



P3.300

Clinical Experience with Tarlatamab in Relapsed Small Cell Lung Cancer: Impact of Corticosteroid Use for Cytokine Release Syndrome on Treatment Outcomes

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INTRODUCTION

- Tarlatamab is a new standard of care for patients with relapsed small cell lung cancer (SCLC).
- Cytokine release syndrome (CRS) is the most frequent and characteristic adverse event associated with tarlatamab.
- Systemic administration of corticosteroids may attenuate T cell-mediated anti-tumor immunity. However, the clinical impact of corticosteroid use for CRS on the efficacy of tarlatamab remains unclear.
- We investigated the association between systemic corticosteroid use/ dose for CRS management and the efficacy of tarlatamab.

METHODS

- This was a retrospective, observational cohort study of patients with relapsed SCLC who received tarlatamab at two centers (National Cancer Center Hospital East and Kobe University Hospital) between January 2019 and June 2026.
- Eight patients (16%) were treated within clinical trials (DeLLphi-300 [NCT03319940], DeLLphi-301 [NCT05060016], or DeLLphi-304 [NCT05740566]), and 42 patients (84%) were treated in clinical practice.
- Efficacy outcomes included objective response rate (ORR) and progression-free survival (PFS). Safety outcomes included the incidence/ severity of CRS and immune effector cell-associated neurotoxicity syndrome (ICANS).
- Corticosteroid dose was assessed as the cumulative dexamethasone-equivalent dose used for CRS management during cycle 1, excluding protocol-specified prophylactic corticosteroids.

- The efficacy of tarlatamab was compared by:
 - The occurrence of CRS
 - Corticosteroid use for CRS
 - The cumulative corticosteroid dose (high-dose [$\geq$ median] vs. low-dose [$<$ median])

RESULTS

Figure 1. Study flow chart

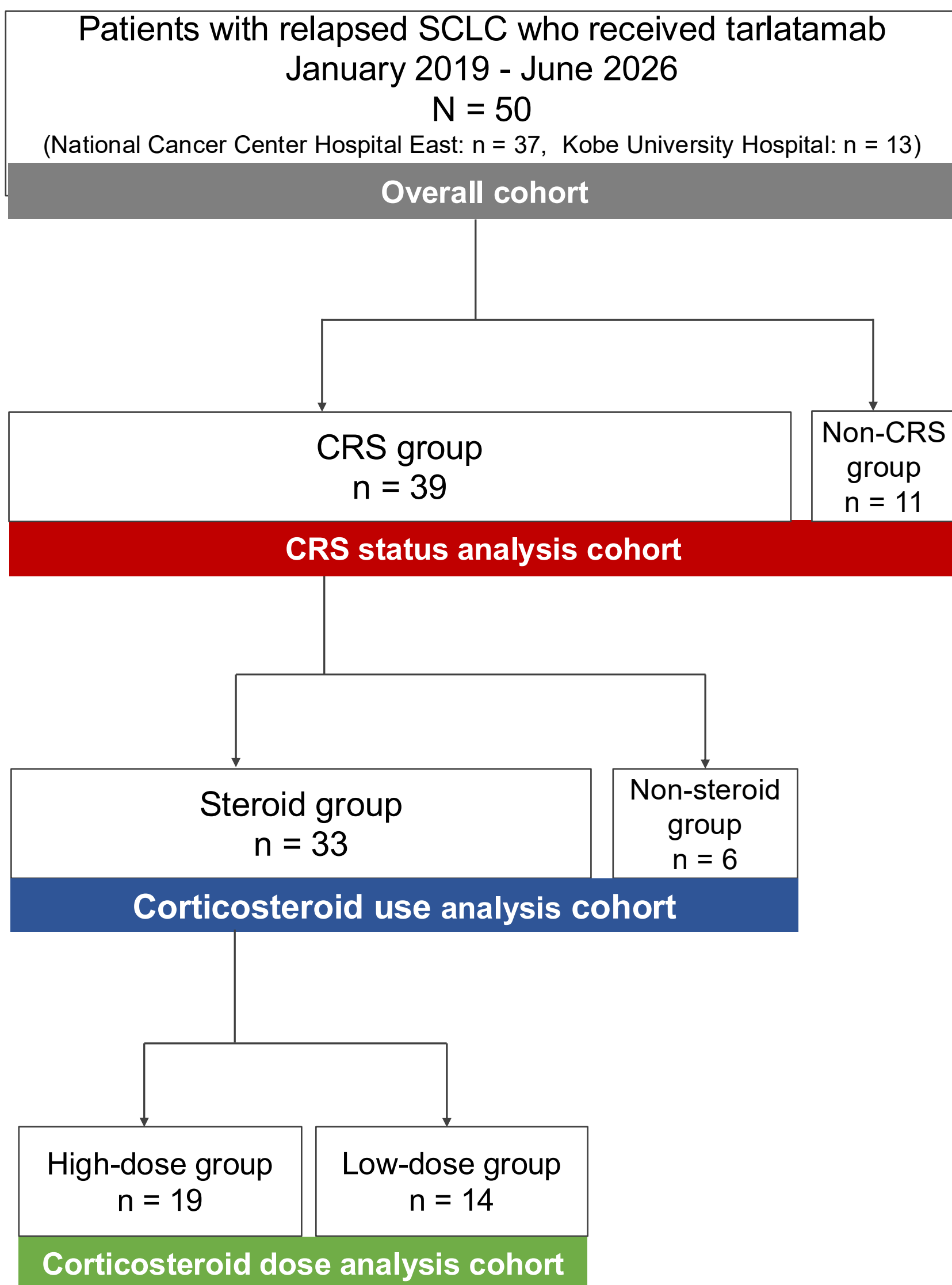


Table 1. Patient characteristics

	N = 50 (%)
Age, years	
Median [range]	70 [37-84]
Sex	
Male	37 (74)
Female	13 (26)
Smoking history	
Ever	47 (94)
ECOG-PS	
0-1	46 (92)
2	4 (8)
Stage at initial diagnosis	
Extensive disease	31 (62)
Brain metastases	
Yes	23 (46)
No. of previous lines of therapy	
1	5 (10)
2	26 (52)
≥ 3	19 (38)
Prior PD-1/PD-L1 inhibitor therapy	
Yes	37 (74)
Chemotherapy-free interval*	
≥ 90 days	37 (74)

*Chemotherapy-free interval: time from the last dose of first-line platinum-doublet chemotherapy to PD.

Table 2. CRS and ICANS incidence, severity and management

All Tarlatamab (N = 50)	CRS, n (%)	ICANS, n (%)
Any grade	39 (78)	3 (6)
Grade 1	26 (52)	2 (4)
Grade 2	13 (26)	1 (2)
Grade ≥ 3	0 (0)	0 (0)
Leading to dose interruption	0 (0)	0 (0)
Leading to discontinuation	0 (0)	0 (0)
Fatal	0 (0)	0 (0)
Utilization of interventions		
Corticosteroids use *	33 (66)	3 (6)
Dexamethasone-equiv. dose, mg — median [range]	14 [0-82]	82 [33-82]
Tocilizumab use	5 (10)	0 (0)
Median time to onset, hours [range]	21 [6-68]	15 [14-24]
Median time to resolution, days [range]	1 [1-5]	1 [1-2]
Resolution rate, %	100	100

*Three patients received corticosteroids for both CRS and ICANS.

Figure 2. Distribution of cumulative corticosteroid dose by CRS grade

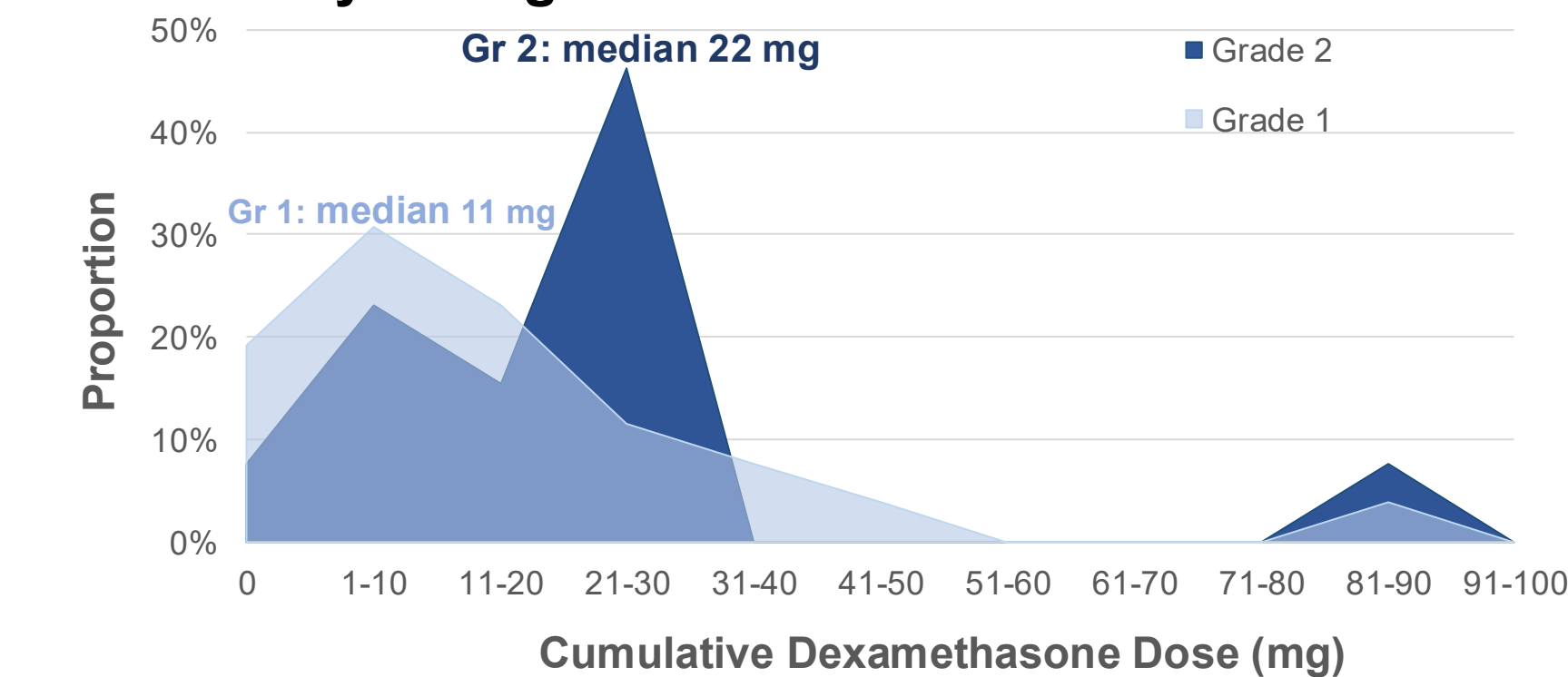
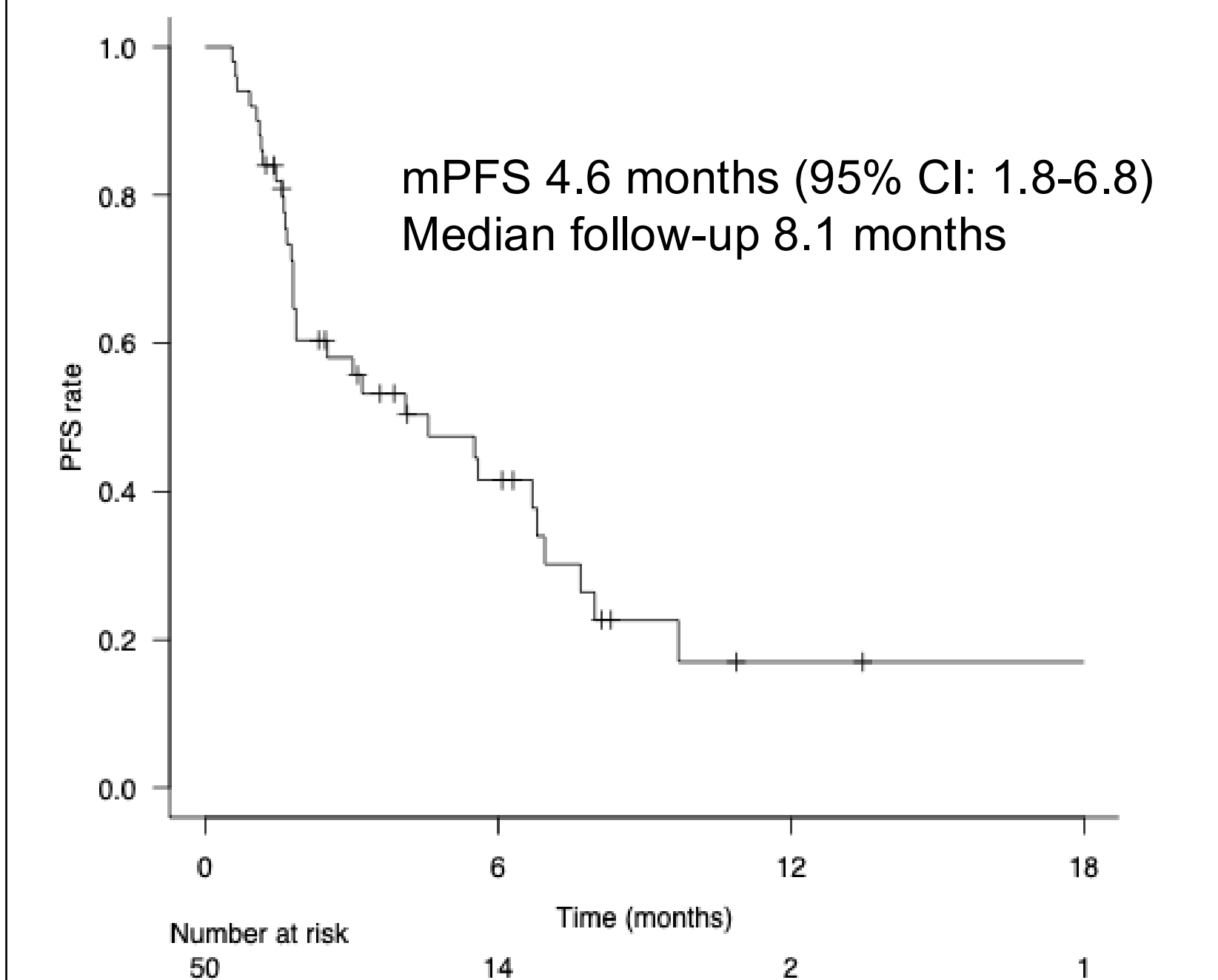


Figure 3. ORR and PFS (Overall cohort)

Best response, n (%)	N = 50
CR	0 (0)
PR	24 (48)
SD	6 (12)
PD	19 (38)
NE	1 (2)
ORR	48%



DISCUSSION AND CONCLUSION

Actionable Take Away Message

- In this study, corticosteroid was used for CRS management in 66% of all patients, with the median cumulative dexamethasone-equivalent dose was 14 mg, and all CRS events resolved safely.
- CRS occurrence, corticosteroid use for CRS, and cumulative corticosteroid dose were not associated with inferior efficacy of tarlatamab.
- Corticosteroids should be used appropriately for tarlatamab-induced CRS.

REFERENCES & ACKNOWLEDGEMENTS

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Figure 4. Efficacy according to CRS status

Best response, n (%)	CRS (n = 39)	Non-CRS (n = 11)
CR	0 (0)	0 (0)
PR	17 (44)	7 (63)
SD	5 (12)	1 (9)
PD	17 (44)	2 (18)
NE	0 (0)	1 (9)
ORR	44%	63% P = 0.31

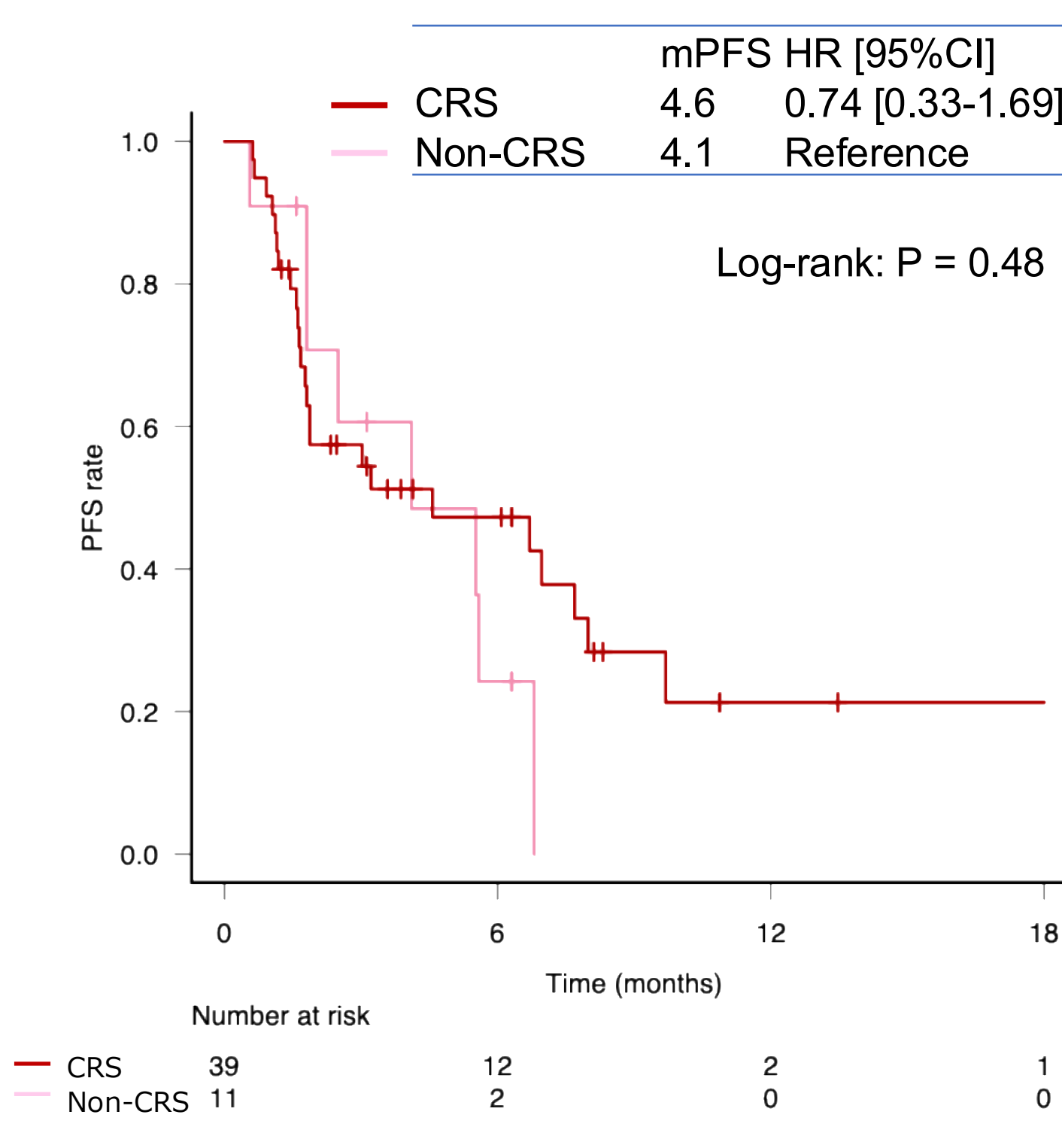


Figure 5. Efficacy according to corticosteroid use for CRS

Best response, n (%)	Steroid (n = 33)	Non-steroid (n = 6)
CR	0 (0)	0 (0)
PR	14 (42)	3 (50)
SD	4 (12)	1 (17)
PD	15 (46)	2 (33)
NE	0 (0)	0 (0)
ORR	42%	50% P = 1.00

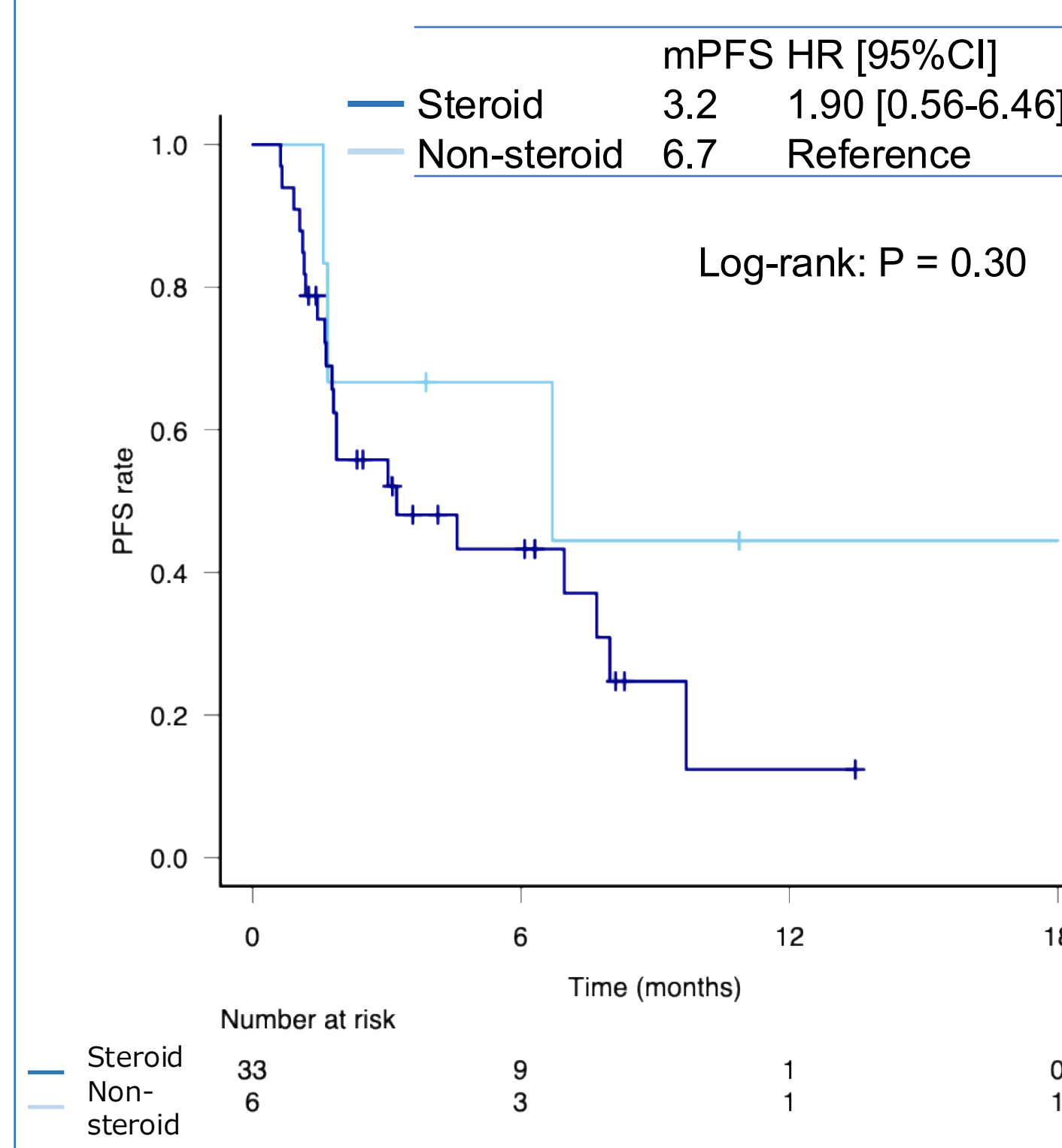


Figure 6. Efficacy according to corticosteroid dose

Best response, n (%)	High-dose (n = 19)	Low-dose (n = 14)
CR	0 (0)	0 (0)
PR	8 (42)	6 (43)
SD	4 (21)	0 (0)
PD	7 (37)	8 (57)
NE	0 (0)	0 (0)
ORR	42%	43% P = 1.00

