

INTRODUCTION

- There has been a recent surge in development of *HER2*-targeted agents which have efficacy in the treatment of non-small cell lung cancer (NSCLC). Trastuzumab deruxtecan was the first drug to obtain approval for treatment of *HER2*-mutated NSCLC after the results of DESTINY-Lung01¹. Selective tyrosine kinase inhibitors such as zongertinib and sevabertinib have also shown promising efficacy^{2,3}.
- NCCN guidelines now advocate for *HER2* mutation testing in all advanced NSCLC⁴.
- In Australia, there are currently no government-subsidised treatments for *HER2*-directed targeted agents for the treatment of NSCLC, however clinical trials and access programs provide avenues to accessing these treatments.
- The real-world uptake of *HER2* testing is variable in clinical practice.
- This study aimed to determine the current landscape of *HER2* testing in Australia and identify barriers to testing.

METHODS

Design:

- National, anonymous online survey of medical practitioners via the University of Sydney REDCap platform.
- Data were collected from July to August 2025.
- The survey link was distributed via email to Australian doctors who are members of the Thoracic Oncology Group of Australasia (TOGA)(n=228). Membership to this organisation is paid and voluntary and does not include all Australian doctors working in this field. The survey was also emailed separately to additional pathologists (n=11) at selected sites performing molecular testing in Australia.
- Depending on whether they were a clinician or pathologist, respondents were then directed to a secondary survey with specific questions related to their field. Demographic and survey response data are presented descriptively.
- Ethics approval for this survey study was obtained from the University of Sydney Human Research Ethics Committee (2025/HE000263).

DISCUSSION AND CONCLUSION

Actionable Take Away Message

- There is a high rate of *HER2* testing in advanced stage NSCLC in Australia although it is still currently below the target of 100%.
- Barriers to testing include lack of *HER2* inclusion or reporting in multi-gene panels, lack of currently available targeted therapies, and lack of a specific Medicare item number that covers *HER2* testing.

Future Direction for Research

- The level of detail provided by molecular reports was not examined in this study, but should be studied in future research given that treatments are likely to be increasingly directed to specific genetic variants and co-variants

REFERENCES & ACKNOWLEDGEMENTS

References:

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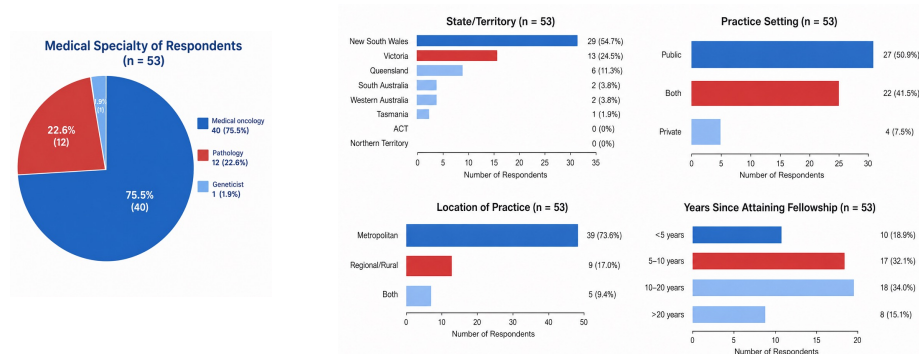
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Artificial Intelligence disclaimer:

AI (ChatGPT) was used to assist with the formatting and graphical representation of study data.

RESULTS

Demographic characteristics of survey respondents

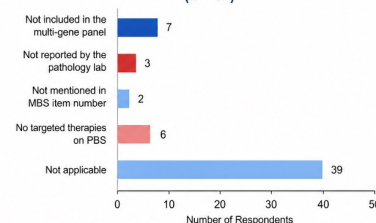


Molecular testing in NSCLC

Biomarkers routinely tested in early NSCLC*	Total (n = 53)	Percentage (%)*
EGFR, BRAF, KRAS, MET (NGS)	51	96.2
ALK, ROS1, RET, NTRK (NGS)	35	66.0
ALK IHC + FISH if positive	21	39.6
ROS1 IHC + FISH if positive	18	34.0
ALK IHC	12	22.6
ROS1 IHC	10	18.9
HER2 (NGS)	34	64.2
HER2 amplification (FISH/ISH)	4	7.5
HER2 overexpression (IHC)	2	3.8
PD-L1	50	94.3

Biomarkers routinely tested in advanced NSCLC*	Total (n = 53)	Percentage (%)*
EGFR, BRAF, KRAS, MET (NGS)	53	100
ALK, ROS1, RET, NTRK (NGS)	41	77.4
ALK IHC + FISH if positive	21	39.6
ROS1 IHC + FISH if positive	20	37.7
ALK IHC	12	22.6
ROS1 IHC	9	17.0
HER2 (NGS)	44	83.0
HER2 amplification (FISH/ISH)	4	7.5
HER2 overexpression (IHC)	2	3.8
PDL1	49	92.5

Rationale for not seeking *HER2* testing* (n = 53)



*Note: Respondents could select more than one option; percentages are based on the total number of respondents (n=53) and may exceed 100% in total.

- A subgroup analysis was performed of the respondents who did not request *HER2* testing in advanced NSCLC (n=9).
- There was a significant association between not seeking *HER2* testing and being within five years of attaining Fellowship ($p = 0.03$, chi-squared test).
- There were no other significant associations related to speciality, State, setting, or location of practice.