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INPLASY

Prognostic role of C-reactive protein in patients with endometrial cancer: a meta-analysis

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 07 October 2023 and was last updated on 07 October 2023.

INTRODUCTION

Review question / Objective The effect of C-reactive protein (CRP) on predicting prognostic outcome of endometrial cancer (EC) patients is widely investigated, but their findings are controversial. This meta-analysis was performed for exploring the association of CRP levels and with EC prognosis.

Condition being studied PubMed, Embase, Web of Science, and Cochrane Library databases were systematically searched between inception and September 07, 2023. The effect of CRP on predicting overall survival (OS) and disease-free survival (DFS) in EC patients was evaluated according to pooled hazard ratios (HRs) as well as 95% confidence intervals (CIs).

METHODS

Search strategy PubMed, Embase, Web of Science, and Cochrane Library databases were systematically searched from their inception till September 07, 2023 using the literature strategy as follows: (C reactive protein or C-reactive protein or CRP) and (endometrial cancer or endometrial carcinoma or endometrial neoplasm or endometrium carcinoma). Only English studies were eligible. Moreover, references in relevant publications were examined to obtain more potentially eligible studies.

Participant or population EC patients diagnosed pathologically.

Intervention Studies investigating the association between CRP level and EC prognosis and those

with available or calculable hazard ratios (HRs) together with 95% confidence intervals (CIs).

Comparator EC patients with low level of CRP.

Study designs to be included Cohort studies,including prospective and retrospective cohorts.

Eligibility criteria Studies were enrolled based on criteria below: (i) EC was diagnosed pathologically; (ii) studies investigating the association between CRP level and EC prognosis; (iii) those with available or calculable hazard ratios (HRs) together with 95% confidence intervals (CIs); (iv) studies with defined CRP threshold; and (v) English studies. Studies below were excluded: (i) case reports, reviews, conference abstracts, letters, and comments; (ii) those with overlapped patients; and (iii) animal studies.

Information sources PubMed, Embase, Web of Science, and Cochrane Library databases were systematically searched from their inception till September 07, 2023. Moreover, references in relevant publications were examined to obtain more potentially eligible studies.

Main outcome(s) Overall survival (OS) and disease-free survival (DFS) were our primary and secondary survival endpoints, separately.

Quality assessment / Risk of bias analysis Two researchers utilized the Newcastle-Ottawa Scale (NOS) for evaluating study quality and for cross-check. NOS evaluates study quality based on three points of view: selection, comparability and outcome, with the score of 0-9. Studies whose NOS scores are ≥ 6 are high-quality. Begg's test and Egger's linear regression test were used in examining possible publication bias.

Strategy of data synthesis The effect of CRP on OS and DFS prediction for EC patients was assessed based on pooled HRs and 95% CIs. I2 statistics and Cochran's Q test were adopted for assessing inter-study heterogeneities. Pooled estimates were determined by the fixed-effects model at I20.10. Or else, the random-effects model was applied.

Subgroup analysis Subgroup analyses were carried out according to different clinicopathological features for detecting the heterogeneity source.

Sensitivity analysis None.

Language restriction Studies published in English language.

Country(ies) involved China.

Keywords CRP; meta-analysis; survival; prognosis; biomarker.

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