

EP17.07: Real-world Outcomes Following Neoadjuvant Chemoimmunotherapy for Resectable Non-Small Cell Lung Cancer in South America

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INTRODUCTION

- Neoadjuvant and peri-operative chemoimmunotherapy (Ch/IO) regimens are standard of care treatments for patients with resectable non-small cell lung cancer (NSCLC) stage IIA-IIIB (N2).
- Patients from South Amertica are often underrepresented in clinical trials and real-world data in this scenario is scarce.
- We aimed to describe pathological and clinical outcomes of neoadjuvant Ch/IO treatment followed by surgery in a South Brazilian cohort.

METHODS

- Single-center. Retrospective and prospective study, from July 2022 to December 2025.
- Included all patients with resectable NSCLC stages IIA-IIIB (N2) who received neoadjuvant platinum-based Ch/IO treatment followed by surgery.
- All patients were EGFR/ALK wild-types and ECOG PS 0-1.
- Primary endpoint: pathological complete response (pCR)
- Exploratory endpoints: major pathological response (MPR), definitive surgery, R0 resection, lymph node downstaging, and post-operative mortality.

DISCUSSION AND CONCLUSION

In this **real-world study**, the main **pathological, clinical and surgical outcomes were comparable to those reported in phase III trials**.

- Clinically significant **pCR and MPR rates**.
- The majority of patients **completed the neoadjuvant treatment**, was submitted to **definitive surgery** and achieved **R0 resection**.
- Minimally invasive surgery (MIS)** was performed in most of the cases, with post-operative results comparable to larger studies.

Longer follow-up and survival data will provide valuable knowledge of real-world practices and treatment outcomes in this population.

REFERENCES & ACKNOWLEDGEMENTS

References:

*Forde PM, Spicer J, Lu S, Provencio M, Mitsudomi T, Awad MM, et al. Neoadjuvant nivolumab plus chemotherapy in resectable lung cancer. N Engl J Med. 2022;386:1973-1985. doi:10.1056/NEJMoa2202170.
*Forde PM, Spicer JD, Provencio M, Mitsudomi T, Awad MM, Wang C, et al. Overall survival with neoadjuvant nivolumab plus chemotherapy in lung cancer. N Engl J Med. 2025; 393(8):741-752 doi:10.1056/NEJMoa2502931.
*Wakelee H, Liberman M, Kato T, Tsuboi M, Lee SH, Gao S, et al. Perioperative pembrolizumab for early-stage non-small-cell lung cancer. N Engl J Med. 2023;389:491-503. doi:10.1056/NEJMoa2302983.
*Spicer JD, Garassino MC, Wakelee H, Liberman M, Kato T, Tsuboi M, et al. Neoadjuvant pembrolizumab plus chemotherapy followed by adjuvant pembrolizumab compared with neoadjuvant chemotherapy alone in patients with early-stage non-small-cell lung cancer (KEYNOTE-671): a randomised, double-blind, placebo-controlled, phase 3 trial. Lancet. 2024;404:1240-1252. doi:10.1016/S0140-6736(24)01756-2.
*Heymach JV, Harpole D, Mitsudomi T, Taube JM, Gaffly G, Hochmair M, et al. Perioperative durvalumab for resectable non-small-cell lung cancer. N Engl J Med. 2023;389:1672-1684. doi:10.1056/NEJMoa2304875.

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AI was not used in this work or in the preparation of this presentation.

RESULTS

Table 1. Patient characteristics

Characteristic	n=35
Age (years) - median (range)	69 (43-80)
Sex, female – n (%)	20 (57.1)
Race, white – n (%)	34 (97.1)
Smoking history – n (%)	29 (82.8)
Histology, adenocarcinoma – n (%)	20 (57.1)
Tumor location, central – n (%)	19 (54.3)
Invasive mediastinal staging performed – n (%)	34 (97.1)
Completed planned neoadjuvant treatment – n (%)	33 (94.3)

Figure 1. Primary and secondary endpoints (proportion from all comers).

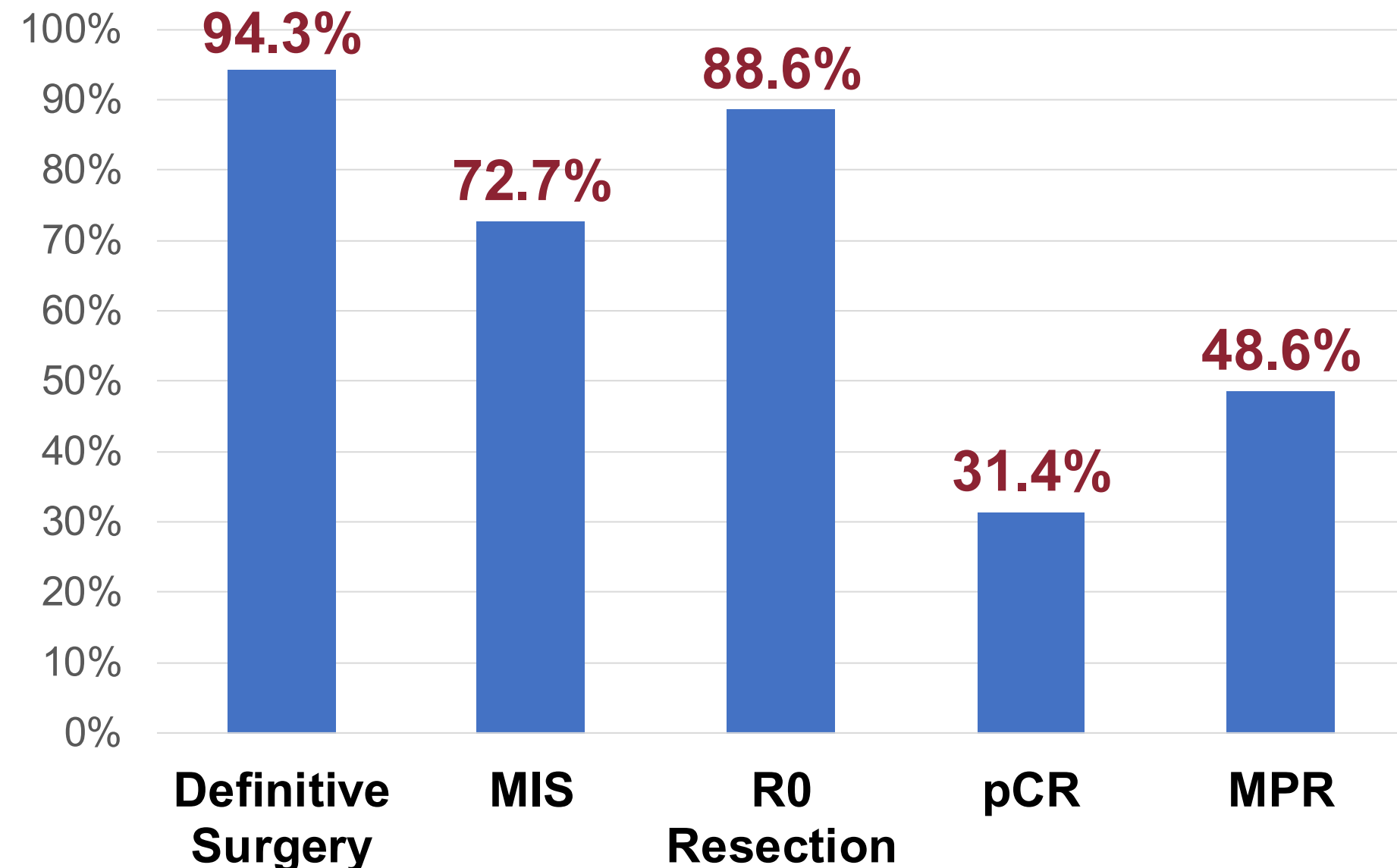


Figure 2. Clinical characteristics (oncoplot) and pathologic regression (waterfall plot) following neoadjuvant chemoimmunotherapy in all comers. Red line demonstrates the 90% pathologic regression of primary tumor cutoff for major pathologic response.

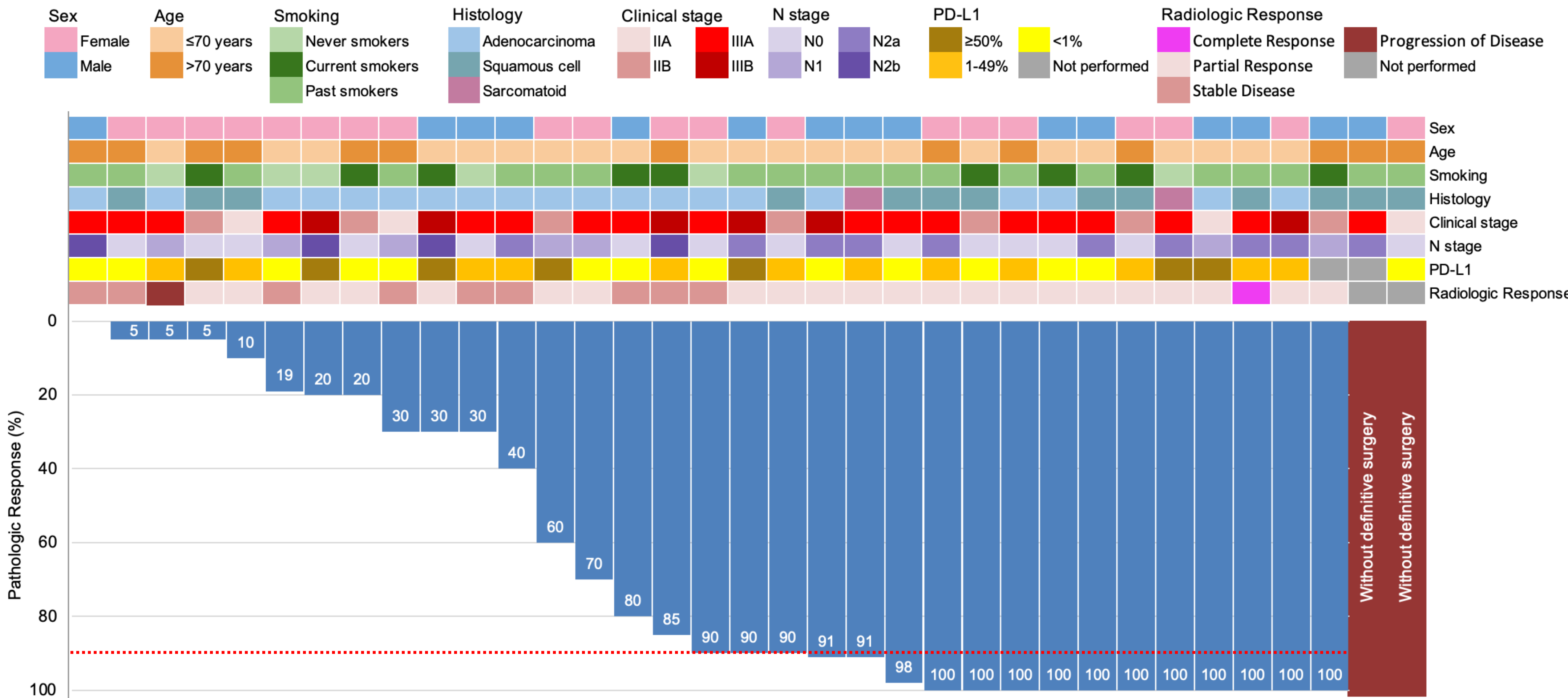


Figure 3. Pathologic responses following neoadjuvant chemoimmunotherapy. Sankey diagrams showing changes in primary tumor (A) and lymph node involvement (B), exhibiting clinical stage (left) and pathologic stage (right), according to AJCC 9th ed.

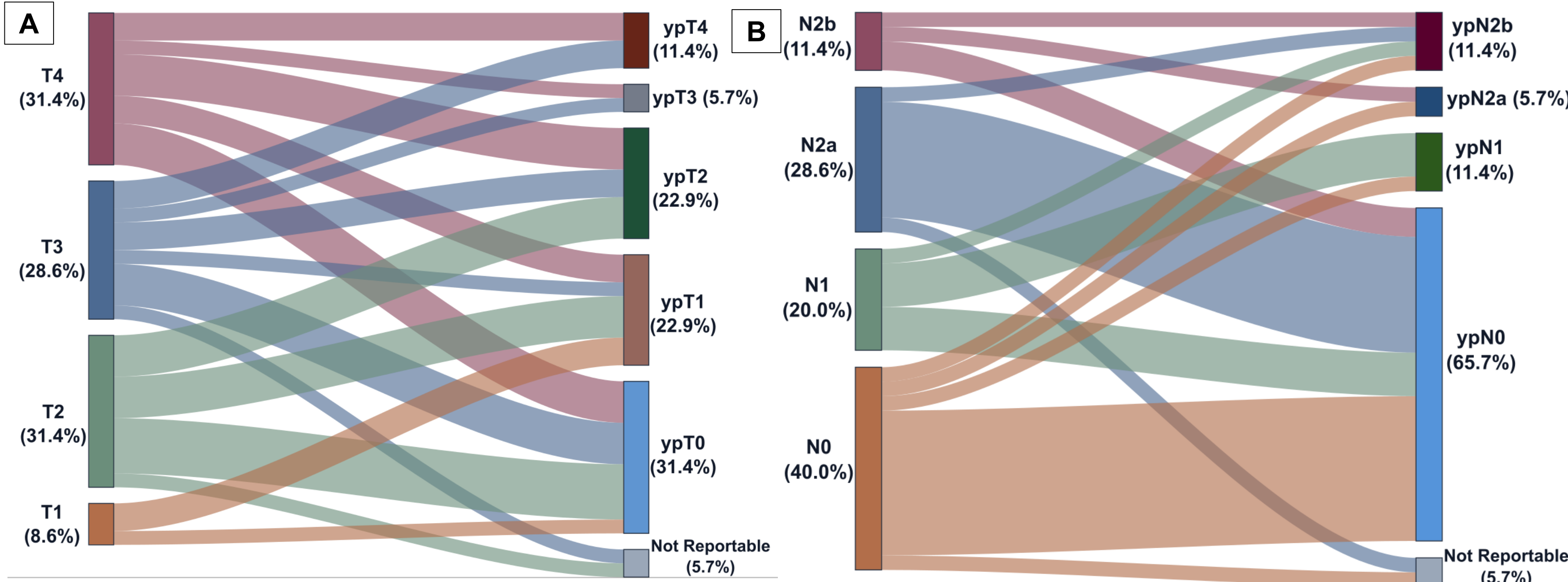


Table 2. Post-operative outcomes.

Outcome	n=33
Surgery - pneumonectomy	3 (9.1)
Post-operative major morbidity*	9 (27.3)
90-day mortality	1 (3)
Started adjuvant treatment	17 (51.5)

Data expressed as n (%).

*Clavien-Dindo complication grade ≥3