Percutaneous ablation for adrenal metastases: a systematic review and meta-analysis

Zhang, JH¹; Fu, YF²; Wang, JY³.

Review question / Objective: We conducted a meta-analysis to assess the clinical efficacy, safety, and long-term outcomes of imaging-guided ablation for adrenal metastases. Condition being studied: The adrenal metastases have been widely treated by imaging-guided ablation methods. However, these outcome results may be influenced by the different guidance methods, different ablation methods, and different primary tumors. Therefore, a comprehensive evaluation is needed to confirm the clinical efficacy and safety of imaging-guided ablation for adrenal metastases.

Information sources: The PubMed, Embase, and Wanfang databases are searched to identify relevant studies.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 07 July 2022 and was last updated on 07 July 2022 (registration number INPLASY202270032).
confirm the clinical efficacy and safety of imaging-guided ablation for adrenal metastases.

METHODS

Participant or population: Patients with adrenal metastasis.

Intervention: Imaging-guided ablation.

Comparator: None.

Study designs to be included: (a) Studies which focused on computed tomography (CT) or ultrasound (US) guided PA for AM; (b) One study should contain more than 20 patients; (c) One study should contain at least one of the following endpoints: technical success rate of PA, local hemorrhage rate, pneumothorax rate, hypertension crisis rate, local recurrence rate, 1-year overall survival (OS) rate, and 3-year OS rate; (d) Languages: not limited.

Eligibility criteria: Inclusion criteria: (a) Studies which focused on computed tomography (CT) or ultrasound (US) guided PA for AM; (b) One study should contain more than 20 patients; (c) One study should contain at least one of the following endpoints: technical success rate of PA, local hemorrhage rate, pneumothorax rate, hypertension crisis rate, local recurrence rate, 1-year overall survival (OS) rate, and 3-year OS rate; (d) Languages: not limited. Exclusion criteria: (a) One study contained multiple guidance methods; (b) One study contained multiple PA methods; (c) One study which used chemical ablation; (d) case reports, letters, and reviews.

Information sources: The PubMed, Embase, and Wanfang databases are searched to identify relevant studies.

Main outcome(s): Technical success rate.

Quality assessment / Risk of bias analysis: Quality assessment is assessed using the Newcastle-Ottawa scale.

Strategy of data synthesis: Owing to presumed heterogeneity, a random-effects model is used to calculate the pooled results, with weighting applied according to the inverse variance of the included studies, where heterogeneity is assumed.

Subgroup analysis: Subgroup analyses are performed based on different guidance methods, different ablation methods, and different primary cancer types.

Sensitivity analysis: None.

Country(ies) involved: China.

Keywords: adrenal, metastasis, ablation.

Contributions of each author: Author 1 - Jian-Hua Zhang. Author 2 - Yu-Fei Fu. Author 3 - Jing-Ya Wang.