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**Phase 1 study of LB2102, a dnTGFR2-armored DLL3-targeted
autologous CAR-T cell therapy, in subjects with relapsed or
refractory SCLC or LCNEC**

Dr. Alberto Chiappori

*Moffitt Cancer Center, Tampa
FL USA*

Disclosure

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AUTHORS: Alberto Chiappori MD¹; Zhonglin Hao MD PhD²; Ben Creelan MD¹; Reinhold Munker MD²; Paul Schwarzenberger MD³; Nitin Patel BM BCh³; Sahista Vahora PharmD³; Christian Davis MS³; Chuan Wang PhD³; Jinghui Zhang PhD³; Lijun Xin PhD³; Jieqing Zhu PhD³; Ying He PhD³; Adam J Schoenfeld MD⁴; and Jacob Sands MD⁵

¹ Moffitt Cancer Center, Tampa FL; ²Markey Comprehensive Cancer Center, University of Kentucky; ³Legend Biotech USA Inc, Somerset NJ; ⁴Memorial Sloan Kettering Cancer Center, New York City NY; ⁵Dana Farber Cancer Institute, Boston MA

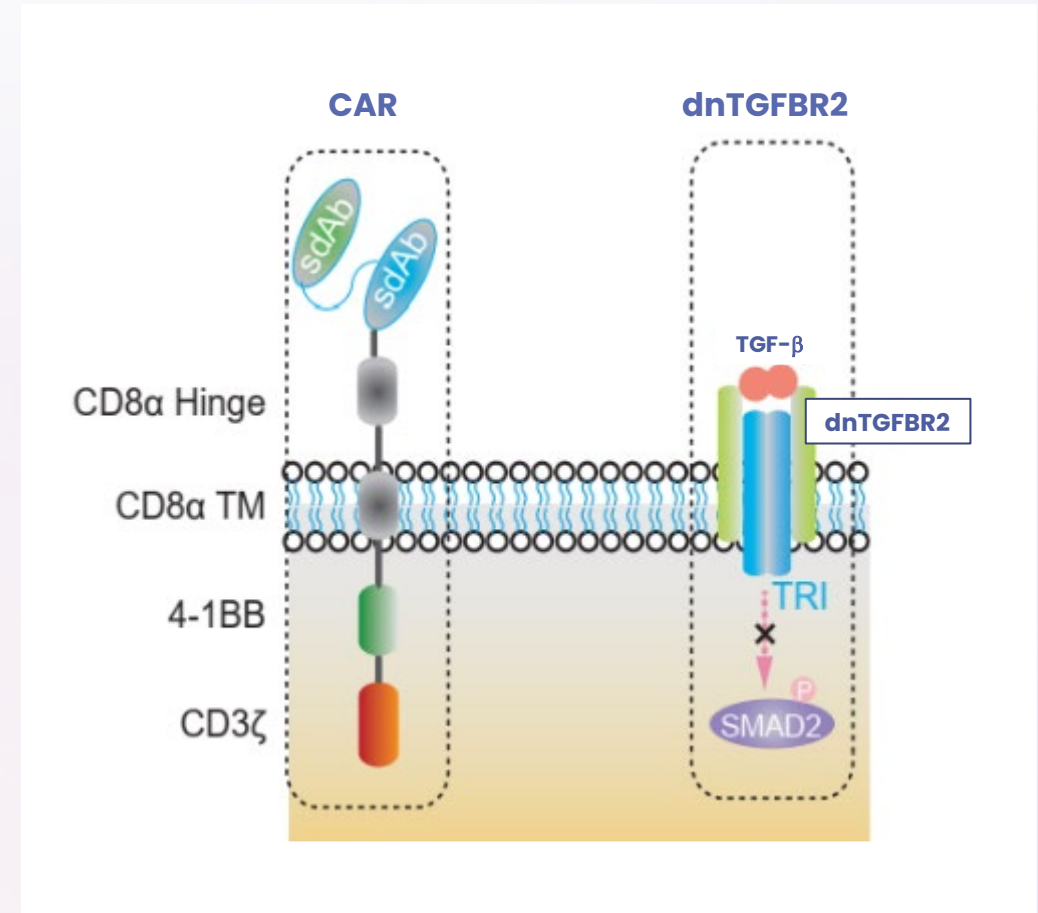
LB2102 : DLL3-targeted Autologous CAR-T Cells With dnTGFB β R2 Armor

DLL3

- An inhibitory Notch ligand highly expressed on the cell surface in SCLC and other neuroendocrine tumors
- Minimal expression in normal tissues

LB2102 CAR-T Cell Design

- Chimeric antigen receptor (CAR): dual single-domain antibodies (sdAb) with high-affinity binding for DLL3
- **dnTGFB β R2** blocks TGF β -mediated signaling to SMAD2
- dnTGFB β R2 removes the inhibitory effects of TGF- β on the CAR-T cells, leading to their increased activation, proliferation, and anti-tumor effector functions

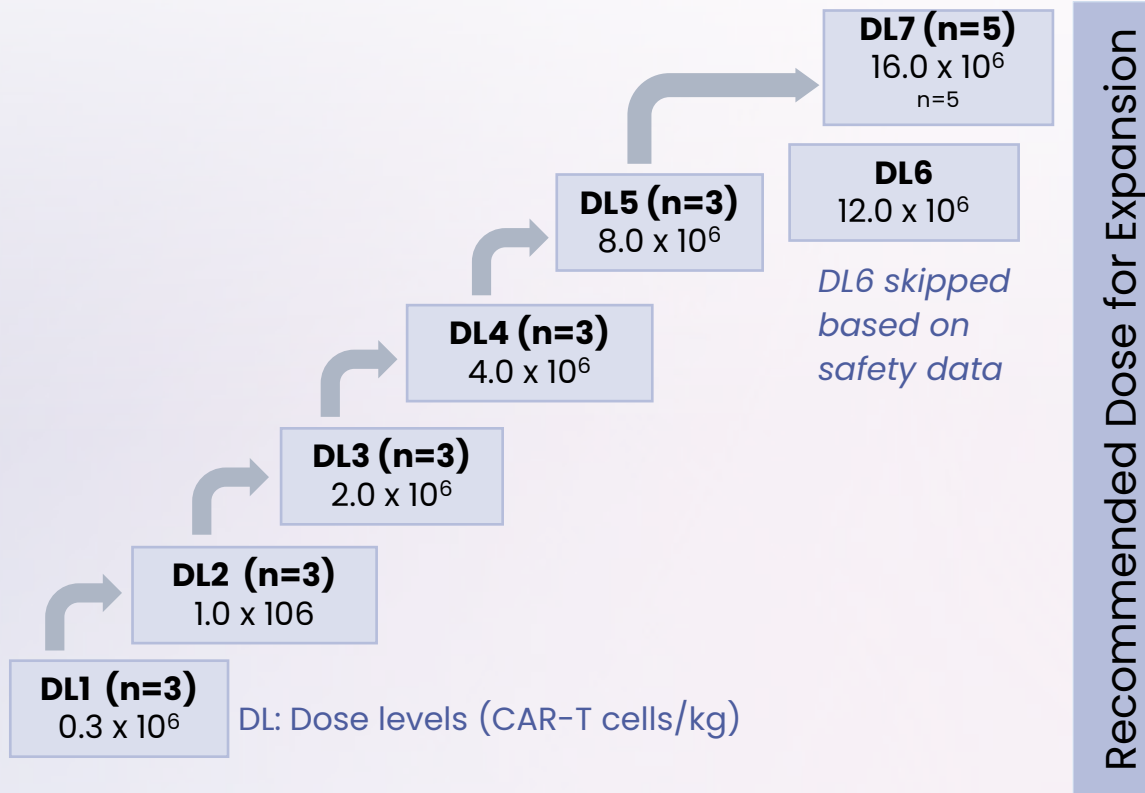


dnTGFB β R2, dominant negative TGF β Receptor 2

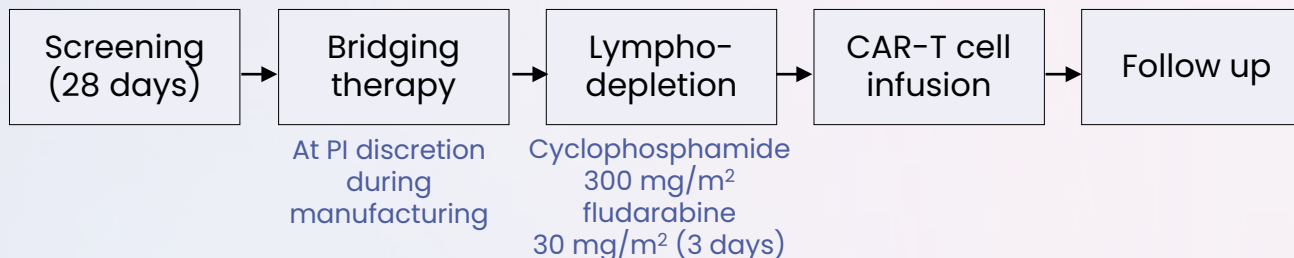
Oral abstract, **no. 339** ASCGT Congress 2026

LB2102 First-in-human Phase 1, Open Label, Multi- Center Study

Dose escalation i3+3 Design (N_{max}=36)



Study Flow Diagram



Key Eligibility Criteria

- Advanced small cell lung carcinoma (SCLC), large cell neuroendocrine lung carcinoma (LCNEC)
- ≥ 1 prior line of systemic treatment and have progressed after or have had an insufficient response
- Presence of ≥ 1 radiologically measurable lesion
- ECOG 0 or 1 and adequate organ function
- No prior CAR-T or DLL3-targeted therapy
- Subjects with treated and stable brain metastases were eligible

Objectives for Dose Escalation

Primary Objective: To characterize the safety and tolerability of LB2102 and determine the recommended dose for expansion (RDE)

Secondary Objective: To evaluate the preliminary efficacy, pharmacokinetics and immunogenicity

Study Enrolled Subjects with R/R SCLC or LCNEC

- The study population comprised 20 subjects with relapsed and/or refractory (R/R) SCLC or LCNEC
- Most subjects had SCLC, with extensive-stage disease at initial diagnosis
- 70% of subjects had history of previously treated brain metastases
- 95% of subjects received bridging therapy while waiting for CAR-T cell manufacturing, including brain radiation in 40% of subjects

Demographic and Disease Characteristics	Total (N=20)
Age: median (range)	56.5 (20, 73)
≥ 60 years	7 (35.0)
Sex: female	10 (50.0)
Primary tumor type	
SCLC	17 (85.0)
LCNEC	3 (15.0)
ECOG : 0	13 (65.0)
1	7 (35.0)
Disease state at initial diagnosis	
Limited	5 (25.0)
Extensive	14 (70.0)
Unknown	1 (5.0)
History of treated brain metastases	14 (70)
Selected sites of metastases at enrollment	
Liver	8 (40.0)
Bone	8 (40.0)
Prior systemic lines of treatment: median (range)	1.5 (1, 7)
Prior brain radiation	10 (50.0)
Lines of bridging therapy: median (range)	1 (1, 2)
Brain radiation during bridging	8 (40.0)
Follow-up (months): median (range)	17.6 (1.1, 19.5)

Note: n (%) is presented, unless otherwise stated

Safety was Manageable, No DLTs or LB2102-related Deaths

	DL1 and DL2 (N=6)	DL3 (N=3)	DL4 (N=3)	DL5 (N=3)	DL7 (N=5)	Total (N=20)
Any TEAE	6 (100)	3 (100)	3 (100)	3 (100)	5 (100)	20 (100)
Grade 3 or 4	3 (50.0)	3 (100)	3 (100)	1 (33.3)	5 (100)	15 (75.0)
Grade 5	0	0	0	1 (33.3)	0	1 (5.0)
Any TEAE related to LB2102	5 (83.3)	1 (33.3)	3 (100)	2 (66.7)	5 (100)	16 (80.0)
Grade 3 or 4 *	3 (50.0)	0	2 (66.7)	0	5 (100)	10 (50.0)
Any Serious TEAE	2 (33.3)	1 (33.3)	2 (66.7)	1 (33.3)	2 (40.0)	8 (40.0)
Related to LB2102	0	0	1 (33.3)	0	0	1 (5.0)
Any DLT	0	0	0	0	0	0
Adverse Event of Special Interest	0	1 (33.3)	1 (33.3)	1 (33.3)	4 (80.0)	6 (30.0)
CRS, Any Grade	0	1 (33.3)	1 (33.3)	0	4 (80.0)	6 (30.0)
CRS, Grade ≥ 3	0	0	0	0	0	0
ICANS, Any Grade	0	0	0	0	3 (60.0)	3 (15.0)
ICANS, Grade ≥ 3	0	0	0	0	1 (20.0)	1 (5.0)
Infection, Grade ≥ 4	0	0	0	1 (33.3)	1 (20.0)	2 (10.0)

Note: n (%) with at least 1 TEAE is presented

*Other Grade 3 or 4 non-hematologic LB2102-related TEAEs were AST elevation and CRP elevation (both n=1)

TEAEs Grade ≥ 3

- 10 related to LB2102 (50% of subjects)
- 1 death from pneumonia (not related to LB2102)
- Most LB2102-related are hematologic and associated with lymphodepletion

CRS occurred in 6 subjects (30%)

- Grade 1 n=4, Grade 2 n=2
- 3 treated with tocilizumab, 2 treated with steroids
- Median onset 2.5 days (1, 16 days)
- Median duration 2.5 days (1, 7 days)

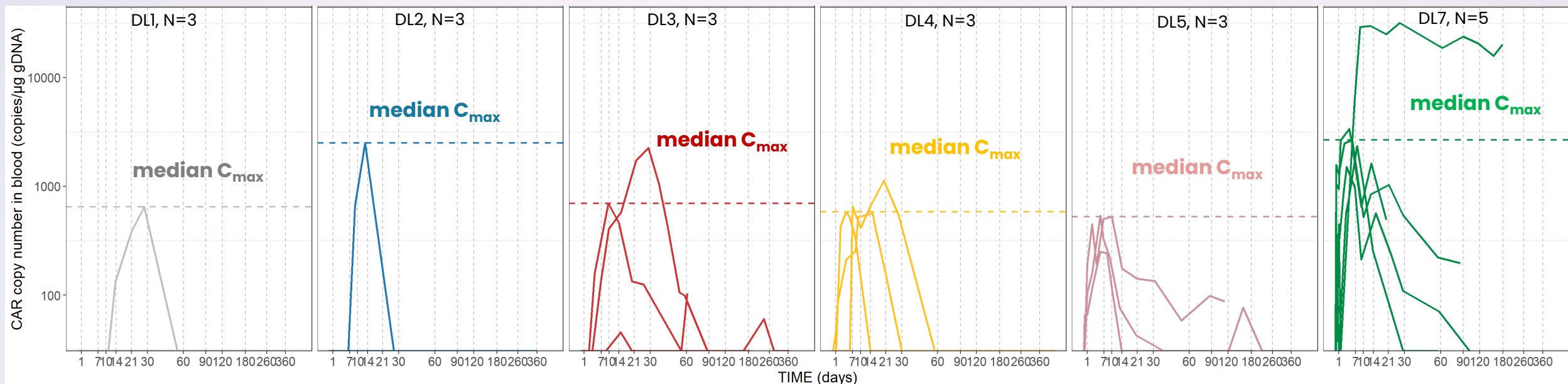
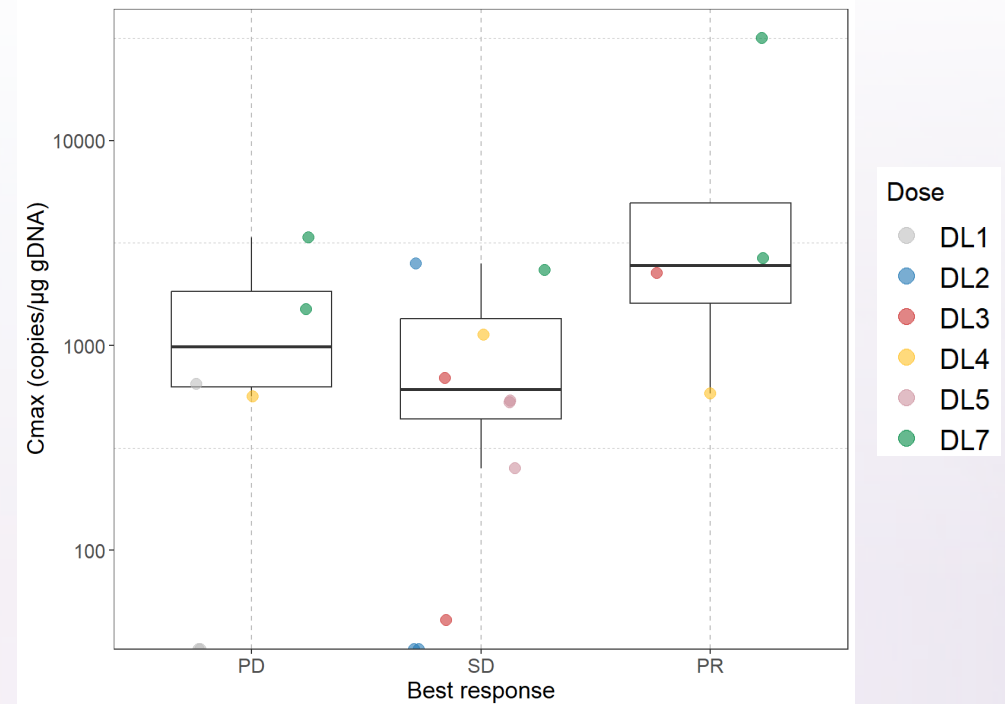
ICANS occurred in 3 subjects (15%)

- Grade 1 n=2 and Grade 3 n=1
- Median onset 4 days (4, 5 days)
- Median duration 5 days (2, 7 days)

CAR-T Cells Were Measurable in All Subjects at $\geq$ DL3

- PK analyses were conducted using qPCR to measure CAR transgene in peripheral blood samples from 20 subjects
- At DL ≥ 3 ($2.0\text{--}16 \times 10^6$ CAR-T cells/kg)
 - Median $C_{\max}$ values were 694, 581, 527, and 2670 copies/ μg gDNA CAR transgene
 - median $T_{\max}$ values were 15, 15, 6, and 6 days

Subjects With a PR had Higher PK Exposure



Clinical Activity Observed at DL3 and Above, Primarily in SCLC

At DL3 and above (n=14)

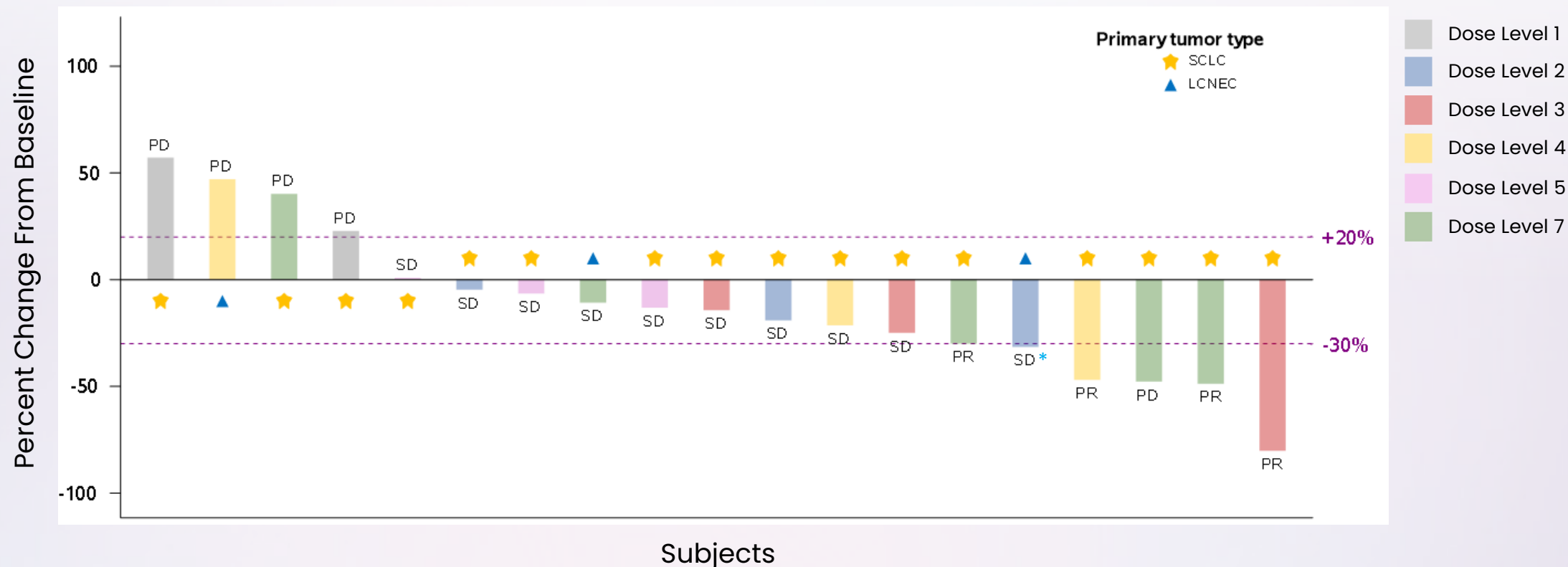
- **SCLC:** ORR 33.3% (4/12)
DCR 83.3% (10/12)
- **LCNEC:** ORR 0% (0/2)
DCR 50.0% (1/2)

	DL1-DL2 [N=6]	DL3-DL7 [N=14]	Overall [N=20]
Non-measurable Disease at Baseline Per RECIST	1 (16.7%)	0	1 (5.0%)
Best Overall Response			
Complete Response (CR)	0	0	0
Partial Response (PR)	0	4 (28.6%)	4 (20.0%)
Stable Disease (SD)	3 (50.0%)	7 (50.0%)	10 (50.0%)
Progressive Disease (PD)	3 (50.0%)	3 (21.4%)	6 (30.0%)
Not Evaluable (NE)	0	0	0
Objective Response Rate (PR + CR) [90% CI]	0 [0%, 39.3%]	4 (28.6%) [10.4%, 54.0%]	4 (20.0%) [7.1%, 40.1%]
Disease Control Rate (SD + PR + CR) [90% CI]	3 (50.0%) [15.3%, 84.7%]	11 (78.6%) [53.4%, 93.9%]	14 (70.0%) [49.2%, 86.0%]

Notes: Percentages are based on the number of subjects in the Safety analysis set (N)

Best Percent Change from Baseline in Target Tumor Lesion Size

Best Responses (per RECIST 1.1)

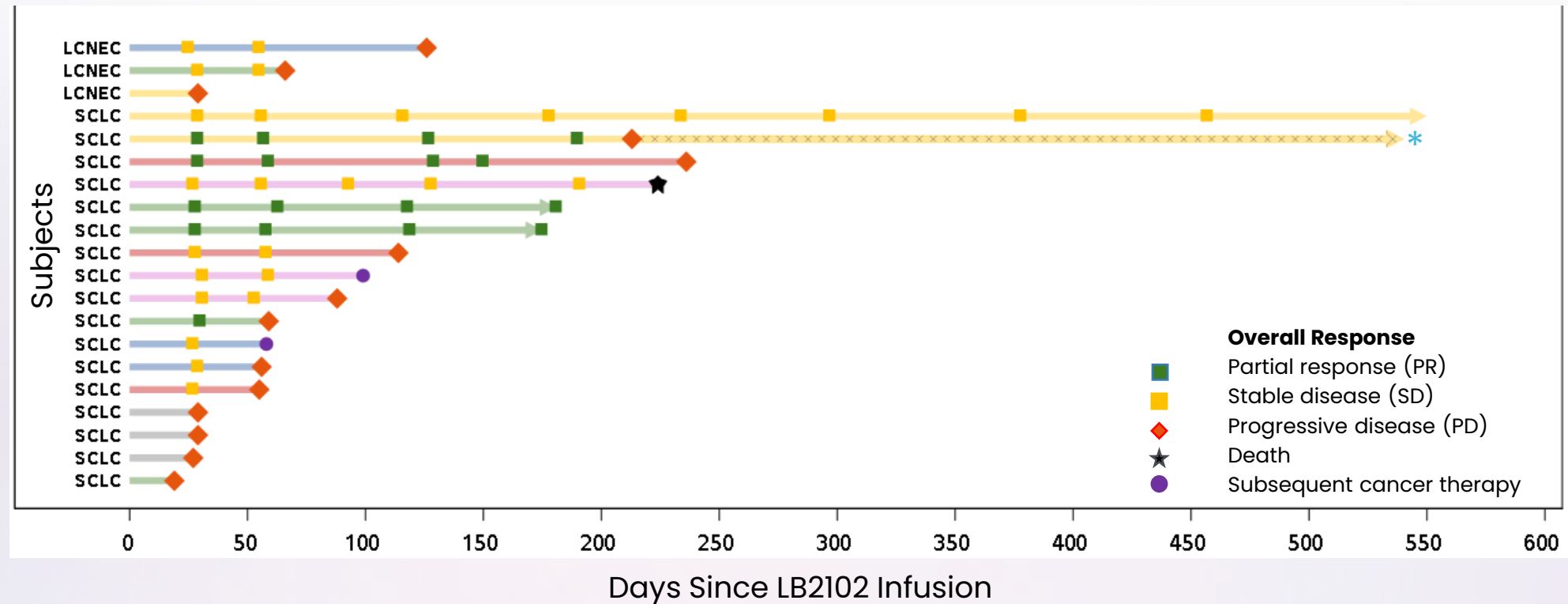


PR: Partial response | SD: Stable disease | PD: Progressive disease | LCNEC: Large cell neuroendocrine lung cancer | SCLC: Small cell lung cancer

Notes: The best percent change from baseline was not evaluable in 1 subject due to non-measurable disease at baseline per RECIST criteria, and is therefore not presented in figure

*Although the subject's best overall response was SD, a 31.6% reduction in target lesion size was observed at the PD assessment; PD was declared due to the appearance of a new lesion

Duration of Response



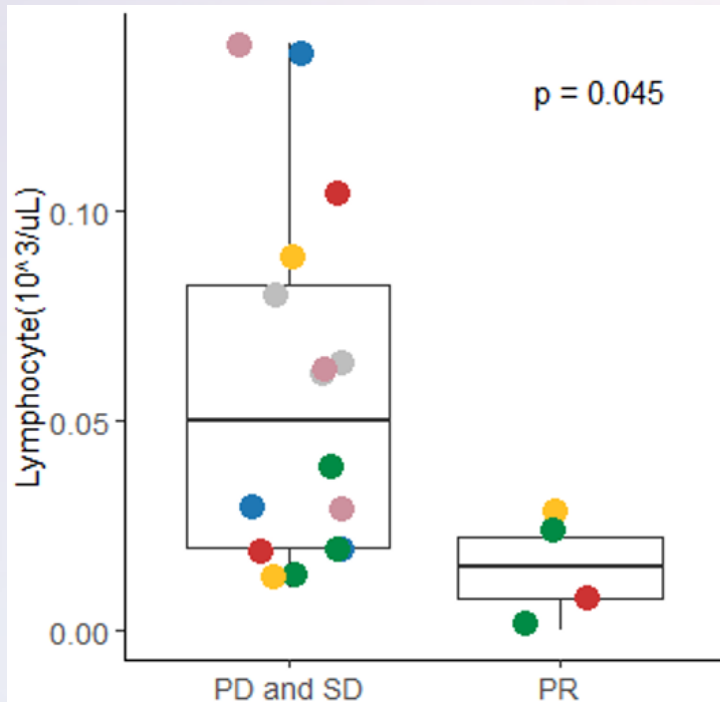
* PD due to brain metastases, managed with SBRT; no subsequent systemic antineoplastic therapy (cross-hatched part of arrow)

- **Median Duration of Response was 6.5 mo** (95% CI, 6.1–NR), with ongoing response in 2 subjects (median follow up 17.6 mo; range 1.1, 19.5 mo)
- **At $\geq$ DL3** (median follow up 12.5 mo; range 1.1, 18.1 mo)
 - Median **Duration of Disease Control was 6.1 mo** (95% CI, 1.3–6.8 mo)
 - **Disease Control Rate** was 60.6% at 6 mo and 15.2% at 9 mo

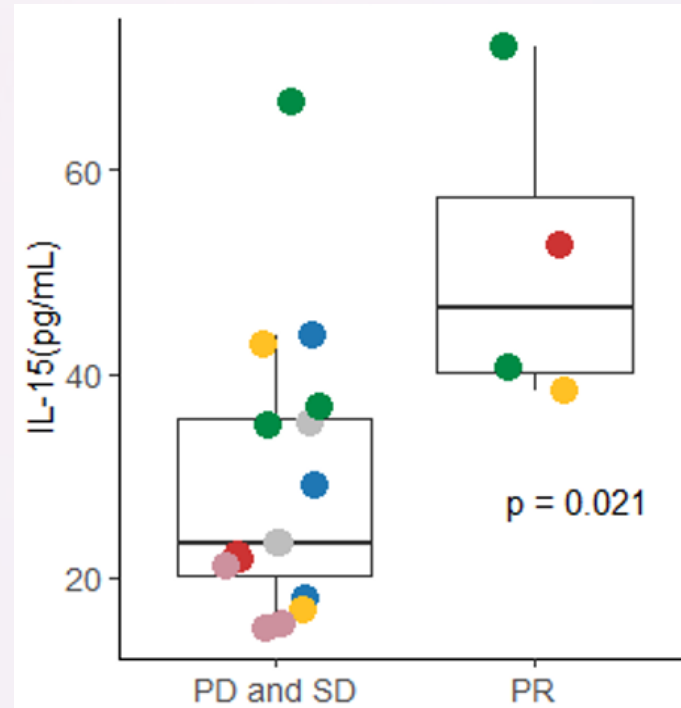
Low Day 1 Lymphocyte Count and High IL-15 and IL-7 Levels Associate With Better Clinical Response

- Lymphodepletion reduces the number of endogenous lymphocytes that consume homeostatic cytokines such as IL-7 and IL-15
- This results in higher levels of IL7 and IL15, which promotes CAR-T cell expansion

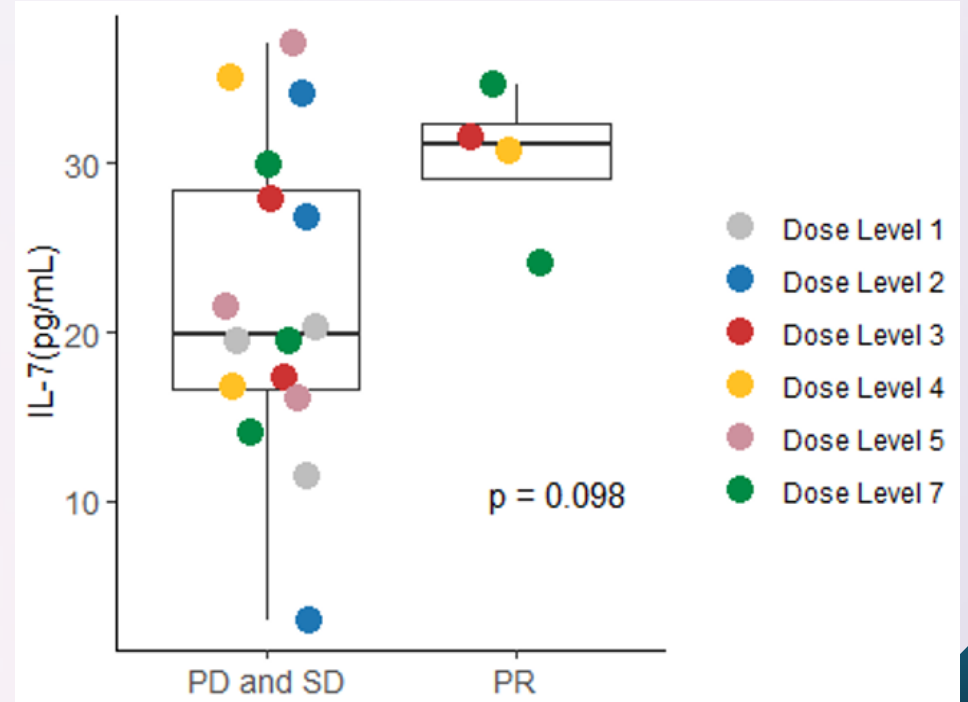
Lymphocytes



IL-15



IL-7



Durable Clinical Benefit Observed at Dose Levels ≥ 3

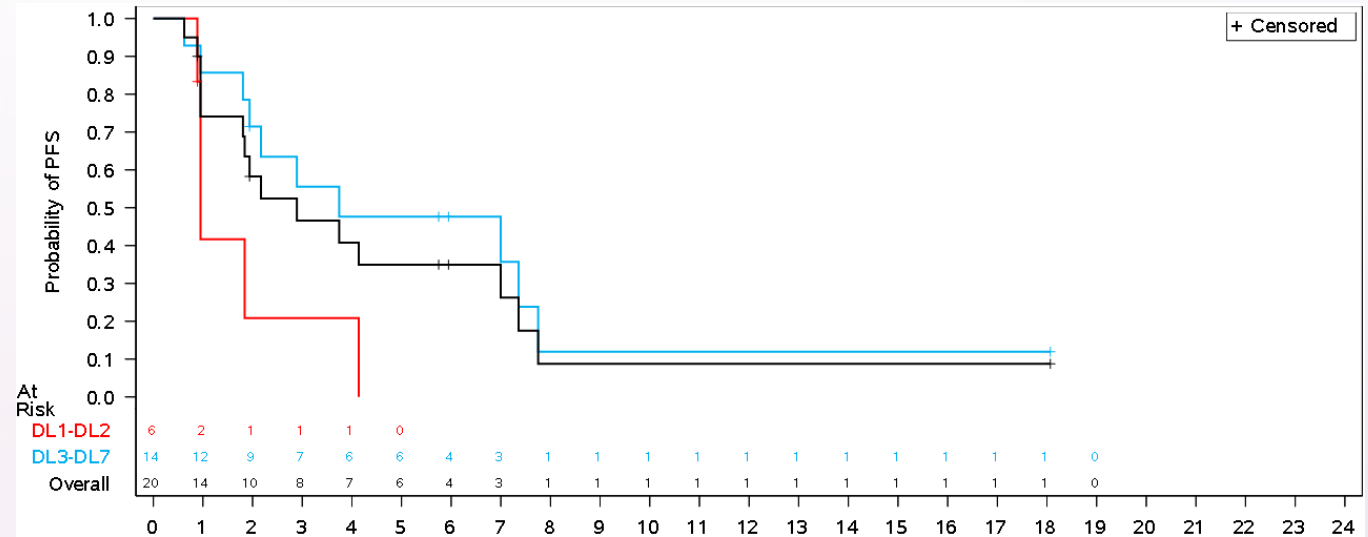
Median Progression-free Survival (mPFS)

(n=20): 2.9 months (95% CI, 1.0–7.0)

At $\geq$ DL3 (n=14) mPFS: 3.8 months

(95% CI, 1.8–7.8)

Kaplan-Meier Plot for Progression Free Survival by Pooled Dose Level

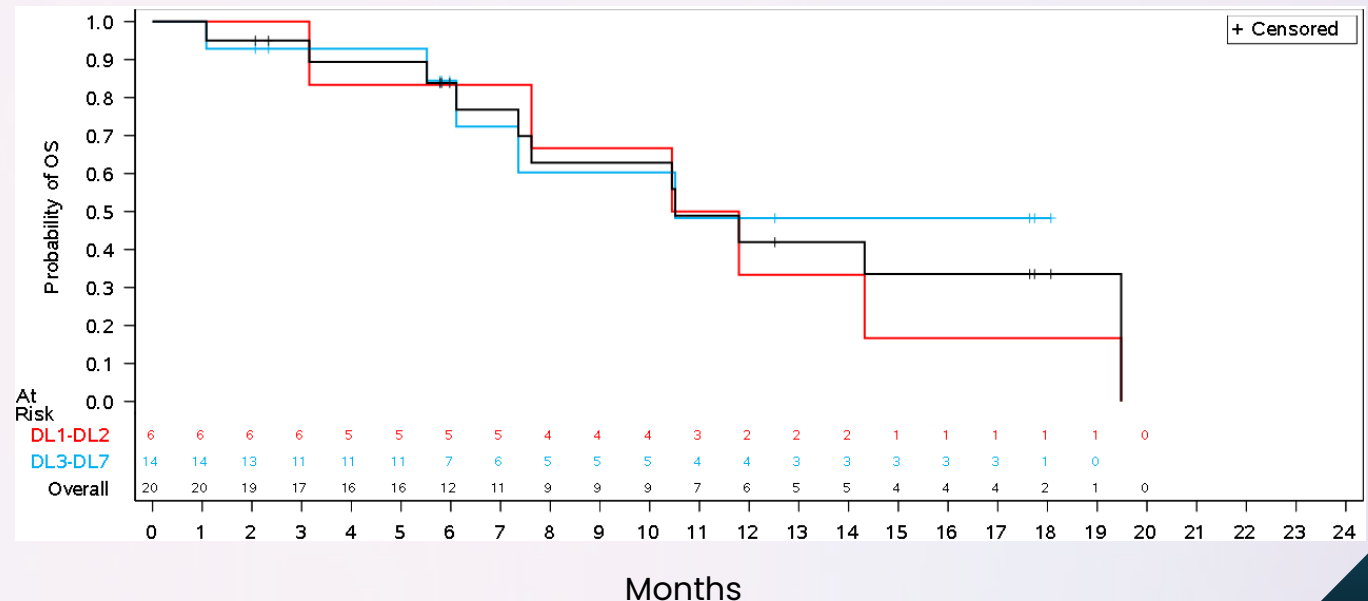


Median Overall Survival: 10.5 months

(95% CI, 6.1–NR;

median follow up: 17.6 months)

Kaplan-Meier Plot for Overall Survival by Pooled Dose Level



Conclusions

LB2102 demonstrated a favorable safety profile across 6 dose levels in 20 subjects with relapsed/refractory SCLC or LCNEC

- No DLTs
- CRS and ICANS are manageable

Encouraging anti-tumor activity was observed at Dose Levels ≥ 3 ($2.0\text{--}16 \times 10^6$ CAR+ T cells/kg)

- Objective Response Rate of 28.6% and Disease Control Rate of 78.6%
- At median follow-up 17.6 months, the median DOR was 6.5 months with ongoing responses
- mPFS was 3.8 months and median Overall Survival was 10.5 months

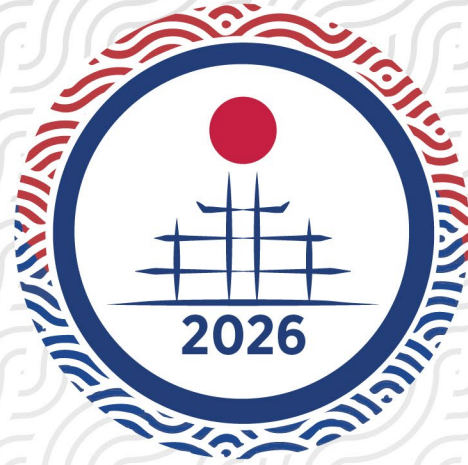
Durable responses and survival outcomes support further investigation

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- Ben Creelan MD (Moffitt Cancer Center, Tampa, FL)
- Reinhold Munker MD (Markey Cancer Center, Lexington, KY)
- Ayman Qasrawi MD (Markey Cancer Center, Lexington, KY)



Thank You.●