Overall survival of adebrelimab plus chemotherapy and sequential thoracic radiotherapy as first-line treatment for extensive-stage small cell lung cancer.

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Background: The phase 3 trial (CAPSTONE-1) showed that adebrelimab (PD-L1 antibody) combined with first-line chemotherapy could prolong overall survival (OS) in patients (pts) with extensive-stage small cell lung cancer (ES-SCLC). Previous studies have shown that radiotherapy can enhance the immunogenicity of tumors, indicating the great potential of combining radiotherapy with immunotherapy. The purpose of this study was to explore the efficacy and safety of adebrelimab combined with chemotherapy and sequential thoracic radiotherapy (TRT) as first-line therapy for ES-SCLC. **Methods:** Key inclusion factors were 18-75 years old, histologically or cytologically confirmed ES-SCLC, ECOG performance status 0-1, no previous systematic treatment. Pts received 4~6 cycles of adebrelimab (20mg/kg, D1, q3w) combined with EP/EC (etoposide, 100mg/m^2, D1-3, q3w and cisplatin, 75mg/m^2, D1, q3w or carboplatin, AUC = 5, D1, q3w). Pts with response sequentially received adebrelimab combined with consolidate TRT (≥30 Gy in 10 fractions or ≥50 Gy in 25 fractions, involved-field irradiation). Pts then entered the maintenance treatment stage with adebrelimab until disease progression or intolerable side effects. The primary endpoint was OS. The secondary endpoints included objective response rate (ORR), disease control rate (DCR), progression-free survival (PFS) and safety. **Results:** From October 2020 to April 2023, 67 pts with ES-SCLC were enrolled. Most patients were male (83.6%), current or former smokers (65.7%) with an ECOG performance status of 1 (95.5%). 22 (32.8%) patients were diagnosed with brain metastasis and 21 (31.3%) patients had liver metastasis at baseline. 45 patients received sequential TRT as planned. All patients were included in the safety and efficacy analysis population. At data cutoff (December 22, 2023), the median follow-up duration was 17.7 months. The median OS was 21.4 months (95% CI: 17.2—not reached months). 1-year and 2-year OS rate were 74.1% (95% CI: 63.6-86.4%) and 39.7% (95% CI: 25.5-61.9%). The median PFS was 10.1 months (95% CI: 6.9—15.5 months). The confirmed ORR was 71.6% (95% CI: 59.3-82.0%) and DCR was 89.6% (95% CI: 79.7-95.7%). The most common grade 3 or higher treatment-related adverse events included neutrophil count decreased (41.8%), white blood cell count decreased (19.4%) and lymphocyte count decreased (13.4%). No unexpected adverse events were observed. **Conclusions:** Adebrelimab plus chemotherapy and sequential TRT as first-line therapy for ES-SCLC showed promising efficacy and acceptable safety. Clinical trial information: NCT04562337. Research Sponsor: Jiangsu Hengrui Pharmaceuticals Co., Ltd.