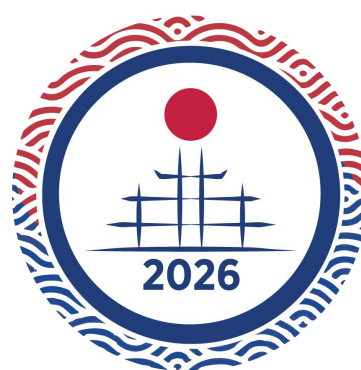




Prognostic value of Baseline CAR and PLR in Patients with NSCLC Undergoing ICI Rechallenge:A Retrospective Analysis

Ling Li¹, Lu Liu², Gaobin Lu¹, Xin Gan¹
The First Affiliated Hospital of Nanchang University, Nanchang, China¹, The Affiliated Hospital of Jiujiang University, Jiujiang, China²
Correspondence: Xin Gan, ganxin1207@126.com



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

INTRODUCTION

Immune checkpoint inhibitor (ICI) rechallenge is an important treatment option for NSCLC patients after recurrence or progression. However, reliable prognostic biomarkers to select suitable candidates are currently lacking. This study aims to explore the predictive value of baseline C-reactive protein to albumin ratio (CAR) and platelet/lymphocyte ratio (PLR) for the efficacy of ICI rechallenge.

METHODS

- Design:**
- This retrospective, single-center study analyzed 43 patients with NSCLC who received ICI rechallenge (Dec 2018–Jan 2026).
 - Eligible patients had a treatment-free interval (TFI) of 3–12 months following prior ICI discontinuation. Baseline CAR and PLR were evaluated as continuous variables.
 - The primary endpoint was progression-free survival (PFS). Secondary endpoints included objective response rate (ORR) and disease control rate (DCR) (RECIST v1.1), and safety (CTCAE v5.0). Independent predictors of progression-free survival (PFS) were identified using univariate and multivariate Cox proportional hazards models.

DISCUSSION AND CONCLUSION

Actionable Take Away Message

- Preliminary findings suggest ICI rechallenge is feasible for selected NSCLC patients, with combination regimens offering superior disease control. Baseline CAR and PLR are practical independent prognostic markers.

Future Direction for Research

- This study validated readily available inflammatory markers for ICI rechallenge prognosis. Future prospective studies are needed to optimize biomarker-guided individualized immunotherapy strategies and improve patient outcomes.

REFERENCES & ACKNOWLEDGEMENTS

REFERENCES

- Gobbini E, Toffart AC, Pérol M, et al. Immune checkpoint inhibitors rechallenge efficacy in non-small-cell lung cancer patients. Clin Lung Cancer. 2020;21(5):e497–e510.
- Katayama Y, Shimamoto T, Yamada T, et al. Retrospective efficacy analysis of immune checkpoint inhibitor rechallenge in patients with non-small cell lung cancer. J Clin Med. 2019;9(1):102.

ACKNOWLEDGEMENTS

IPer ACCME and IASLC requirements: AI tool (ChatGPT, OpenAI) was used for language editing, reference sorting and layout assistance during poster development. All content has been reviewed and validated by the authors; AI does not replace clinical judgment, and authors hold full responsibility for the work.

All WCLC educational materials are reviewed by IASLC to ensure evidence-based, balanced content free of commercial bias, consistent with ACCME Standards for Integrity and Independence.

We thank the First Affiliated Hospital of Nanchang University for study support, and all patients for their participation.

RESULTS

Baseline & Overall Efficacy

- Among 43 patients (median age 64; 72.1% squamous), overall ORR and DCR was 16.3% (95% CI: 6.8% – 30.7%) and 95.3% (95% CI: 84.2% – 99.4%), respectively. Median PFS was 7.77 months (95% CI: 7.26–12.39).

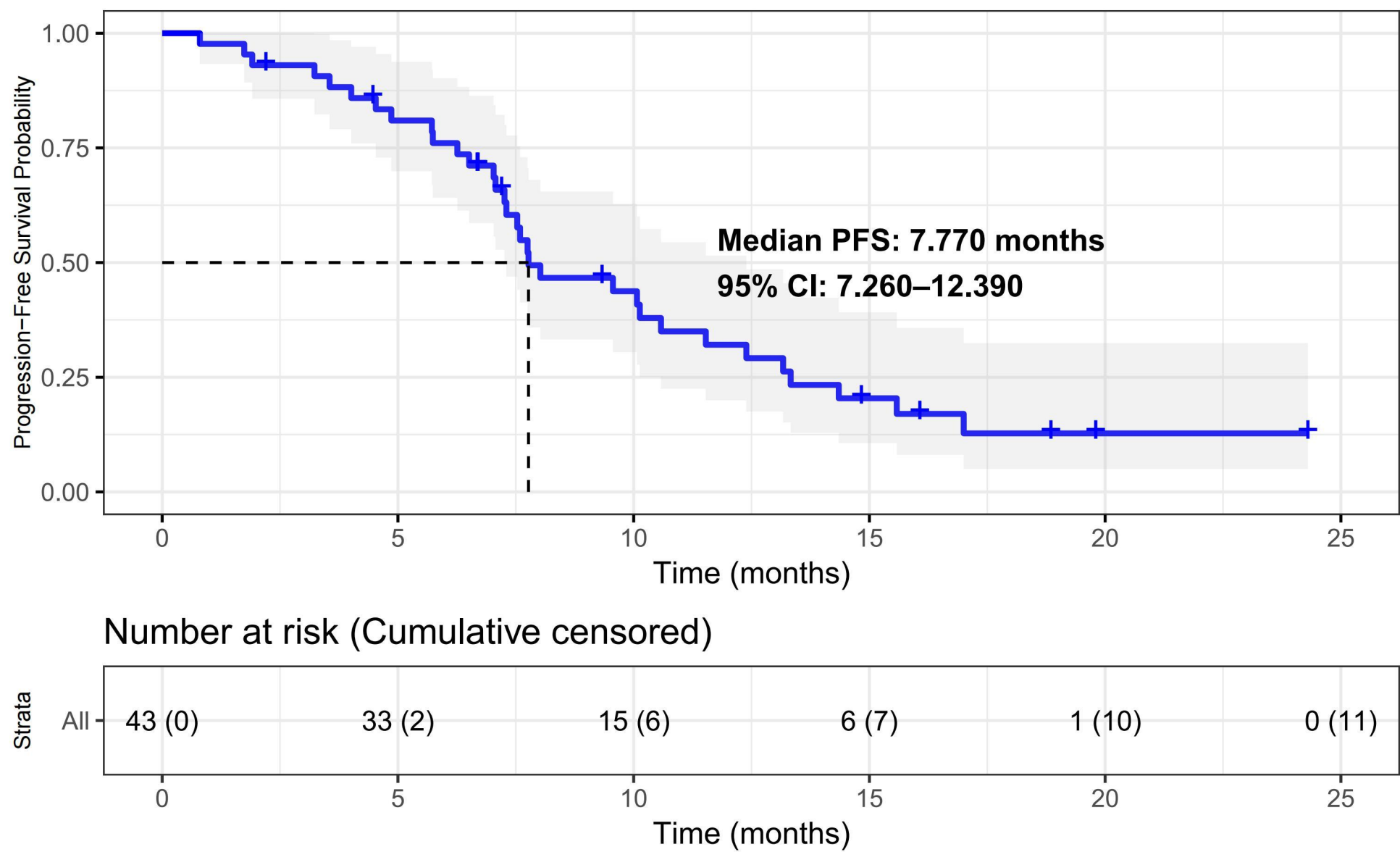


Figure 1: Kaplan-Meier curve for progression-free survival.

Efficacy Subgroup Analysis

- Outcomes did not significantly differ by prior discontinuation reason (PD 7.75 vs. irAEs 12.39 months, P=0.246) or PD-1/PD-L1 inhibitor switching (7.53 vs. 8.02 months, P=0.906).
- ICI plus chemotherapy (n=15) achieved a 40.0% ORR (95% CI 16.3%–67.7%). All ICI-based combination regimens (plus chemotherapy and/or anti-angiogenics) demonstrated 100% DCR, superior to ICI monotherapy (71.4%, P=0.023).

Prognostic Biomarker Analysis

- Among variables screens in univariate analysis, multivariate identified baseline CAR (HR=0.185; P=0.020) and PLR (HR=1.005; P=0.008) as independent predictors of shorter PFS.

Clinical and Biomarkers	Univariate Analysis		Multivariate Analysis	
	HR(95% CI)	P	HR(95% CI)	P
Smoking	2.017 (0.969-4.195)	0.061	-	-
Gender	1.067 (0.409-2.780)	0.895	-	-
BMI	0.972 (0.874-1.081)	0.598	-	-
PLR	1.003 (1.000-1.006)	0.033	1.005 (1.000-1.008)	0.008
PLT	1.002 (0.998-1.006)	0.288	-	-
CAR	0.235 (0.057-0.971)	0.045	0.185 (0.044-0.768)	0.020
SII	1.000 (1.000-1.001)	0.100	-	-
NLR	1.099 (0.949-1.272)	0.207	-	-
LMR	1.036 (0.832-1.291)	0.750	-	-
PNI	1.001 (0.953-1.052)	0.970	-	-
IBI	0.998 (0.992-1.004)	0.533	-	-
ALI	1.001 (0.998-1.003)	0.543	-	-
LDH	1.001 (0.996-1.007)	0.601	-	-
CRP	0.961 (0.922-1.000)	0.051	-	-
ALB	1.027 (0.958-1.102)	0.454	-	-
AAPR	0.464 (0.120-1.798)	0.267	-	-
AFR	0.986 (0.910-1.069)	0.732	-	-

Figure 2: Univariate and multivariate Cox regression analyses of clinical and biological biomarkers.

Safety Profile

- Rechallenge irAE occurred in 53.5% (vs. 48.8% initially; Grade ≥ 3: 18.6%). Hypothyroidism predominated (39.5%), and new-onset grade ≥ 3 cutaneous toxicities occurred and rare Grade 4 events (myocarditis, pneumonia) were observed.