



TRIMPACT: Early Outcomes of First Line Atezolizumab in Real-World Stage IV NSCLC with PD-L1 ≥50%

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BACKGROUND & OBJECTIVE

Unmet need

Real-world evidence on the early efficacy and safety of first-line atezolizumab remains limited, especially in people with high tumour burden and comorbidities.

Objective

To evaluate early efficacy and safety of first-line atezolizumab monotherapy in a real-world cohort of people with stage IV NSCLC and PD-L1 ≥ 50%.

METHODS



Design

Prospective, multicenter, real-world study



Setting

20 tertiary centers in Türkiye



Population

Stage IV NSCLC · PD-L1 ≥ 50% · no EGFR/ALK mutations · received atezolizumab monotherapy as first-line



Endpoints

Efficacy: ORR, DCR, OS, PD
Safety: AEs, SAEs, irAEs



Data cut-off

Early analysis (mean follow-up: 3 months)

BASELINE CHARACTERISTICS (N = 80)

Age, median (range)	67 (41–83) years
Male, n (%)	74 (92.5%)
Smoking history, n (%)	74 (92.3%)
ECOG PS 0/1/2, n (%)	18 (22.5%) / 56 (70.0%) / 6 (7.5%)
De novo metastatic disease	55 (68.8%)
Squamous cell carcinoma	37 (46.3%)
Adenocarcinoma	34 (42.5%)
Other histology	9 (11.2%)
PD-L1 TPS, median (IQR)	75% (60–90%)
Ki-67 ≥ 50%, n (%)	47 (58.8%)
TP53 mutation, n (%)	28 (35.3%)
KRAS mutation, n (%)	18 (23.0%)

Metastatic sites, n (%)

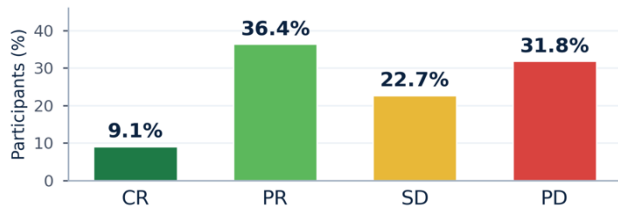
Brain metastasis	19 (24.1%)
Bone metastasis	29 (36.7%)
Liver metastasis	22 (27.8%)
Lung metastasis	60 (75.0%)
Other sites	18 (22.5%)

Comorbidities, n (%)

Any comorbidity	53 (67.1%)
Cardiovascular disease	38 (71.7% of comorbid)

Substantial comorbidity burden and high metastatic load, reflecting clinical practice.

EFFICACY — BEST OVERALL RESPONSE



ORR (CR+PR) **45.5%** DCR (CR+PR+SD) **68.2%**

Figure 1. Best overall response at month 3 (RECIST 1.1).

SYMPTOM IMPROVEMENT & ECOG PS

- Cough: improved (p = 0.46)
- Hemoptysis: improved (p = 0.03; statistically significant)
- Fatigue: improved (p = 0.08)
- ECOG performance status stable from baseline to month 3 in the majority (p = 0.417)

OVERALL SURVIVAL

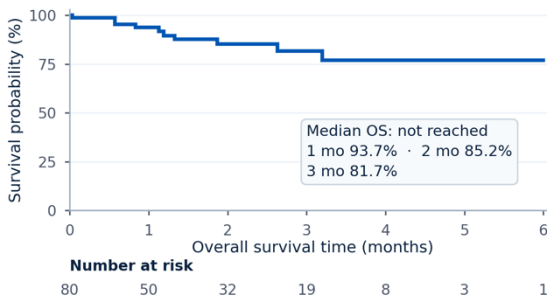


Figure 2. Kaplan-Meier estimate of overall survival (N = 80).

COMPARISON WITH IMpower110

	TRIMPACT (real-world)	IMpower110 atezolizumab
ORR	45.5%	38.3%
DCR	68.2%	Not reported
Median OS	Not reached	20.2 months
6-month OS	86.3%*	76.5%

***6-month OS is a landmark estimate in participants with ≥ 6 months of follow-up.**

Early outcomes appear consistent with pivotal trial results, despite a higher comorbidity burden and brain metastasis rate.

IMpower110: TC3/IC3 wild-type population. * TRIMPACT mean follow-up 3 months (3-month OS 81.7%).

SAFETY & TOLERABILITY

Still on treatment	Disease progressed	Discontinued due to death
61 (76.3%)	9 (11.0%)	10 (12.5%)



No immune-related toxicities reported in this early analysis

Common AEs (any grade): fatigue · cough · decreased appetite · rash — mostly grade 1–2 and manageable

Short follow-up may underestimate late-onset immune-related toxicities.

CLINICAL INTERPRETATION

- High tumour burden: brain 24.1%, bone 36.7%, Ki-67 ≥ 50% 58.8%.
- Meaningful early antitumour activity.
- Low SAE rate, no immune-related events in this early period.

TRIMPACT supports the real-world use of atezolizumab as a first-line option in PD-L1 ≥ 50% NSCLC.

CONCLUSIONS

- First-line atezolizumab monotherapy provides promising early efficacy in real-world stage IV NSCLC with PD-L1 ≥ 50%.
- Treatment is well tolerated, with a low incidence of serious adverse events and no immune-related toxicities in the early follow-up.
- Real-world participants had substantial comorbidity burden and high metastatic load, reflecting clinical practice.
- Response rates remained high despite brain (24.1%) and liver (27.8%) metastases, both negative prognostic factors in immunotherapy.
- Longer follow-up is needed to evaluate survival outcomes and late-onset immune-related adverse events.

References: 1. Herbst RS, et al. N Engl J Med. 2020;383:1328–1339 (IMpower110). 2. Jassem J, et al. J Thorac Oncol. 2021;16:1872–1882 (IMpower10 updated OS analysis).

Abbreviations: AE, adverse event; ALK, anaplastic lymphoma kinase; CR, complete response; DCR, disease control rate; ECOG PS, Eastern Cooperative Oncology Group performance status; EGFR, epidermal growth factor receptor; IQR, interquartile range; irAE, immune-related adverse event; NSCLC, non-small cell lung cancer; ORR, objective response rate; OS, overall survival; PD, progressive disease; PD-L1, programmed death-ligand 1; PR, partial response; RECIST, Response Evaluation Criteria in Solid Tumours; SAE, serious adverse event; SD, stable disease; TPS, tumour proportion score.

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