

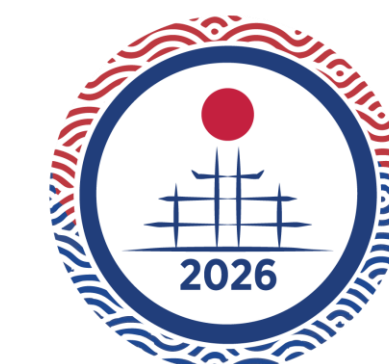


P1.114: Radiological-Pathological Response Discordance After Neoadjuvant Chemo-Immunotherapy in NSCLC: A Real-World Multicenter Study

L. De Negri^{1,2}, P. Novellis^{1,2}, D. Pontillo¹, E. Coscione², P. Muriana¹, E. Dieci¹, A.L. Di Prima¹, R. Ferrara¹, A. Bulotta¹, F. Passaretti^{1,2}, A. Damascelli¹, G. Arrigoni¹, G. Cannone³, V. Sambataro³, M.G. Mastromarino⁴, C.C. Zirafa⁴, E. Guerrini⁴, M. Patella⁵, F.T. Gallina⁶, R. Tajè⁶, D. Nachira⁷, G. Calabrese⁷, V.M. Giudici⁸, R. Scaramuzzi⁹, G. Viscardi⁹, F. Vaisitti¹⁰, M. Marcaccini¹⁰, P. Bertoglio¹¹, S. Bonucchi¹², F. Guerrera¹³, P. Lyberis¹³, E. Ruffini¹³, S. Nicotra¹¹, F. Leo¹⁰, G. Marulli^{8,14}, S. Margaritora⁷, E. Mercadante⁶, S. Cafarotti⁵, M. Lucchi⁴, A. Dell'Amore³, G. Veronesi^{1,2}

¹IRCCS Ospedale San Raffaele, Milan/IT, ²Vita-Salute San Raffaele University, Milan/IT, ³Padua University Hospital, Padua/IT, ⁴University Hospital of Pisa, Pisa/IT, ⁵EOC, Bellinzona/CH, ⁶IRCCS Regina Elena National Cancer Institute, Rome/IT, ⁷Fondazione Policlinico Universitario A. Gemelli IRCCS, Università Cattolica del Sacro Cuore, Rome/IT, ⁸IRCCS Humanitas Research Hospital, Milan/IT, ⁹AORN dei Colli-Ospedale Monaldi, Naples/IT, ¹⁰S. Luigi Gonzaga Hospital, University of Turin, Orbassano/IT, ¹¹IRCCS Azienda Ospedaliero-Universitaria di Bologna, Bologna/IT, ¹²Alma Mater Studiorum Università di Bologna, Bologna/IT, ¹³Azienda Ospedaliera-Universitaria Città della Salute e della Scienza di Torino, Turin/IT, ¹⁴Humanitas University, Milan/IT

Correspondence: l.denegri00@gmail.com



IASLC 2026 World
Conference on Lung Cancer

SEPTEMBER 12 - 15, 2026
SEOUL, REPUBLIC OF KOREA

INTRODUCTION

Immunotherapy was first introduced for unresectable non-small cell lung cancer (NSCLC), and later it was moved to the neoadjuvant setting. Radiological response is mainly assessed using the Response Evaluation Criteria in Solid Tumors (RECIST1.1). However, its predictive value remains controversial due to the atypical response patterns related to immunotherapy, which may lead to discrepancies between radiological response and pathological findings at surgery.

METHODS

Design

Multicenter retrospective study involving 11 referral centers (preliminary results).

Population (2016-2025)

- Clinical stage II-III NSCLC (8th edition)
- Neoadjuvant chemo-immunotherapy or immunotherapy
- Surgery with radical intent

Primary outcome

Discordance rate between post-neoadjuvant radiological staging (ycStage) and pathological staging (ypStage).

Statistical analysis

Logistic regression analyses were performed to identify predictors of radiological-pathological staging discordance.

193 patients • 11 centers • 2016-2025

Discordance

150

77.7%

Concordance

43

22.3%

DISCUSSION AND CONCLUSION

Actionable Take Away Message

- High radiological-pathological discordance after chemo-immunotherapy (77.7%), mainly driven by radiological overstaging.
- Imaging detected a complete response in 4.7% vs 35.2% at pathology, likely due to immunotherapy-related fibrosis.
- Age, RECIST1.1 partial response, and intraoperative hilar fibrosis are predictors of discordance.

Future Direction for Research

- These findings highlight the limitations of RECIST1.1 after immunotherapy, supporting the need for alternative response assessment strategies.

REFERENCES & ACKNOWLEDGEMENTS

- Forde PM, Spicer J, Lu S, et al. Neoadjuvant Nivolumab plus Chemotherapy in Resectable Lung Cancer. *N Engl J Med*. 2022;386(21):1973-1985. doi:10.1056/NEJMoa2202170
- Sun C, Ma X, Meng F, et al. Tumor microenvironment(TME) and single-source dual-energy CT(ssDECT) on assessment of inconformity between RECIST1.1 and pathological remission in neoadjuvant immunotherapy of NSCLC. *Neoplasia*. 2024;50:100977. doi:10.1016/j.neo.2024.100977
- Cottrell TR, Thompson ED, Forde PM, et al. Pathologic features of response to neoadjuvant anti-PD-1 in resected non-small-cell lung carcinoma: a proposal for quantitative immune-related pathological response criteria (irPRC). *Ann Oncol*. 2018;29(8):1853-1860. doi:10.1093/annonc/mdy218



Acknowledgments: the Authors thank all the participating centers of the IMMUNORATS collaborative group.

Artificial Intelligence (AI) Use Disclaimer

An AI assistant (Claude, Anthropic) was used only to support layout and language editing of this poster. All data, analyses, figures and scientific content were produced and verified by the Authors.

RESULTS

Variable	Concordance	Discordance	p-value
Male vs Female	20 (46.51%)	88 (58.67%)	0.16
Age at surgery (per 5-year increase)	65 (58.69)	68 (61.73)	0.029
BMI	24.61 (22.16-27.55)	25.65 (22.91-28.41)	0.26
Smoking history			0.036
Never	5 (11.63%)	9 (6.00%)	
Past	16 (37.21%)	88 (58.67%)	
Current	22 (51.16%)	53 (35.33%)	
COPD	11 (25.58%)	39 (26.00%)	0.96
Previous malignancy	7 (16.28%)	18 (12.00%)	0.46
FEV1 (%)	88 (74-101)	93 (77-102)	0.29
cStage			0.56
IIA	0 (0.00%)	1 (0.67%)	
IIB	3 (6.98%)	18 (12.00%)	
IIIA	27 (62.79%)	78 (52.00%)	
IIIB	13 (30.23%)	53 (35.33%)	
RECIST1.1 Complete response	6 (13.95%)	3 (2.00%)	0.004
RECIST1.1 Partial response	26 (60.47%)	122 (81.33%)	0.004
RECIST1.1 Stable disease	10 (23.26%)	20 (13.33%)	0.11
RECIST1.1 Progressive disease	1 (2.33%)	5 (3.33%)	1.00
PD-L1 (%)	5 (0-60)	10 (0-55)	0.92
Preop immunotherapy	3 (6.98%)	3 (2.00%)	0.13
Preop chemo-immunotherapy	40 (93.02%)	147 (98.00%)	0.13
Complications immunotherapy	19 (44.19%)	57 (38.51%)	0.50
N° of cycles	4 (3-4)	4 (4-4)	0.16
Leukocytes before surgery after induction	6.21 (5.09 - 7.13)	6.36 (5.08 - 7.83)	0.48
Pleural adhesions	12 (27.91%)	67 (44.67%)	0.11
Hilar fibrosis	20 (46.51%)	93 (62.00%)	0.13
Histopathological inflammation	33 (78.57%)	109 (74.15%)	0.27
Pathology			0.83
ADK	30 (69.77%)	93 (62.00%)	
SCC	11 (25.58%)	48 (32.00%)	
ASC	1 (2.33%)	3 (2.00%)	
LCNE	1 (2.33%)	3 (2.00%)	
Other	0 (0.00%)	3 (2.00%)	

Table 1. Variables by concordance status.

Key findings

- 193 cases: 150 (77.7%) showed radiological-pathological staging discordance, 43 (22.3%) concordance.
- Discordant patients were older (p=0.029) and had heavier smoking history (p=0.036).
- In the discordance group, RECIST1.1 complete response rates were lower (p=0.004) while partial response rates were higher (p=0.004).
- No differences in PD-L1 expression, type of neoadjuvant therapy, immunotherapy-related complications and surgical findings.
- At multivariate analysis, 5-year increase in age (aOR 1.25; 95%CI 1.01-1.55; p=0.039), smoking history (aOR 2.60; 95%CI 1.23-5.50; p=0.012), RECIST1.1 partial response (aOR 2.52; 95%CI 1.14-5.57; p=0.023), and intraoperative hilar fibrosis (aOR 2.13; 95%CI 1.02-4.46; p=0.046) were independent predictors of radiological-pathological response discordance.
- Complete response was 7-fold less frequent at imaging than at pathology (4.7% vs 35.2%).

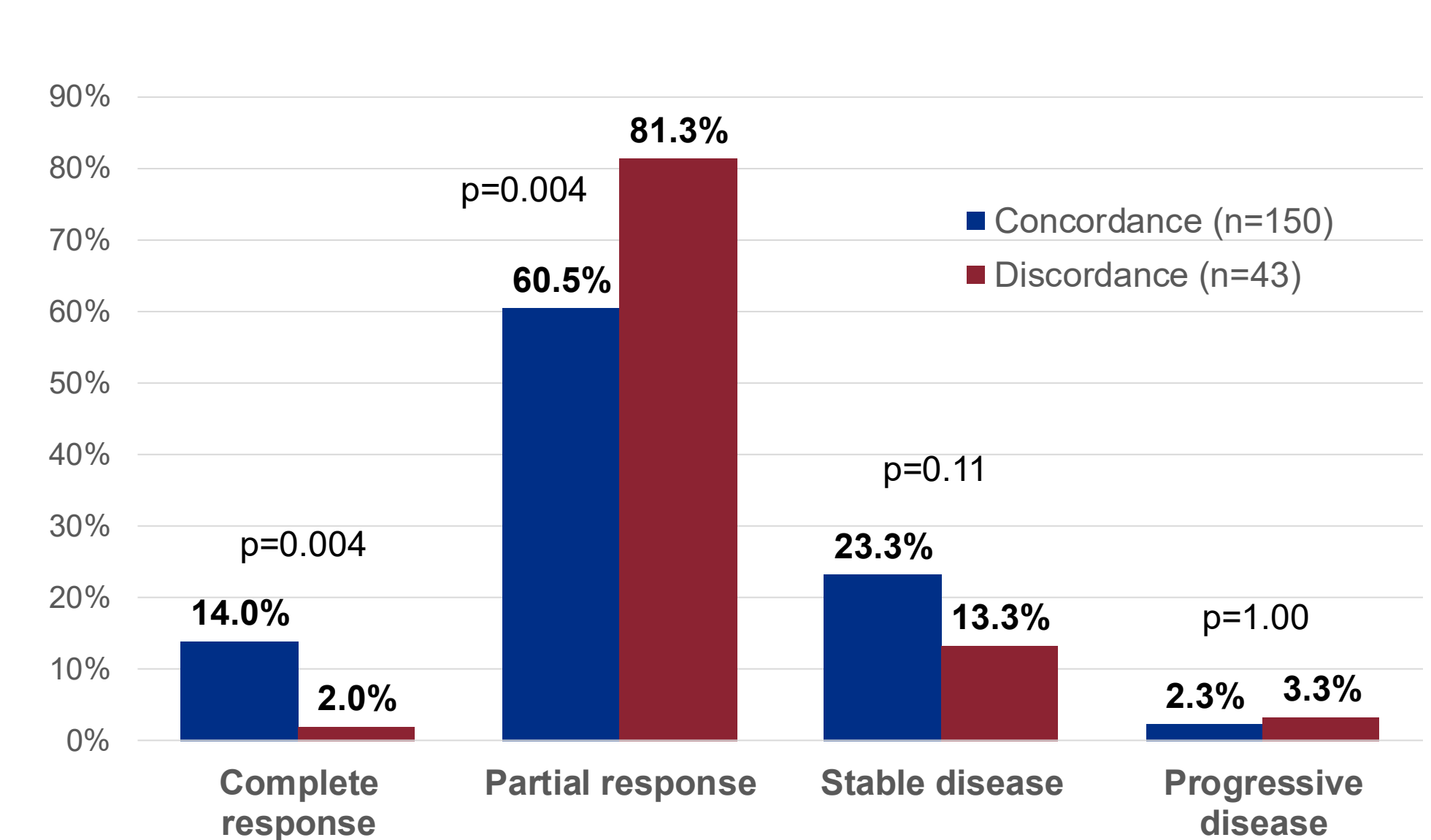


Figure 1. RECIST1.1 response by concordance status.

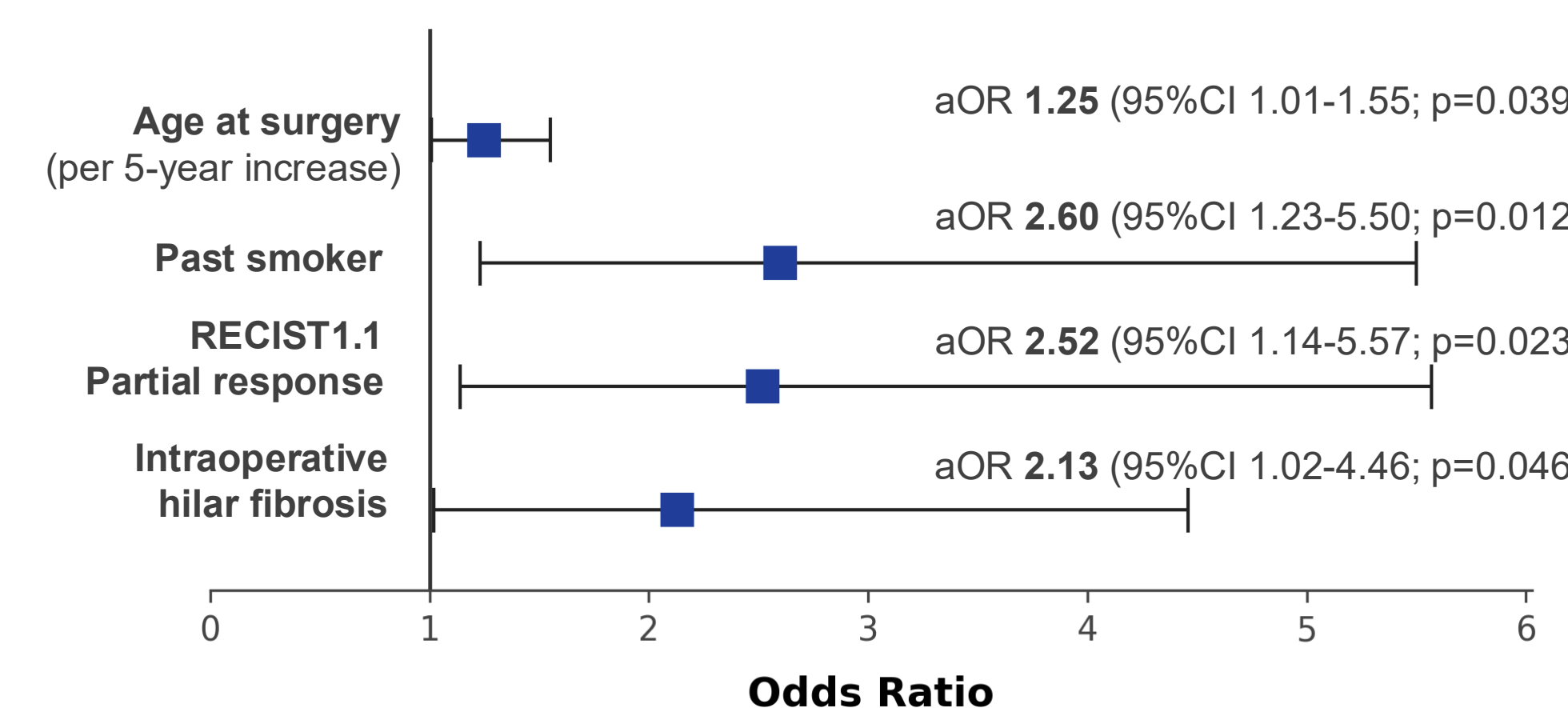


Figure 2. Multivariate predictors of response discordance.

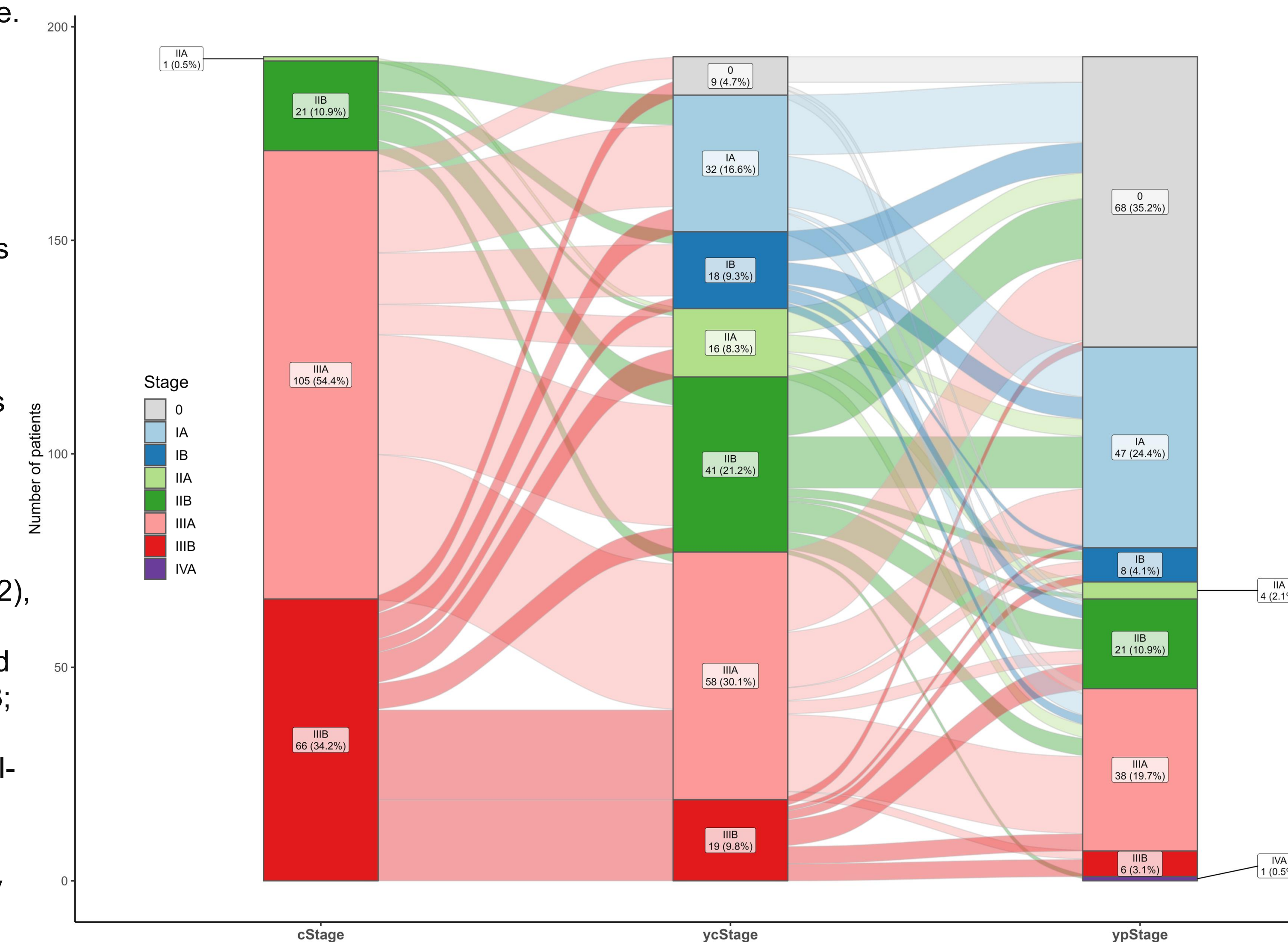


Figure 3. Stage migration from clinical staging (cStage) to post-neoadjuvant clinical staging (ycStage) and pathological staging (ypStage).