International Platform of Registered Systematic Review and Meta-analysis Protocols

INPLASY

Prognostic and clinicopathological significance of fibrinogen-to-albumin ratio (FAR) in patients with breast cancer: a meta-analysis

INPLASY202470087
doi: 10.37766/inplasy2024.7.0087
Received: 22 July 2024
Published: 22 July 2024

Wang, ZW; Shen, XQ.

Corresponding author:
Xiaqing Shen

hzxq1234615@163.com

Author Affiliation:
Huzhou Central Hospital.

ADMINISTRATIVE INFORMATION

Support - None.

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

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202470087

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 22 July 2024 and was last updated on 22 July 2024.

INTRODUCTION

Review question / Objective Fibrinogen-to-albumin ratio (FAR) has been extensively analyzed for its significance in predicting breast cancer (BC) patient prognosis, but existing findings remain conflicting. Therefore, the present meta-analysis was conducted for identifying FAR's significance for forecasting BC prognosis.

Condition being studied We thoroughly searched databases PubMed, Embase, Web of Science, Cochrane Library, and CNKI till May 25, 2024. FAR's value for forecasting overall survival (OS) and disease-free survival (DFS) of BC was examined through computing combined hazard ratios (HRs) as well as 95% confidence intervals (CIs).

METHODS

Participant or population Breast cancer patients diagnosed pathologically.

Intervention Studies reported relation of FAR with BC patient prognosis and HRs as well as 95% CIs could be accessed or computed.

Comparator BC patients with normal level of FAR.

Study designs to be included Cohortstudies, including prospective and retrospectivecohorts.

Eligibility criteria The studies below were included: (1) the BC cases were enrolled as study objects; (2) studies reported relation of FAR with BC patient prognosis; (3) hazard ratios (HRs) as well as 95% confidence intervals (CIs) could be accessed or computed; and (4) a cut-off value of FAR was identify. Studies below were eliminated: (1) meeting abstracts, reviews, letters, comments, case reports; (2) animal studies; and (3) studies recruited overlapped patients. There was no limitation on publication language.

Information sources This work thoroughly searched PubMed, Embase, Web of Science,

Cochrane Library, and CNKI databases till May 25, 2024.

Main outcome(s) Overall survival (OS) was our primary survival endpoint, whereas disease-free survival (DFS) was out secondary survival endpoint.

Quality assessment / Risk of bias analysis The included study quality was evaluated via 2 separate researchers with Newcastle-Ottawa Scale (NOS). We performed Begg's funnel plot and Egger's test for evaluating publication bias.

Strategy of data synthesis FAR's significance for forecasting the BC OS and DFS was analyzed through computing combined HRs and 95%CIs. Inter-study heterogeneities were assessed through Cochrane's Q test and I2 statistics. An analysis of random-effects model should be used upon prominent heterogeneity ($I2>50\%$ and/or $p<0.10$); or else, we adopted the fixed-effects model.

Subgroup analysis We performed subgroup analyses stratified by country, sample size, threshold, threshold determination, together with survival analysis for exploring FAR's effect on predicting prognosis of diverse BC populations.

Sensitivity analysis This study also conducted sensitivity analysis for detecting the heterogeneity sources and assessing result stability.

Country(ies) involved China.

Keywords fibrinogen-to-albumin ratio; breast cancer; meta-analysis; evidence-based medicine; prognosis.

Contributions of each author
Author 1 - Zhanwei Wang.
Author 2 - Xiaqing Shen.