Abstract #8100: Serplulimab vs. placebo combined with chemotherapy as first-line treatment for extensive-stage small-cell lung cancer: Extended follow-up results and patient-reported outcomes from the international phase 3 ASTRUM-005 study

Ying Cheng[1], Liang Han[2], Lin Wu[3], Jun Chen[4], Hongmei Sun[5], Guilan Wen[6], Yinghua Ji[7], Anastasia Zimina[8], Jianhua Shi[9], Zhijie Pan[10], Jinsheng Shi[11], Xicheng Wang[12], Yuansong Bai[13], Tamar Melkadze[14], Yueyin Pan[15], Xuhong Min[16], Maksym Viguro[17], Jing Li[18], Alex Alika[18], Qingyu Wang[18], Jun Zhu[18], ASTRUM-005 Study Group

[1]Jilin Cancer Hospital, Changchun, China; [2]Xuzhou Central Hospital, Xuzhou, China; [3]Hunan Cancer Hospital, the Affiliated Cancer Hospital of Xiangya School of Medicine, Central South University, Changsha, China; [4]Tianjin Medical University General Hospital, Tianjin, China; [5]Jiamusi Cancer Hospital, Jiamusi, China; [6]The First Affiliated Hospital of Nanchang University, Nanchang, China; [7]The First Affiliated Hospital of Xinxiang Medical University, Xinxiang, China; [8]Budgetary Healthcare Institution of Omsk Region "Clinical Oncology Dispensary", Omsk, Russia; [9]Linyi Cancer Hospital, Linyi, China; [10]The First Affiliated Hospital of Zhejiang University School of Medicine, Hangzhou, China; [11]Cangzhou People's Hospital, Cangzhou, China; [12]The First Affiliated Hospital of Guangdong Pharmaceutical University, Guangzhou, China; [13]China-Japan Union Hospital of Jilin University, Changchun, China; [14]Acad. Fridon Todua Medical Center–Research Institute of Clinical Medicine, Tbilisi, Georgia; [15]Anhui Provincial Hospital, Hefei, China; [16]Anhui Chest Hospital, Hefei, China; [17]Medical Center "Mriya Med-Service", Kryvyi Rih, Ukraine; [18]Shanghai Henlius Biotech, Inc., Shanghai, China

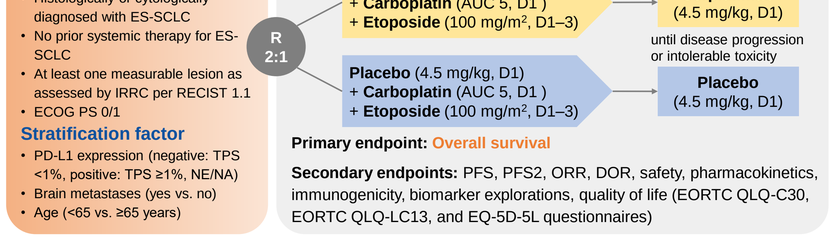
Background

- Anti-PD-L1 plus chemotherapy has become the standard first-line therapy for extensive-stage small-cell lung cancer (ES-SCLC). However, benefits in overall survival (OS) are still modest (improvement in median OS, 2.0–2.5 months).[1–3]
- ASTRUM-005 was an international phase 3 trial comparing the efficacy and safety of serplulimab vs. placebo, combined with chemotherapy, as first-line treatment for ES-SCLC. Interim analysis showed a 4.5-month improvement in median OS in serplulimab-chemotherapy group, making serplulimab the first approved PD-1 inhibitor for ES-SCLC.[4] Continuing improvements were seen in all efficacy endpoints in an updated analysis reported at ESMO Asia Congress 2022.
- Here we present the updated efficacy with extended follow-up and patient-reported outcomes.

Methods

- This randomized, double-blind, phase 3 trial (Figure 1) screened patients at 114 hospital sites in 6 countries. Detailed methods have been reported previously.[4]

Figure 1. Study design



AUC, area under curve; D, day; DOR, duration of response; ECOG PS, Eastern Cooperative Oncology Group performance status; ES-SCLC, extensive-stage small-cell lung cancer; IRRC, independent radiology review committee; IV, intravenous infusion; NA, not available; NE, not evaluable; ORR, objective response rate; PFS, progression-free survival; PD-L1, programmed death ligand-1; Q3W, every 3 weeks; R, randomization; RECIST, Response Evaluation Criteria in Solid Tumors; TPS, tumor proportion score.

Results

- By the data cutoff of June 13, 2023, the median follow-up duration was 31.6 months. 585 patients were enrolled and randomized to the serplulimab-chemotherapy group (n = 389) and the placebo-chemotherapy group (n = 196). 31.5% of patients were non-Asian (all White).
- Baseline demographics and characteristics of each group have been reported previously.[4]

Table 1. Updated secondary efficacy endpoints

Endpoints	Serplulimab-chemotherapy (n=389)	Placebo-chemotherapy (n=196)
Median PFS by IRRC, mo (95% CI)	5.8 (5.6–6.9)	4.3 (4.2–4.4)
Hazard ratio (95% CI)	0.46 (0.38–0.57)	
Confirmed ORR by IRRC, % (95% CI)	68.9 (64.0–73.5)	58.7 (51.4–65.6)
Complete response, n (%)	6 (1.5)	0
Partial response, n (%)	262 (67.4)	115 (58.7)
Median DOR by IRRC, mo (95% CI)	6.8 (5.5–7.9)	4.2 (3.1–4.2)

References

1. Liu SV, *et al.* ***J Clin Oncol*** **2021**;39(6):619–630.
2. Paz-Ares L, *et al.* ***ESMO Open*** **2022**;7(2):100408.
3. Wang J, *et al.* ***Lancet Oncol*** **2022**;23(6):739–747.
4. Cheng Y, *et al.* ***JAMA*** **2022**;328(12):1223–1232.

Correspondence: Professor Ying Cheng; E-mail: jl.cheng@163.com

The survival benefits brought by the addition of serplulimab were maintained as the first-line therapy of ES-SCLC. PROs were not adversely impacted, and pain in other parts was significantly improved.

Efficacy

Figure 2. Updated overall survival in overall population (A) and non-Asian (all White) patients (B)

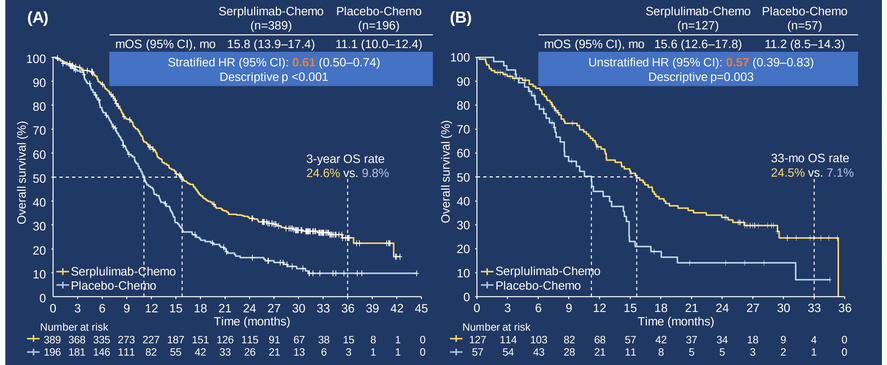
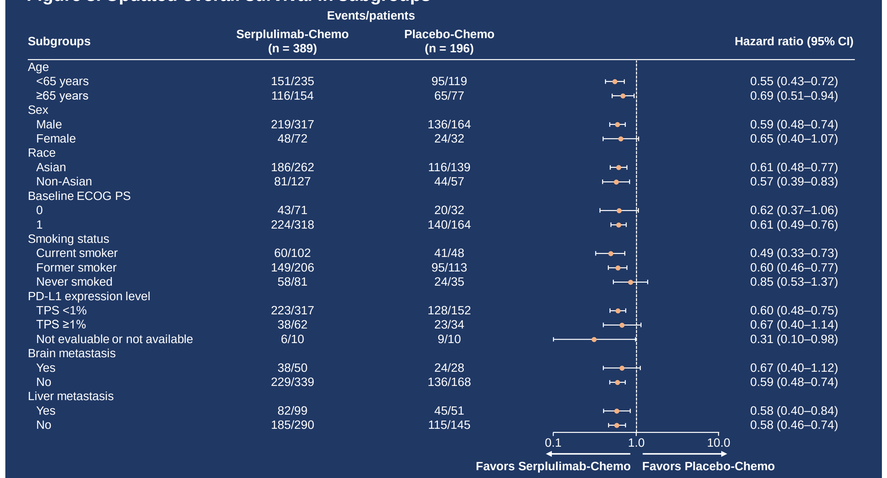


Figure 3. Updated overall survival in subgroups



Chemo, chemotherapy; CI, confidence interval; ECOG PS, Eastern Cooperative Oncology Group performance status; ES-SCLC, extensive-stage small-cell lung cancer; HR, hazard ratio; m, median; mo, month; OS, overall survival; PD-L1, programmed death ligand-1; PROs, patient-reported outcomes; TPS, tumor proportion score.

Outcomes in non-Asian patients (all White) may serve as a proof of concept for the ASTRIDE bridging trial currently accruing patients in the United States (NCT05468489).

Patient-reported outcomes of quality of life (data cutoff: June 13, 2022)

- By-visit longitudinal changes in all domains of the three questionnaires (EORTC QLQ-C30, EORTC QLQ-LC13, and EQ-5D-5L) were comparable between treatment groups.
- Least square mean changes from baseline to week 18 in QLQ-C30 functional and symptom domains, QLQ-LC13 symptom domains, and EQ-5D-5L VAS were similar and generally improved in both groups (Figure 4). More pronounced and persistent amelioration was observed in "pain in other parts" symptom domain for the serplulimab-chemotherapy group (Figure 4, Table 2).
- Time to deterioration was similar between treatment groups (Table 3).

Figure 4. Change from baseline to Week 18 in functional and symptom domains

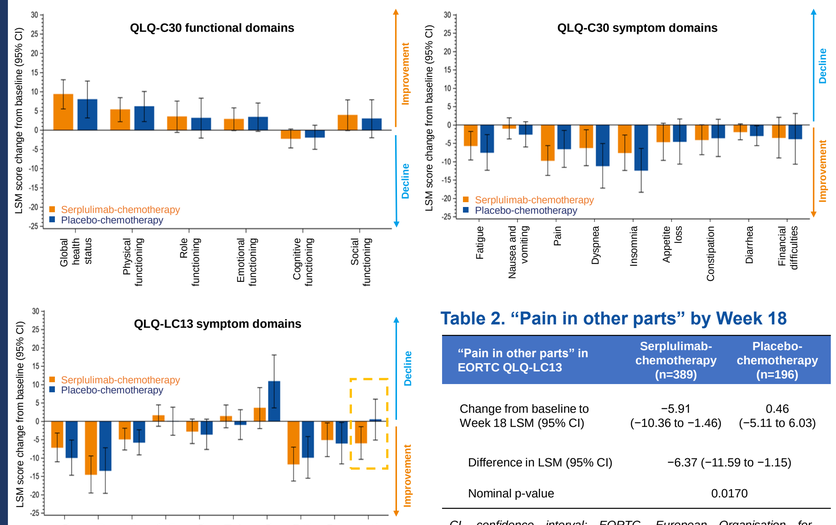


Table 2. "Pain in other parts" by Week 18

"Pain in other parts" in EORTC QLQ-LC13	Serplulimab-chemotherapy (n=389)	Placebo-chemotherapy (n=196)
Change from baseline to Week 18 LSM (95% CI)	−5.91 (−10.36 to −1.46)	0.46 (−5.11 to 6.03)
Difference in LSM (95% CI)	−6.37 (−11.59 to −1.15)	
Nominal p-value	0.0170	

CI, confidence interval; EORTC, European Organisation for Research and Treatment of Cancer; EQ-5D-5L, European Quality of Life-5 Dimension-5 Level; LSM, least square mean; QLQ-C30, Quality of Life Questionnaire Core 30; QLQ-LC13, Quality of Life Questionnaire-Lung Cancer 13.

Table 3. Time to deterioration

Median time to deterioration	Serplulimab-chemotherapy (n=389)	Placebo-chemotherapy (n=196)
Global health status/quality of life, mo (95% CI)	not reached (26.8–NE)	not reached (NE–NE)
Hazard ratio (95% CI)	0.90 (0.59–1.39)	
Physical functioning, mo (95% CI)	not reached (NE–NE)	not reached (NE–NE)
Hazard ratio (95% CI)	1.01 (0.61–1.65)	
Role functioning, mo (95% CI)	not reached (26.8–NE)	not reached (NE–NE)
Hazard ratio (95% CI)	1.17 (0.74–1.87)	

CI, confidence interval; mo, month; NE, not evaluable.

Acknowledgments and Disclosures

- The authors would like to acknowledge the participants in this study and their families, the investigators and staff at all clinical sites and the members of the Independent Data Monitoring Committee.
- This study was funded by Shanghai Henlius Biotech, Inc. Editorial support was provided by Shiqi Zhong and Chen Hu from Henlius Biotech, Inc.
- Jing Li, Alex Alika, Qingyu Wang, and Jun Zhu are employees of Shanghai Henlius Biotech, Inc.

2024 American Society of Clinical Oncology (ASCO) Annual Meeting, May 31 – June 4, 2024