

INPLASY PROTOCOL

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Review Stage at time of this submission: Piloting of the study selection process.

Conflicts of interest:
None declared.

MMP-2 genetic variants influence platinum-induced myelosuppression of cervical cancer: A protocol for systematic review

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Review question / Objective: Myelosuppression is one of the most common toxicity induced by chemotherapy or concurrent chemo-radiotherapy (CCRT) among patients with cervical cancer. The system review is designed to assess the efficacy of MMP-2 by combining the previous reports together.

Condition being studied: Cervical carcinoma has been one of the most common female carcinomas worldwide. It has been estimated that 604,127 new cervical carcinoma cases and 341,831 deaths were reported worldwide in 2020.¹ Treatments including concurrent chemo-radiotherapy (CCRT) and adjuvant chemotherapy may be effective, but is poorly tolerated in some patients.² Bone marrow suppression is one of the most common adverse effects of chemotherapy. Severe myelosuppression (WHO grade III-IV) with risks of secondary sepsis and other life-threatening complications. Severe chemotherapy-related toxicity may be caused by a conspiracy of internal factors and external factors.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 31 March 2022 and was last updated on 01 April 2022 (registration number INPLASY202230178).

INTRODUCTION

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METHODS

Participant or population: Patients with cervical cancer undergoing platinum-based therapy.

Intervention: MMP-2 genetic variant.

Comparator: Mutant carriers vs wild type carriers.

Study designs to be included: RCT, Cohort, cross-sectional studies, case-control studies.

Eligibility criteria: Myelosuppression induced by chemotherapy or concurrent chemo-radiotherapy (CCRT) among patients with cervical cancer. Myelosuppression induced by chemotherapy or concurrent chemoradiotherapy (CCRT) among patients with cervical cancer.

Information sources: Databases including Pubmed, Embase, the Cochrane Library, Wanfang, China National Knowledge Infrastructure (CNKI), VIP database, and Chinese Biomedical Databases (CBM) will be used to search the studies.

Main outcome(s): Toxicity: RR, OR and corresponding 95% CI were extracted if they were provided in the articles.

Quality assessment / Risk of bias analysis: Funnel plot was employed to display and visually spot the publication bias that may exist during pooling across the studies. As

funnel plot was unable to give a definite conclusion, non-parametric test (Begg's test) and parametric test (Egger's test) were also used in the study to detect the publication bias.

Strategy of data synthesis: As described above, the relationship between the mutation and long-term survival was measured by HR with 95% confidential interval (CI).

Subgroup analysis: According to the types of bone marrow depression, subgroup analysis will be made. Subgroup analysis will also be made accordant with the acupuncture methods.

Sensitivity analysis: Sensitivity analysis will be made to evaluate the robustness of the combined result as well as the origin of the heterogeneity.

Country(ies) involved: China.

Keywords: Cervical cancer; Myelosuppression; Systematic review.

Contributions of each author:
Author 1 - Kecheng Huang.