INPLASY PROTOCOL

To cite: Fang et al. Bevacizumab combined with pemetrexed plus carboplatin or cisplatin in the treatment of malignant pleural effusion of lung cancer : A meta-analysis of randomized controlled trials. Inplasy protocol 202240096. doi: 10.37766/inplasy2022.4.0096

Received: 16 April 2022

Published: 17 April 2022

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Support: **High-level talents project.**

Review Stage at time of this submission: **Data analysis.**

Conflicts of interest:
None declared.

Bevacizumab combined with pemetrexed plus carboplatin or cisplatin in the treatment of malignant pleural effusion of lung cancer : A meta-analysis of randomized controlled trials

Fang, M[1]; Guo, YR[2]; Yuan, Y[3]; Chen, JZ[4].

Review question / Objective: **To systematically evaluate the efficacy and safety of bevacizumab combined with pemetrexed plus carboplatin or cisplatin in the treatment of malignant pleural effusion of lung cancer,compared with chemotherapy alone. The included studies were randomized controlled trials.**
Condition being studied: **The CNKI, PubMed, Cochrane Library, Embase, Chinese Science and Technology Journal Database (VIP), and Wanfang Databases were searched for randomized controlled trials (RCTs) of bevacizumab combined with pemetrexed plus carboplatin or cisplatin in the treatment of malignant pleural effusion of lung cancer. The retrieval time is from the establishment of the database to February 2022. Two evaluators independently evaluated the quality of the literature included in the study, extracted the data and made statistical analysis through Revman 5.3 software.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 April 2022 and was last updated on 17 April 2022 (registration number INPLASY202240096).

INTRODUCTION

Review question / Objective: **To systematically evaluate the efficacy and safety of bevacizumab combined with pemetrexed plus carboplatin or cisplatin in the treatment of malignant pleural effusion of lung cancer, compared with chemotherapy alone. The included studies were randomized controlled trials.**

Condition being studied: **The CNKI, PubMed, Cochrane Library, Embase, Chinese Science and Technology Journal Database (VIP), and Wanfang Databases were searched for randomized controlled**

trials (RCTs) of bevacizumab combined with pemetrexed plus carboplatin or cisplatin in the treatment of malignant pleural effusion of lung cancer. The retrieval time is from the establishment of the database to February 2022. Two evaluators independently evaluated the quality of the literature included in the study, extracted the data and made statistical analysis through Revman 5.3 software.

METHODS

Participant or population: Patients with malignant pleural effusion of lung cancer.

Intervention: Bevacizumab combined with pemetrexed plus carboplatin or cisplatin.

Comparator: Pemetrexed plus carboplatin or cisplatin.

Study designs to be included: RCT.

Eligibility criteria: Non-small cell lung cancer with malignant pleural effusion was confirmed by pathological or cytological examination.

Information sources: he CNKI, PubMed, Cochrane Library, Embase, Chinese Science and Technology Journal Database (VIP), and Wanfang Databases.

Main outcome(s): Therapeutic effect of malignant pleural effusion.

Additional outcome(s): Myelosuppression, gastrointestinal reactions, fever, chest pain, bleeding and other adverse events.

Quality assessment / Risk of bias analysis: Cochrane Risk of Bias Tool.

Strategy of data synthesis: We used the Cochrane RevMan version 5.3 software (The Cochrane Collaboration, UK).to analyze the data.The results were reported as pooled as odds ratios(OR) with respective 95% confidence intervals (95% CI).Heterogeneity test was assessed with Cochran's Q test and I2 statistic.If the heterogeneity was not significant ($p>0.1$, $I2<50.0\%$), then the fixed-effect model can be performed, otherwise, the random effects model. We assessed the potential publication bias by funnel plots , Egger's test and Begg's test. All p values were two-sided, and $p<0.05$ was considered to manifest statistical significance.

Subgroup analysis: Subgroup analysis was performed based on pemetrexed plus carboplatin or cisplatin.

Sensitivity analysis: Sensitivity analysis assessed the impact of each study on the overall estimate by omitting one study at a time.

Language: English.

Country(ies) involved: China.

Keywords: Pleural Effusion, Malignant, Bevacizumab,lung cancer, Pemetrexed, carboplatin, Cisplatin, Meta analysis.

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