

P1.339: Real-world application of Australasian lung cancer quality indicators using population wide linked data



IASLC 2026 World
Conference on Lung Cancer
SEPTEMBER 12 – 15, 2026
SEOUL, REPUBLIC OF KOREA



Health
South Western Sydney
Local Health District

Chiew KL^{1,2}, Chong S³, Sundaresan P^{4,5}, Lehman M^{2,6}, **Vinod SK^{1,7}**
¹South Western Clinical School, University of New South Wales, Liverpool, Australia, ²Princess Alexandra Hospital, Division of Cancer Services, Brisbane, Australia, ³Epidemiology and Health Analytics, Western Sydney Local Health District, North Parramatta, Australia, ⁴Radiation Oncology Network, Westmead Hospital, Westmead, Australia ⁵Sydney Medical School, The University of Sydney, Camperdown, Australia, ⁶School of Medicine, University of Queensland, Brisbane, Australia, ⁷Liverpool Cancer Therapy Centre, South Western Sydney Local Health District, Liverpool, Australia

Correspondence: Kim-Lin.Chiew@health.qld.gov.au

INTRODUCTION

- Quality indicators (QIs) enable benchmarking of cancer care, identification of variation, and quality improvement.
- For population-level assessment, effective QIs should be feasible to measure using routinely collected data that allow timely and low burden evaluation.
- In Australia, a national set of thoracic cancer QIs was recently developed through a Delphi consensus process to standardise measurement of lung cancer care.¹

Aim:

To assess the feasibility of measuring standardised lung cancer QIs using cancer registry linked data in New South Wales (NSW) and evaluate compliance with recommended benchmarks.

METHODS

Study Population:

Patients diagnosed with lung cancer in NSW, 2008–2012.

Data sources:

NSW Clinical Cancer Registry (ClinCR), Admitted Patient Data Collection (APDC), and Registrar of Births, Deaths & Marriages (RBDM).

Quality Indicators:

Included 26 lung cancer-specific QIs from the nationally endorsed Australasian thoracic cancer quality indicator set, developed through a Delphi consensus process.

Feasibility and analysis:

- A QI was considered feasible if the required data items were available within the linked dataset.
- Feasible QIs were assessed against their recommended benchmark levels to determine compliance with consensus standards.

DISCUSSION AND CONCLUSION

Conclusions:

Feasibility: Only 58% of national lung cancer QIs were measurable using registry-linked data.

QI measurement: Care met benchmark standards in 27% of measurable indicators.

Implication: Current data systems limit accurate evaluation of lung cancer care quality in NSW.

Future direction: Strengthen and expand nationwide lung cancer registry infrastructure by purposefully collecting key data items to enable comprehensive assessment and timely quality improvement.

Discussion:

- Registry-linked data captured fewer than 60% of national lung cancer QIs, limiting comprehensive assessment.
- Missing documentation (performance status (PS), stage) likely contributed to under-estimation of treatment compliance.
- Safety indicators performed well, suggesting consistent adherence to treatment-related safety processes.
- Findings highlight structural gaps in documentation, MDT processes, and treatment pathways.
- System-level evaluation remains constrained by incomplete or non-standardised data capture

Key Message

Population-wide linked data in NSW can assess selected aspects of lung cancer quality, but incomplete data capture limits comprehensive benchmarking.

A national registry is needed to enable reliable, timely measurement and quality improvement.

REFERENCES & ACKNOWLEDGEMENTS

1. Nash J, Stone E, Vinod S, Leong T, Dawkins P, Stirling RG, Harden S, Bolton A, McWilliams A, O'Byrne K, Wright GM. Lung cancer (internet-based) Delphi (LUCID): A modified eDelphi consensus process to establish Australasian clinical quality indicators for thoracic cancer. *Respirology*. 2024 Dec;29(12):1085-94.
Artificial Intelligence (AI) Use Disclaimer
Microsoft Copilot was used for editing and structuring author-provided content. Final content was reviewed and approved by authors.

RESULTS

Feasibility:

Of the 26 lung cancer QIs assessed only 15 (58%) were measurable.

Non-measurable QIs:

QIs that could not be measured were related to:

- Timeliness of care
- Diagnostic testing
- Mediastinal staging
- Smoking status
- Specialist nursing care

Data Completeness:

- PS was documented in only a subset of cases
- Stage documentation incomplete across the cohort
- Missing data reduced the number of patients eligible for several QIs
- Documentation gaps likely contributed to under-estimation of treatment compliance

Benchmark Comparisons:

- Most measurable QIs failed to meet benchmark levels.
- 11 of 15 measurable QIs (73%) were below recommended benchmarks.
- Documentation-related QIs showed particularly low compliance.
- Only one treatment QI met the benchmark
- Six treatment QIs relied on PS and/or stage documentation potentially introducing bias.
- All treatment safety QIs met benchmark thresholds.

Population-level gaps identified:

- Multidisciplinary (MDT) discussion
- Documentation completeness
- Receipt of guideline-concordant treatment

Measured QIs and Benchmark Results

