



P1.193: Induction of Sequential Immunochemotherapy After EGFR-TKI Versus EGFR-TKI Therapy in EGFR-Mutant NSCLC: A Real-World Cohort Study



Yi-Fan Qi^{1,2}, Rui Fu^{1,2}, Jun-Tao Lin¹, Chao Zhang¹, Yi-Duo Lin¹, Si-Qi Huang¹, Yijing Feng^{1,2}, Wei-Ye Huang³, Zi-Yi Xu¹, Jian Su^{1,2}, Xue-Ning Yang¹, Yi-Long Wu¹, Ben-Yuan Jiang^{1,2*}, Wen-Zhao Zhong^{1,2*}

¹ Guangdong Lung Cancer Institute, Guangdong Provincial People's Hospital, Guangdong Academy of Medical Sciences, Southern Medical University, ² Guangdong Provincial Key Laboratory of Translational Medicine in Lung Cancer, Guangdong Provincial People's Hospital, Guangdong Academy of Medical Sciences, Southern Medical University, ³ Department of Pathology, Guangdong Provincial People's Hospital, Guangdong Academy of Medical Sciences, Southern Medical University

Correspondence: Wen-Zhao Zhong, syzhongwenzhao@scut.edu.cn

INTRODUCTION

Neoadjuvant EGFR-TKI therapy has demonstrated promising efficacy in *EGFR*-mutant (EGFR-M+) non-small cell lung cancer (NSCLC), yet major pathological response (MPR) rates remain limited. Immunochemotherapy is generally not recommended in *EGFR*-M+ NSCLC, and the efficacy of sequential immunochemotherapy after EGFR-TKI in the preoperative setting remains unclear.

METHODS

We conducted a retrospective real-world study including patients with sensitizing EGFR-M+ NSCLC treated at our center with either preoperative EGFR-TKI or preoperative sequential immunochemotherapy after EGFR-TKI. MPR and pathological complete response (pCR) were compared using Fisher's exact test. Multivariable logistic regression was used for MPR, and Firth penalized logistic regression was used for pCR because of sparse events. The association between baseline PD-L1 expression and pathological response was also evaluated.

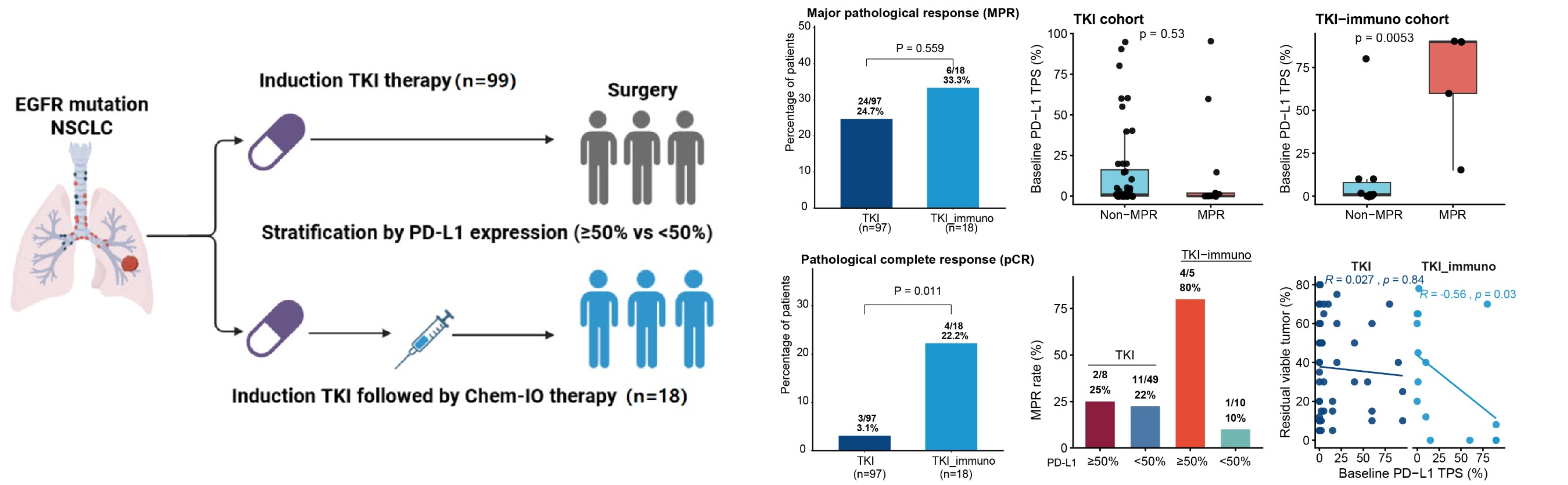
DISCUSSION AND CONCLUSION

Actionable Take Away Message

- Preoperative sequential immunochemotherapy after EGFR-TKI was associated with a significantly higher pCR rate, but not with a significant improvement in MPR, in patients with EGFR-M+ NSCLC.
- Baseline PD-L1 may help identify patients more likely to benefit from this sequential strategy. These findings warrant further validation in our prospective clinical study (NCT06300424).

RESULTS

- A total of 117 patients were included, comprising 99 in the TKI cohort and 18 in the TKI-immuno cohort. EGFR mutation subtype distributions were comparable between groups and were predominantly 19Del and L858R. Baseline stage differed significantly (TKI vs TKI-Immuno, I-II: 18.1% vs 5.6%; IIIA: 34.0% vs 38.9%; IIIB-IIIC: 47.9% vs 44.4%; IV: 0% vs 11.1%, $P=0.031$). Baseline PD-L1 distribution showed a trend toward imbalance, with a higher proportion of PD-L1 TPS $\geq 50\%$ in the TKI-immuno cohort (33.3% vs. 13.8%, $P=0.081$).
- In unadjusted analysis, pCR was significantly higher in the TKI-immuno cohort than in the TKI cohort (22.2% vs. 3.1%; OR 8.67, 95% CI 1.32–65.74; $P=0.011$), whereas MPR was not significantly different (33.3% vs. 24.7%; $P=0.559$). In Firth penalized logistic regression adjusted for baseline stage, TKI-immuno remained significantly associated with a higher likelihood of pCR (OR 7.55, 95% CI 1.68–36.65; $P=0.009$). In sensitivity analysis restricted to patients with available baseline PD-L1 data, this association remained significant after adjustment for baseline stage and PD-L1 status (OR 33.83, 95% CI 2.86–4565; $P=0.003$).
- Baseline PD-L1 expression was not associated with MPR in the TKI cohort ($P=0.53$), but was significantly higher in MPR patients than non-MPR patients in the TKI-immuno cohort ($P=0.0053$). Consistently, the MPR rate was highest in PD-L1-high patients in the TKI-immuno cohort (80%), and baseline PD-L1 was inversely correlated with residual viable tumor burden only in this cohort ($R=-0.56$, $P=0.03$).



REFERENCES & ACKNOWLEDGEMENTS

Artificial Intelligence (AI) Use Disclaimer

ChatGPT (OpenAI) was used to assist with English-language editing, wording refinement, and formatting of this poster. It was not used to generate, analyze, or interpret the study data or to draw scientific conclusions. All AI-assisted content was critically reviewed, verified, and approved by the authors, who take full responsibility for the accuracy and integrity of the material presented.