INPLASY PROTOCOL

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Predictive value of MEP1A in cancer prognosis: a protocol of systematic review and meta-analysis

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The authors report no conflicts of interest.

Review question / Objective: **What is the predictive value of MEP1A in the prognosis of different cancers?**
Condition being studied: **Cancer is the second leading cause of death in the world after cardiovascular disease, mainly due to the lack of early symptoms and early diagnosis, as well as the high recurrence rate after radical surgery and conventional treatment. But in fact, early cancer without metastasis can be cured as long as it is detected early. Nowadays, cancer is becoming the main cause of death. The detection of biomarkers can know the current biological process of the body, which may play a helping role in disease identification, early diagnosis and prevention, prognosis and monitoring in the treatment process. Therefore, the discovery and selection of valuable biomarkers have become an important hotspot of current research.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 02 October 2020 and was last updated on 02 October 2020 (registration number INPLASY2020100005).

INTRODUCTION

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treatment. But in fact, early cancer without metastasis can be cured as long as it is detected early. Nowadays, cancer is becoming the main cause of death. The detection of biomarkers can know the current biological process of the body, which may play a helping role in disease identification, early diagnosis and prevention, prognosis and monitoring in the treatment process. Therefore, the discovery and selection of valuable biomarkers have become an important hotspot of current research.

METHODS

Participant or population: Patients with common tumors which have been diagnosed by pathology.

Intervention: Patients with positive/high expression of MEP1A were considered as intervention group.

Comparator: Patients with negative/low expression of MEP1A were considered as control group.

Study designs to be included: Randomized controlled trials, cohort studies, case-control studies, or cross-sectional studies.

Eligibility criteria: Patients with common tumors which have been diagnosed by pathology. Patients with positive/high expression of MEP1A were considered as intervention group. Patients with negative/low expression of MEP1A were considered as control group. Randomized controlled trials, cohort studies, case-control studies, or cross-sectional studies. The following studies will be excluded, duplicate publications, review, comments, case reports, non-human study, uncontrolled study, or studies were not in English/Chinese; The data needed to be extracted in the study is incomplete.

Information sources: A comprehensive search was conducted on PubMed, Cochrane library and Web of Science Database using the combination of medical subject headings (MeSH) and free words. The retrieval time is up to September 21, 2020. The publication language is limited to Chinese and English without time restriction.

Main outcome(s): Overall survival (OS), progression-free survival (PFS), disease-free survival (DFS), recurrence-free survival (RFS), disease-specific survival (DSS).

Additional outcome(s): Correlations between MEP1A expression and clinicopathological features, such as tumor size, stage and metastasis.

Quality assessment / Risk of bias analysis: The quality assessment of included studies will be appraised using the Newcastle-Ottawa Scale (NOS) for the non-randomized controlled trials or the Cochrane's risk of bias tool for the randomized controlled trials. The above work would be carried out by two persons separately and the results checked by the same two persons. If there are some differences, they will be solved through discussion.

Strategy of data synthesis: The outcome measures will be calculated using hazard ratio (HR) or odds ratio (OR) for extracted dichotomous variable and mean difference (MD) for the continuous variables. When $p < 0.05$ (two-sided), the difference is statistically significant. Pooled estimates of survival outcomes and their 95% CIs will be presented in forest plots by fixed or random effect model. I^2 statistic is used to evaluate the heterogeneity between studies. When the I2 is less than 50%, it means that the statistical heterogeneity between studies is small, otherwise, it indicates that there is significant statistical heterogeneity which should be addressed or explained by further analyses.

Subgroup analysis: Based on tumor type, race and age of included population, and other factors that may affect the robustness of meta-analysis results.

Sensibility analysis: By excluding the low-quality study.

Country(ies) involved: China.

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Keywords: **MEP1A; cancer; prognosis; systematic review.**

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