multidisciplinary workforce for their tumour multidisciplinary team (MDT) meetings, with barely a third discussing all potential lung cancer cases and half of all institutions lacking specialist lung cancer nurses [8]. Most centres, especially in non-metropolitan areas, struggle with shortages of thoracic surgeons, nuclear medicine specialists and access to cutting-edge diagnostic technology, including personalised medicine strategies such as next-generation sequencing (NGS) [8]. The results of the 2025 Lung Cancer Landscape Survey are keenly awaited to assess the impact of recent investment in areas such as nursing care.

MDT meetings are internationally recognised as best practice in cancer care, ensuring that each patient benefits from collective expertise in diagnosis, staging and an individualised treatment plan [9]. Compared with no MDT care, patients whose cases are discussed at MDT are more likely to receive complete staging, guideline-concordant therapies (including surgery and radiotherapy), and have improved overall survival [10, 11]. A recent systematic review and meta-analysis (including Australian data) found that patients with lung cancer who were discussed in MDT meetings had not only better documentation of stage and higher rates of surgery but also longer 1-year and overall survival compared with those not discussed [12].

Specialist lung cancer nurse involvement is powerfully linked with improved patient outcomes. Their presence throughout diagnosis and care reduces the risk of early death and unnecessary hospital admissions, increases uptake of systemic therapy and ensures timely, coordinated care [13]. When considering the burden of lung cancer, there remains a profound imbalance of specialist lung cancer nurses in Australia compared with other common cancers.

4 | The Power of Clinical Quality Registries and Data Platforms

High-quality clinical quality registries are recognised for delivering, improving and sustaining best clinical practice. Probably, the best exemplar in lung cancer is the National Lung Cancer Audit (established in 2005) in the United Kingdom, which has been widely acknowledged as having a profound impact on local and national policy, and influencing outcomes for lung cancer [14]. An effective clinical quality registry will recognise and seek to alleviate unwarranted variations in the quality of care. There are multiple reports over the past decade from different groups in Australia showing unwarranted variations in the quality of lung cancer care [15]. Such variations are known to reduce survival and affect quality of life [16, 17]. More recently, a large study from Victoria found worse adherence with guideline-concordant care and worse survival in public versus private hospitals [18]. None of these retrospective reports have been designed to change practice. Of the 69 clinical quality indicators proposed by these different Australian groups, none are comparable between each other, and none accurately measure the proposed optimal care pathway for people with lung cancer recommendations endorsed by Cancer Australia [15, 19].

Australia urgently requires a collaborative national lung cancer clinical quality data platform to provide near real-time audit cycles against endorsed clinical quality indicators, benchmarking institutions and identifying unwarranted variations in access, timeliness and outcomes. Such a platform would enable not just evaluation, but action: data-driven improvement cycles, early warning of delays and a robust foundation for research, including registry-based trials, health economic evaluations and linkage to the National Cancer Screening Register to provide critical, timely data on the NLCSP outcomes.

5 | Equitable Access to Personalised Medicine: A Necessity for Modern Lung Cancer Care

Timely access to personalised medicine investigations, such as molecular testing and NGS is now a cornerstone of contemporary lung cancer care [20]. This enables optimised and personalised therapy (e.g., targeted and immunotherapies), and rapid adaptation to advances in personalised medicine. Delays or inequities in such access will likely translate to poorer outcomes for patients, especially in regional, rural or underfunded centres. For the promise of screening and early diagnosis to be realised, Australia must guarantee equitable, rapid access to molecular testing and NGS for all patients, irrespective of geography or socio-economic status.

6 | Linking Biobanks and Real-World Outcomes

Australia has world-class cancer researchers and research facilities. The opportunity to leverage this expertise and learn from longitudinal biobank initiatives is potentially revolutionary [21]. Collecting biological samples for multi-omics analysis linked to clinical outcomes could transform our understanding of why some therapies fail or succeed and drive advances in translational research [22, 23]. Australia's current model of fragmented research groups is inefficient. To improve outcomes for the community and achieve global leadership in translational research, national collaboration across the whole lung cancer community must be improved.

7 | Synergy With Smoking Cessation: A Missed Opportunity Without Investment

The potential impact of lung cancer screening is magnified when embedded with effective smoking cessation, with evidence demonstrating that integrated cessation support alongside

screening reduces lung cancer and all-cause mortality beyond what screening alone can accomplish [24, 25]. Yet, the lack of cessation support in most specialist centres represents a missed opportunity to optimise the impact of the NLCSP [8], and the loss of dedicated Medicare Benefits Scheme (MBS) item numbers to support smoking cessation in December 2023 seems incongruous with the clear known benefits. Continued advocacy for a policy of a tobacco- and nicotine-free generation will have the biggest impact for Australians.

8 | A Tipping Point: The Urgent Call for Action

Without major investment in both services and research, the full potential of the Australian NLCSP will not be realised. The establishment of the NLCSP offers a unique opportunity to transform lung cancer outcomes in Australia. Realising the full potential benefits requires:

- Universal access to MDT care and lung cancer specialist nurses;
- Nationwide timely access to personalised medicine interventions such as NGS;
- A state-of-the-art lung cancer clinical quality registry for benchmarking care and system improvement;
- Expansion of dedicated, embedded smoking cessation services with MBS support;
- Research platforms linking biobanks with longitudinal outcomes, strengthening potentially transformative personalised medicine approaches; and
- More determined, sustained efforts to close the gap for Aboriginal and Torres Strait Islander peoples, led by NACCHOs.

The culture needs to change into setting the standard of care required of health services, rather than allowing inadequate infrastructure to dictate the standard of care. We need innovation, not compromise.

With decisive, coordinated investment, Australia can transform lung cancer outcomes for generations to come. Without it, the true, wider potential benefits of screening will remain out of reach—and lung cancer will continue to disproportionately affect the Australian community. Now is the time to act.

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