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Abstract no.:

Metastasis-directed therapy (MDT) for Oligometastatic Renal Cell Carcinoma (RCC): A Systematic Review and Meta-Analysis

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Objective: The KEYNOTE 564 study showed that adjuvant pembrolizumab after nephrectomy improved disease-free survival and overall survival. One of the study's inclusion criteria was M1 NED - no evidence of disease after complete metastasectomy. This study aims to summarize the evidence on the efficacy and safety of MDT in oligometastatic or oligoprogressive RCC.

Patients and methods: The study protocol was registered in PROSPERO (registration number: CRD42024566232). MEDLINE, Embase, and Cochrane library were searched for studies from inception to July 2024, using equivalent combinations of "metastatic-directed therapy", AND ("oligometastatic RCC" OR "oligoprogressive RCC") in accordance with PRISMA. Data pertaining to study characteristics, therapy details, and complications were extracted from each study. The efficacy and safety outcomes of MDT were reviewed. Random effect meta-analysis was performed. Risk of Bias (RoB) analysis was performed with the ROBINS-I tool.

Results: The systematic review included 13 studies, including a total of 2078 patients. Meta Analysis showed that for patients receiving MDT, the pooled median progression free survival (PFS) was 20.0 months (95% CI: 9.7 - 30.2 months); the pooled median overall survival (OS) was 49.3 months (95% CI = 41.7 - 56.9 months). The CTCAE (Common Terminology Criteria for Adverse Events) grade 3 or above toxicity ranged from 0 to 26%. There were only two 30-day mortality (both from lung metastasectomy), out of the 9 studies (including 596 patients) that reported mortality rates.

Conclusion: MDT offered favourable PFS and OS in oligometastatic RCC with an acceptable toxicity profile, potentially allowing delayed initiation of systemic therapy.