Clinical outcomes of second-line and beyond (2L+) treatments (txs) in locally advanced or metastatic non-small cell lung cancer (aNSCLC): a systematic literature review (SLR)

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ABSTRACT

Objectives: This SLR describes the outcomes of chemotherapy (CT), immunotherapy (IO) and targeted therapy (TT) in 2L+ aNSCLC.

Methods: English language publications (2001 – '22) were searched in Embase, MEDLINE, and Cochrane Library; non-indexed conferences and specific trial registries were manually searched (2020 – '22). For IO-based interventions, efficacy, safety and reported health-related quality of life (HRQoL) outcomes were extracted.

Results: Of 14 IO studies identified, 11 (10 monotherapies [mono]) compared IO vs CT, one compared IO to IO, and two compared IO ± TT vs CT±TT. IO and TT were administered as monotherapy or in combination with CT. Prior tx with docetaxel or immune checkpoint inhibitors was a common exclusion criterion. Median overall survival (OS) and progression-free survival (PFS) in months ranged between 9.2–17.8 (IO) vs 6.0–11.9 (CT), and 2.3–4.3 (IO) vs 2.6–4.4 (CT), respectively. All IOs demonstrated significant improvement in OS vs CTs, except bavituximab and avelumab. Three studies reported significant improvement in PFS with IO. In the IO vs IO study, the addition of CT to bavituximab demonstrated numerical improvement in OS and PFS. One study comparing IO ± TT vs CT±TT reported a significant improvement in OS but a decrease in PFS with ramucirumab-pembrolizumab vs CT ± ramucirumab. Another study found significant improvement in OS with durvalumab vs standard of care. Across studies, the rates of any grade adverse events were comparable. Acknowledging differences in HRQoL instrumentation and data collection across the 6 studies, nivolumab showed improvement on the EuroQol scale and average symptom burden index compared to CT. Tislelizumab and atezolizumab showed marked improvement per the Core Quality of Life Questionnaire and lung cancer module compared to CT.

Conclusions: Consistent with the tx paradigm, IO mono significantly improved median OS and HRQoL. Nivolumab, tislelizumab, and sintilimab also significantly improved PFS.