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Safety and Efficacy of Tarlatamab and Intracranial Radiotherapy: A Multi-Institution, Real-World Experience

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Disclosures

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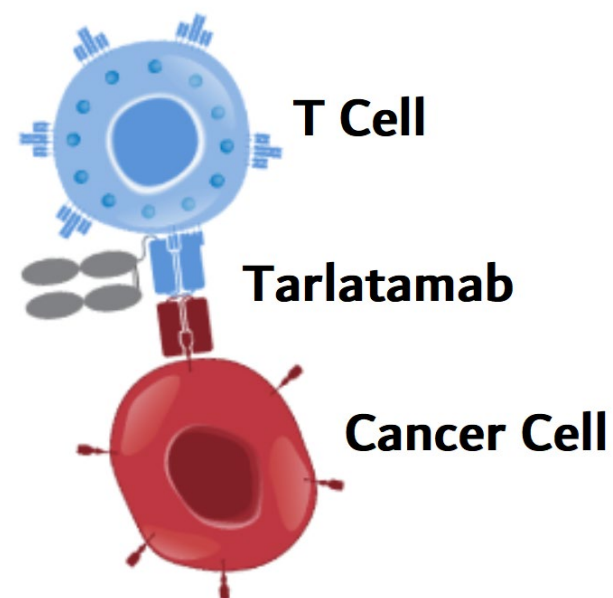
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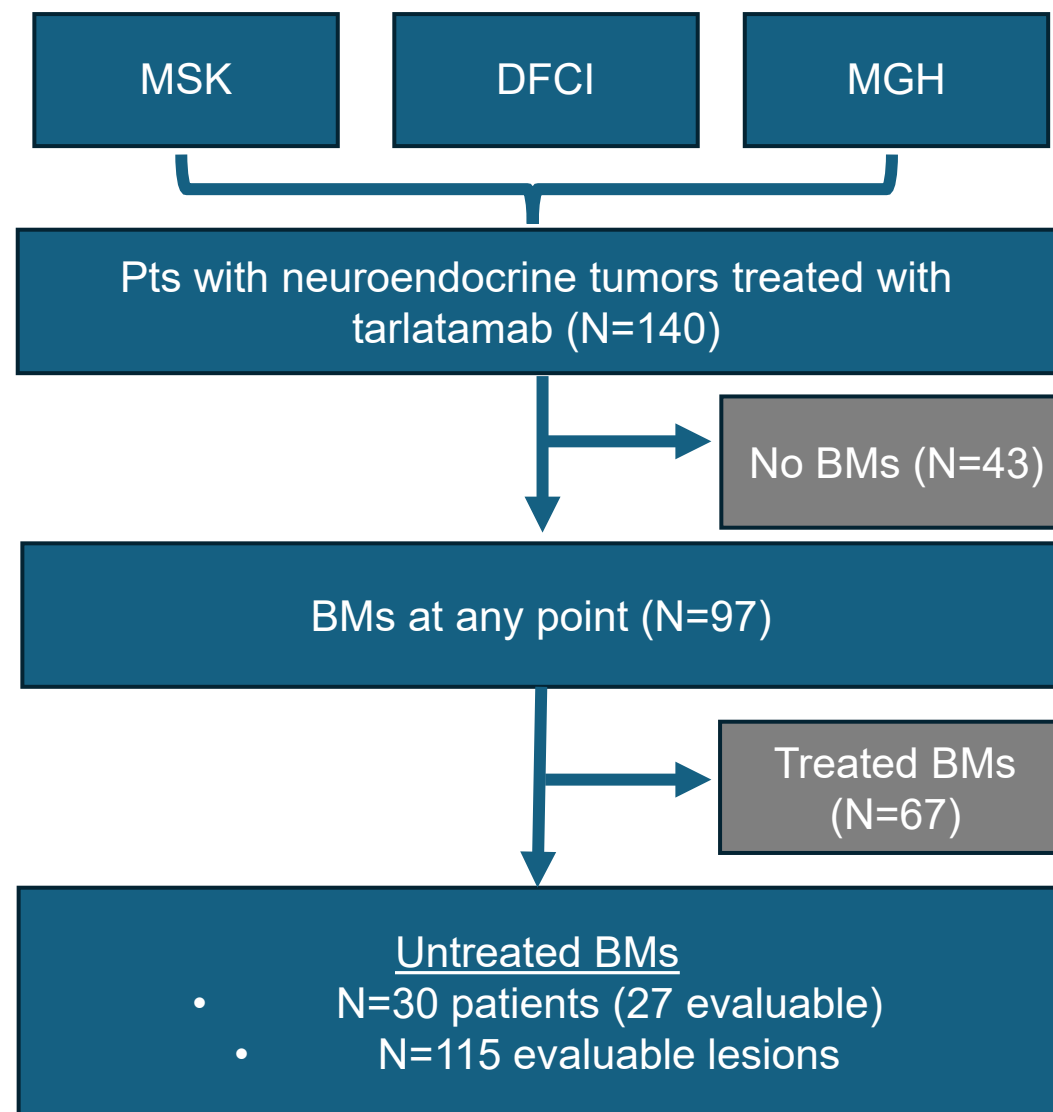
Introduction

- Tarlatamab, a bispecific T-cell engager, was FDA approved in 2025 for extensive stage small cell lung cancer (ES-SCLC).
- Post-hoc analysis of DeLLphi-304 showed an intracranial response rate (icORR) of 56%, but most patients had received prior radiotherapy (RT) (1).
- The intracranial efficacy of tarlatamab by prior RT status and the safety of central nervous system (CNS) RT in this population is poorly understood.



Methods

- Radiation oncologists determined intracranial response and recurrence.
- Medical oncologists determined extracranial response.
- Multivariable logistic regression analysis was used to assess factors associated with ICANS development using R v4.6.1



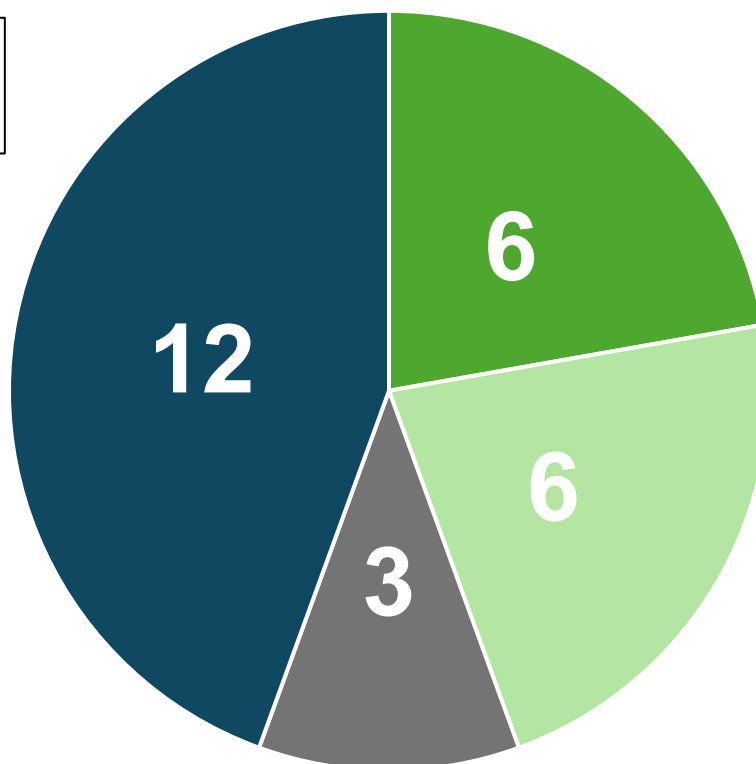
BM = brain mets

	Patients treated with tarlatamab (N=140)
Age at diagnosis (median, range)	65 (18 – 84)
Sex (N, %)	
Female	68 (49%)
Male	72 (51%)
Performance status (N, %)	
ECOG 0-1	121 (86%)
ECOG 2	18 (13%)
ECOG 3	1 (1%)
Smoking status (N, %)	
Current/former	125 (89%)
Never	14 (10%)
Unknown	1 (1%)
Histology (N, %)	
De novo SCLC	121 (86%)
Transformed SCLC	5 (4%)
Combined SCLC + LCNEC	3 (2%)
LCNEC	2 (1%)
Carcinoid	8 (6%)
Brain metastases at any point (N, %)	
Yes	97 (69%)
No	43 (31%)
Best systemic response (N, %)	
CR	1 (1%)
PR	40 (29%)
SD	23 (16%)
PD	50 (36%)
Mixed	4 (3%)
NE	22 (16%)

Response rates

Patient-level responses (N=27)

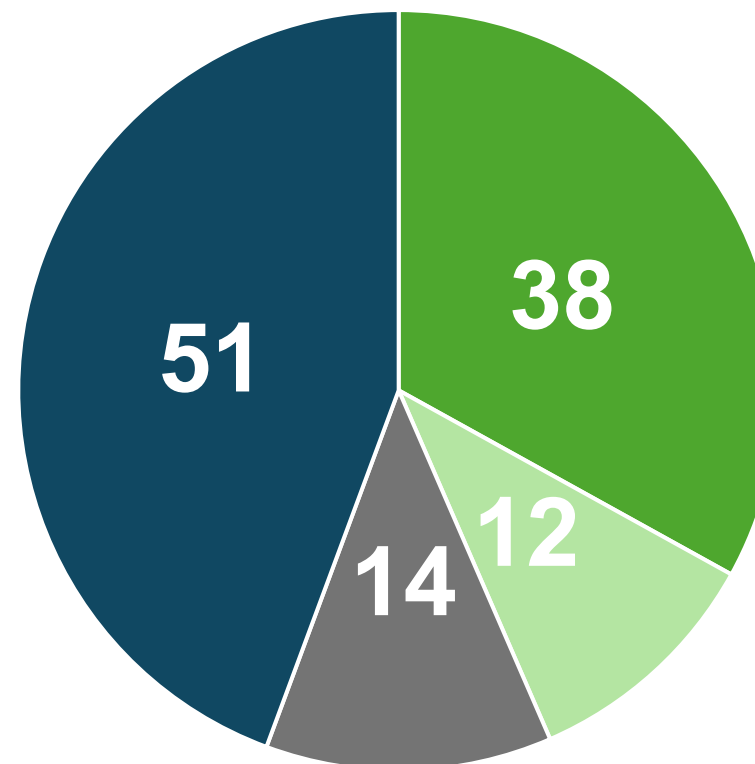
ORR= 44.4%
DCR= 55.7%



■ CR ■ PR ■ SD ■ PD

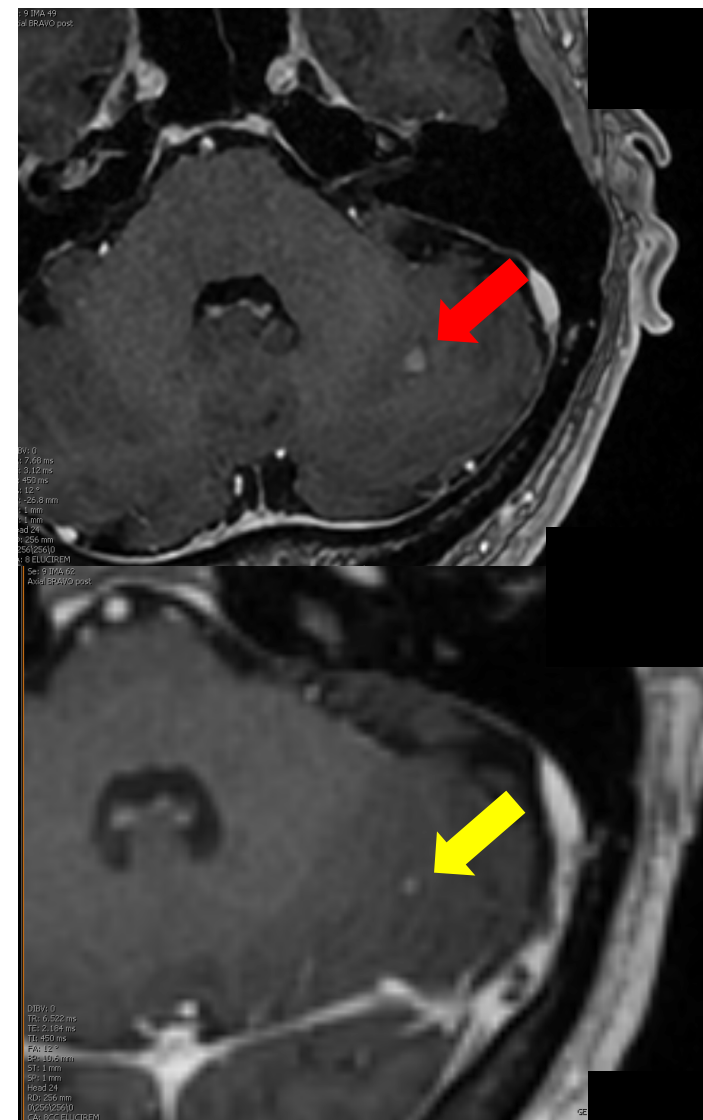
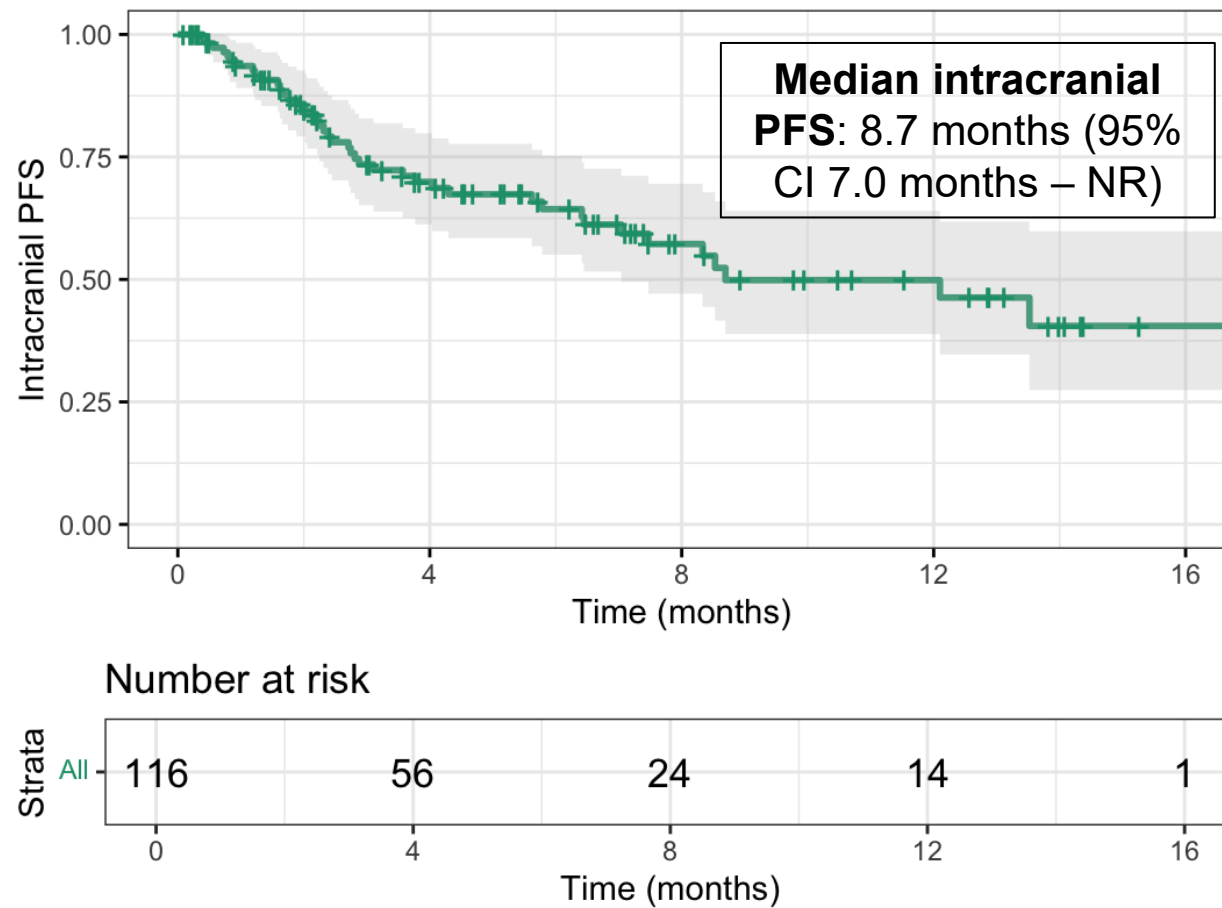
Lesion-level responses (N=115)

ORR= 43.5%
DCR= 55.7%



■ CR ■ PR ■ SD ■ PD

Intracranial PFS

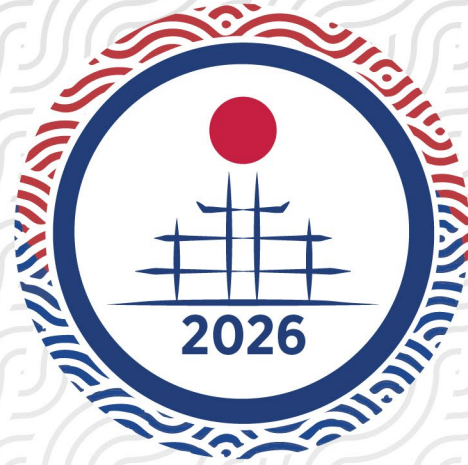


ICANS risk factors

Variable	OR (95% CI)	P value
Age	1.02 (0.98–1.07)	0.3
Any brain mets	1.77 (0.36–8.51)	0.5
Untreated brain mets	0.59 (0.15–2.06)	0.4
Prior CNS RT	1.04 (0.24–4.60)	1.0

Conclusions

- About half of patients with untreated BMs experienced intracranial disease control on tarlatamab, while half experienced intracranial progression.
- Intracranial PFS among all patients was 8.7 months.
- Presence of brain mets, untreated brain mets, and prior CNS RT did not appear to increase risk of ICANS.



Thank You.