INPLASY PROTOCOL

To cite: Li et al. Frailty and long-term survival of ovarian cancer patients. Inplasy protocol 202290028. doi: 10.37766/inplasy2022.9.0028

Received: 07 September 2022

Published: 07 September 2022

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Support: **None.**

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

Conflicts of interest:
None declared.

Frailty and long-term survival of ovarian cancer patients

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Review question / Objective: **To evaluate the association between frailty and long-term survival of patients with ovarian cancer.**
Condition being studied: **Because the symptoms of OC tend to be non-specific and the effective screening methods for OC are still lacked, patients with OC are likely to be diagnosed at advanced stage, which may be an important reason for the poor prognosis of these patients.**
Eligibility criteria: **Reviews, preclinical studies, studies including non-OC patients, studies that did not evaluate frailty, or studies that did not report the survival outcomes were excluded. In addition, studies with follow-up duration within months were also excluded because we did not aim to evaluate the immediate influence of frailty on mortality of patients with OC.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 07 September 2022 and was last updated on 07 September 2022 (registration number INPLASY202290028).

INTRODUCTION

Review question / Objective: **To evaluate the association between frailty and long-term survival of patients with ovarian cancer.**

Rationale: **Many factors have been proposed to influence the prognosis of patients with OC, such as age, cancer stage, grade, histological type, and anticancer treatments etc. However, for some patients with OC, prognostic prediction remains difficult. Frailty refers to a state of age-related decline in biological reserve, decreased ability to maintain physiological balance and increased vulnerability to adverse health events. However, studies evaluating the correlation between frailty and survival of patients with OC showed inconsistent results. Therefore, we performed a systematical review and**

meta-analysis to comprehensively investigate the relationship between frailty and survival of patients with OC.

Condition being studied: Because the symptoms of OC tend to be non-specific and the effective screening methods for OC are still lacked, patients with OC are likely to be diagnosed at advanced stage, which may be an important reason for the poor prognosis of these patients.

METHODS

Search strategy: A combined search term was used, including (1) "frailty" OR "frail"; (2) "ovarian" OR "ovary"; and (3) "cancer" OR "carcinoma" OR "malignancy" OR "tumor" OR "neoplasm".

Participant or population: Adult patients with histologically confirmed diagnosis of OC.

Intervention: Patients with high frailty at admission.

Comparator: Patients with low or none frailty ast admission.

Study designs to be included: Cohort studies.

Eligibility criteria: Reviews, preclinical studies, studies including non-OC patients, studies that did not evaluate frailty, or studies that did not report the survival outcomes were excluded. In addition, studies with follow-up duration within months were also excluded because we did not aim to evaluate the immediate influence of frailty on mortality of patients with OC.

Information sources: PubMed, Embase, Cochrane's Library and Web of Science.

Main outcome(s): The primary outcome was overall survival (OS), and the secondary outcomes were progression-free survival (PFS).

Additional outcome(s): None.

Quality assessment / Risk of bias analysis: Two independent authors conducted literature search and analysis, data collection, and study quality assessment separately.

Strategy of data synthesis: The main objective was to determine the relative risks of OS and PFS of OC patients with and without frailty, which were presented as risk ratios (RRs) and the confidence intervals (CIs). A random-effect model with the DerSimonian & Laird approach was applied to pool the results after incorporating of possible between-study heterogeneity.

Subgroup analysis: Subgroup analyses were also performed to explore the influences of study characteristics on the outcome.

Sensitivity analysis: Influencing analyses by excluding one cohort at a time were performed to evaluate the stability of the results.

Language restriction: English.

Country(ies) involved: China.

Other relevant information: None.

Keywords: frailty; ovarian cancer; survival; meta-analysis.

Contributions of each author:
Author 1 - Kemin Li.
Author 2 - Rutie Yin.
Author 3 - Zhengyu Li.