Clinical outcomes of first-line (1L) 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 outcomes of chemotherapy(CT), immunotherapy(IO) and anti-angiogenic therapy(AT) in 1L aNSCLC.

Methods: Publications (2010–'22) were searched in Embase, MEDLINE, and Cochrane Library; non-indexed conferences and specific trial registries were searched (2020–'22). Building on Pilkington 2015 (1L aNSCLC SLR, 2001–'09), efficacy outcomes were extracted by intent-to-treat(ITT) and subgroups.

Results: Of 35 studies, 31 compared IO vs CT, two IO vs IO, and two IO ± AT vs AT. Most trials recruited patients with non-oncogenic aNSCLC; for trials including patients with genomic alterations, wildtype results were used. IO and AT were often evaluated in combo with CT. Compared to CT, most IO combos reported overall survival(OS) and progression-free survival(PFS) hazard ratios(HRs) and 95% confidence intervals(95%CIs) < 1 in the ITT; median OS and PFS (months) ranged between 5.0–34.5(IO) vs 6.0–21.9(CT), and 2.9–24.5(IO) vs 4.0–9.9(CT), respectively. For IO monotherapy, OS and PFS ranged between 10.3–23.4(IO) vs 9.2–14.9(CT), and 4.2–7.7(IO) vs 4.0–6.8(CT), respectively. For IO vs IO, the addition of CT to IO-doublet resulted in better OS and PFS, while pembrolizumab-ipilimumab was comparable to pembrolizumab monotherapy. Among IO ± AT vs AT, PFS improved with nivolumab-bevacizumab-CT and atezolizumab-bevacizumab-CT. Results for PD-L1 ≥ 50% were: compared to CT, most IO combos reported PFS HRs and 95%CIs < 1; median OS and PFS (months) ranged between 15.2–36.6(IO) vs 10.1–26.9(CT), and 6.4–12.9(IO) vs 4.5–6.5(CT), respectively. For IO monotherapy, OS and PFS ranged between 15.9–26.3(IO) vs 12.2–14.7(CT), and 5.4–8.3(IO) vs 5.0–6.5(CT), respectively. For IO vs IO, addition of CT to IO-doublet improved PFS. Among IO ± AT vs AT, PFS improved upon addition of atezolizumab to bevacizumab-CT.

Conclusions: Combinations of IO and CT ± AT demonstrated improved median OS and PFS in the ITT and in PD-L1 ≥ 50%.