



P3.1491: Real-World Outcomes of Tarlatamab in Previously Treated Small Cell Lung Cancer at a Single Institution.

Ryo Yamamoto¹, Miyako Kitazono¹, Rina Murakami¹, Tomoki Takayama¹, Naoki Yoshida¹, Takumi Fukaya¹, Tadahisa Wada¹, Ryojyu Sato¹, Yuichi Sato¹, Shuichi Matsuda¹, Takeshi Kobayashi¹.

¹Tokyo Metropolitan Tama Medical Center

Correspondence: ryolbdwcb@gmail.com



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INTRODUCTION

Tarlatamab, a bispecific T-cell engager (BiTE) targeting DLL3, demonstrated promising efficacy in previously treated small cell lung cancer (SCLC) in the pivotal DeLLphi-300 and DeLLphi-301 trials^{1), 2)}. Real-world populations are more heterogeneous than clinical trial cohorts, and emerging real-world studies have reported the clinical activity and safety of tarlatamab in broader patient populations^{4), 5)}. We therefore aimed to evaluate the safety and clinical activity of tarlatamab in a real-world SCLC population.

METHODS

Study Design: Retrospective, single-institution analysis.
Setting: Tokyo Metropolitan Tama Medical Center.
Timeframe: April 2025 - March 2026.
Cohort: N = 9 patients with previously treated SCLC who received tarlatamab.
Evaluated Metrics: Patient characteristics, safety profiles (CRS/ICANS), and clinical outcomes (ORR, DCR).
Tumor Response Assessment: Tumor response was assessed by the treating physicians according to RECIST v1.1.
Safety Assessment: CRS and ICANS were graded according to the ASTCT consensus criteria³⁾.
Data Cutoff: March 31, 2026.

BASELINE CHARACTERISTICS OVERVIEW

Age, median (range), years	71 (61–82)
Sex, n (%)	
Male	5 (55.6%)
Female	4 (44.4%)
Prior lines of therapy, median (range)	2 (2-4)
ECOG PS 0/1/2/3, n	0/6/1/2
DeLLphi-301-ineligible, n (%)	4 (44.4%)
Brain metastasis, n (%)	5 (55.6 %)
Liver metastasis, n (%)	5 (55.6 %)

RESULTS

Efficacy

ORR: 77.8% (7/9), **DCR:** 77.8% (7/9). **Best overall response:** CR 0, PR 7, SD 0, PD 2

Safety

CRS Incidence: CRS occurred in 8/9 patients (88.9%): Grade 1 in 4 and Grade 2 in 4; no Grade ≥3 CRS occurred.

CRS Timing: All CRS events occurred within 24 hours after the Day 1 dose of Cycle 1, with a median time to onset of 18 hours (range, 7.6–20.4 hours).

CRS Management: Two patients required tocilizumab.

Neurological Safety: One patient with baseline brain metastases developed Grade 1 ICANS on Day 29 of tarlatamab treatment, which resolved spontaneously without specific intervention.

Adverse Events: Dysgeusia was the most common AE (observed in 5 out of 6 patients continuing treatment).

Treatment Status

Treatment Continuation: 6/9 patients remained on treatment at data cutoff; discontinuations were due to PD (n=2) and fatal cardioembolic cerebral infarction (n=1). No discontinuations were attributed to CRS or ICANS.

Case	Age / Sex	ECOG PS	Prior lines of therapy	Brain Metastasis	Liver Metastasis	DeLLphi-301 eligible	CRS Grade	Time to CRS Onset	CRS Management	ICANS Grade	Other AEs	Best Overall Response (BOR)
Pt.1	68 / F	3	2	●	—	No, PS, Symptomatic Brain Meta	2	22h 23m	Dexa(5)	—	Thrombocytopenia (Gr1) Dysgeusia	PR
Pt.2	71 / M	1	2	—	●	Yes	1	19h 20m	Dexa(3)	—	Dysgeusia, Parosmia	PR
Pt.3	77 / M	1	2	●	●	Yes	1	20h 26m	None	—	Dysgeusia	PR
Pt.4	61 / F	1	2	—	●	Yes	2	7h 38m	Dexa(3)	—	—	PD
Pt.5	71 / M	1	4	●	—	Yes	1	20h 23m	None	—	—	PR
Pt.6	63 / F	1	2	—	—	Yes	1	16h 40m	Dexa(2)	—	Dysgeusia	PR
Pt.7	73 / M	2	2	●	●	No, PS	2	14h 48m	Dexa(3) Toci(1)	—	Dysgeusia	PR
Pt.8	77 / M	1	2	●	—	No, Symptomatic Brain Meta	—	—	None	1	Dysgeusia	PR
Pt.9	82 / F	3	2	—	●	No, PS	2	13h 58m	Dexa(3) Toci(1)	—	—	PD

Metastasis: ● Yes | — No

Dexa: Dexamethasone; numbers in parentheses indicate the number of doses.

BOR: Partial Response (PR) | Progressive Disease (PD)

Toc: Tocilizumab

DISCUSSION AND CONCLUSION

In this study, tarlatamab showed high clinical activity in a real-world, heavily pretreated SCLC population (median age: 71 years; median 2 prior lines of therapy). Notably, responses were observed even in patients with poor performance status or baseline brain or liver metastases, including those who did not meet DeLLphi-301 eligibility criteria. However, the real-world incidence of CRS was high (88.9%) but limited to Grade 1–2 events; two patients required tocilizumab, and no Grade ≥3 CRS was observed. Importantly, no treatment discontinuations were attributed to CRS or ICANS.

ACTIONABLE TAKEAWAY MESSAGE Proactive CRS Management Is

Mandatory: Given that all CRS events occurred within 24 hours following the Cycle 1 Day 1 dose (median onset, 18 hours), close inpatient monitoring during this period is essential. Early recognition and prompt intervention with corticosteroids and tocilizumab when indicated may have contributed to the absence of Grade ≥3 CRS and supported treatment continuation.

REFERENCES & ACKNOWLEDGEMENTS

References

For key references, please scan the QR code.



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