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Real-world outcomes with atezolizumab versus durvalumab plus chemotherapy for extensive-stage small cell lung cancer: A TriNetX propensity-matched analysis

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BACKGROUND

- **First line treatment** for extensive-stage small cell lung cancer (ES-SCLC) is platinum-etoposide plus an immune checkpoint inhibitor (ICI), **either atezolizumab or durvalumab.**
- No **head-to-head** randomized trials have compared these regimens
- **Goal:** evaluate **real-world outcomes** with these ICIs using a large multi-institutional database

METHODS

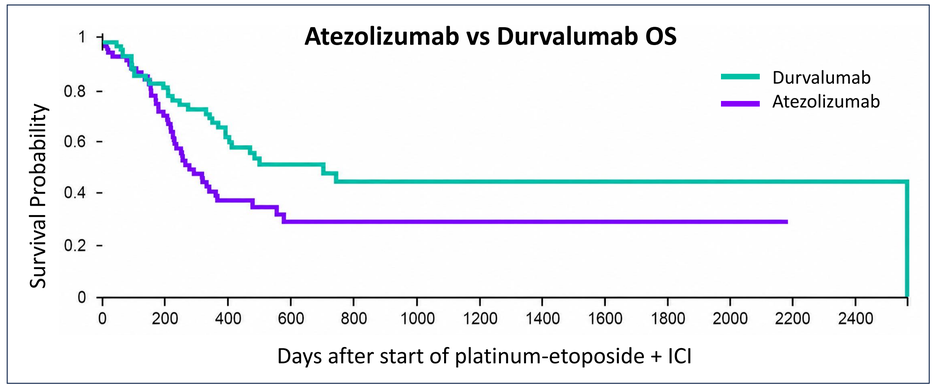
- **Retrospective cohort** study using the TriNetX Global Collaborative Network
- **Inclusion:** Adults with ES-SCLC treated with platinum-etoposide + **atezolizumab or durvalumab**
- Cohorts matched 1:1 using **propensity scores** based on age, sex, race, tobacco use, and comorbidities (CKD, CHF, MI, stroke, etc.)
- Primary outcomes: **overall survival (OS)** & **real-world progression-free survival (rwPFS)**, defined as time to second-line therapy or death
- Survival analyzed via **Kaplan-Meier** method and **cox proportional hazards** models
- Secondary outcomes: **immune-related adverse events (irAEs)** and **hospitalization rates,** evaluated by **z-test**

RESULTS

Outcomes	Atezolizumab	Durvalumab	Effect Estimate
Patients (n)	69	69	
Median F/U (months)	8.6	13.4	
Median OS (months)	9.1	23.2	HR 0.58 (95% CI 0.47–0.93) **p=0.021**
Median rwPFS (months)	6.7	8.6	HR 0.72 (95% CI 0.47–1.11) **p=0.14**

Table 1. Outcomes in Propensity-Matched Cohort

Durvalumab-based therapy was associated with **longer OS** compared to Atezolizumab in this propensity matched real world cohort



RESULTS

- **750 eligible** patients (677 atezolizumab, 73 durvalumab)
- **69 matched pairs** identified after matching
- **Atezolizumab** was associated with **higher hematologic adverse events** (35 vs 22 events; p=0.025) and trended toward **increased hospitalizations** (34 vs 24; p=0.085)
- **No significant difference in rwPFS** was observed

Limitations

- These results should be regarded as **hypothesis-generating**
- Shorter **follow-up duration** in durvalumab cohort
- **Observational** study design
- Potential residual **confounding**
- Limited **sample size**
- **Future:** These findings underscore the need for **additional comparative effectiveness research** to clarify optimal immunotherapy selection in ES-SCLC

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