Real world effectiveness of immune checkpoint inhibitors + chemotherapy (ICI+CT) versus ICI monotherapy (ICI) In untreated locally advanced/metastatic non-small cell lung cancer (NSCLC): a targeted literature review

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ABSTRACT

Objectives: In Europe, ICIs are commonly recommended for untreated locally advanced/metastatic NSCLC with ≥50% programmed death-ligand 1 (PD-L1) expression, based on randomized controlled trials (RCTs). However, real-world evidence (RWE) suggests some patients benefit more from ICI+CT. We aimed to (1) compare ICI+CT versus ICI outcomes in RWE, (2) identify patient subgroups who may benefit from ICI+CT or ICI, and (3) compare RWE outcomes with RCTs.

Methods: A protocol-driven targeted literature review was conducted in August 2024 to identify RWE on overall survival (OS), progression-free survival (PFS), overall response rate (ORR), and adverse events (AEs). Searches in Embase and MEDLINE were conducted, and relevant abstracts were screened by a reviewer. Articles were selected according to their suitability to answer the research questions. Relevant RCTs were identified from a separate systematic literature review.

Results: After screening 193 abstracts, 17 RWE studies were included. Clinical outcomes generally favoured ICI+CT over ICI (median OS range, 15-33.7 months versus 13-19.8 months, respectively; median PFS, 7-12.4 months versus 4.4-11.3 months; ORR, 59.8%-68.7% versus 30.3%-47.1%). ICI+CT was associated with more grade ≥3 AEs versus ICI (31.3% versus 26.8%). Subgroups trending towards ICI+CT benefit included women, patients with PD-L1 ≥50% (versus PD-L1 ≥90%), and ECOG performance status 0-1. Subgroups trending towards an ICI benefit included men, and patients with liver or brain metastases. OS, PFS, and ORR were similar in RWE and RCTs for ICI+CT, but for ICI alone, OS, PFS, ORR, and grade ≥3 AEs were generally higher in RCTs than in RWE.

Conclusion: OS and PFS generally favoured ICI+CT in the identified RWE studies. However, more research is needed to confirm patient subgroups benefiting from ICI+CT or ICI alone. Reported outcomes appear favourable for patients receiving ICI in RCTs than in RWE studies; this discrepancy needs to be understood so that clinicians can make informed treatment decisions.