

INTRODUCTION

Non-small cell lung cancer (NSCLC) remains a leading cause of cancer-related mortality, particularly in settings where access to early diagnosis, molecular testing, and modern systemic therapies is limited. In middle-income countries such as Brazil, disparities between public and private healthcare systems may further contribute to differences in disease presentation, treatment patterns, and clinical outcomes. However, contemporary real-world data characterizing these disparities remain limited.

METHODS

- **Design:**
- A retrospective cohort study included adult patients with pathologically confirmed NSCLC treated at a private and a public hospital in São Paulo, Brazil, between January 2018 and August 2022.
- Electronic medical records were reviewed for demographic, clinical, molecular, treatment, and survival data.
- Overall survival was estimated using the Kaplan-Meier method and compared using the log-rank test.
- Overall, 389 patients were included (private n=238; public n=151). Stage data were available for 224 patients and OS data for 357 (private n=211; public n=146).

DISCUSSION AND CONCLUSION

Actionable Take Away Message

- Public-hospital patients presented with more advanced disease at diagnosis and markedly shorter overall survival.

Future Direction for Research

- Prospective multicenter studies should evaluate the contribution of stage at diagnosis, molecular testing, treatment access, socioeconomic factors, and comorbidities to the observed survival differences.
- Adjusted analyses are needed to identify potentially modifiable drivers of these disparities.

REFERENCES

- Herbst RS, Morgensztern D, Boshoff C. The biology and management of non-small cell lung cancer. *Nature*. 2018;553(7689):446-454.
- Paim J, Travassos C, Almeida C, Bahia L, Macinko J. The Brazilian health system: history, advances, and challenges. *Lancet*. 2011;377(9779):1778-1797.
- Lindeman NI, Cagle PT, Aisner DL, et al. Updated molecular testing guideline for the selection of lung cancer patients for treatment with targeted tyrosine kinase inhibitors. *J Mol Diagn*. 2018;20(2):129-159.
- Sosa E, D'Souza G, Akhtar A, et al. Racial and socioeconomic disparities in lung cancer screening in the United States: a systematic review. *CA Cancer J Clin*. 2021;71(4):299-314.

RESULTS

KEY FINDINGS

Among patients with available staging data (n = 224), stage I–II disease was more frequent in the private cohort (**33% vs 8.8%**), whereas stage IV disease was more frequent in the public cohort (**49% vs 59%**).

Median overall survival was **102.7 months** in the private cohort versus **23.9 months** in the public cohort (**log-rank p < 0.0001**).

Two-year overall survival was **82.1% vs 49.8%**, and mortality at last follow-up was **47% vs 67%**, respectively.

Characteristic	Private	Public
Total patients	238	151
Active smokers	16%	36%
Never-smokers	27%	12%
Stage I–II among staged patients	33%	8.8%
Stage IV among staged patients	49%	59%
EGFR mutation	12%	6%
Mortality at last follow-up	47%	67%

