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A systematic review of cancer-related cognitive impairment in cancer patients

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ADMINISTRATIVE INFORMATION

Support - No financial support.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY2024100067

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 15 October 2024 and was last updated on 15 October 2024.

INTRODUCTION

Review question / Objective The objective of this study was to systematically evaluate the factors affecting cancer-related cognitive impairment in adult cancer patient. The study group is adult cancer patients, including patients with malignant tumors such as breast cancer, lung cancer and cervical cancer. There were no intervention measures. The control group was non-tumor healthy people. Outcome index is the influencing factor. The study design was cross-sectional study, case-control study and cohort study.

Condition being studied In the whole study, two researchers who have received systematic evidence-based training independently screened literatures according to inclusion and exclusion criteria, extracted data and cross-checked them. In case of disagreement, discussion and resolution were conducted or a third party was consulted to assist in judgment.

METHODS

Participant or population The patients included in the systematic review in this study were patients with confirmed malignant tumors.

Intervention There were no interventions in the study.

Comparator The control group was non-tumor healthy people.

Study designs to be included The study design was cross-sectional study, case-control study and cohort study.

Eligibility criteria Inclusion criteria: (1) The subjects were patients with clinical diagnosis of tumor; (2)Age ≥ 18 years old; (3)Specific measurement methods were used to identify the presence of cancer-related cognitive impairment; (4) The study involved related factors or predictors of cancer-related cognitive impairment in cancer patients; (5) The study types were cohort study,

case-control study and cross-sectional study; (6) The literature provides the adjusted OR value and 95%CI after multi-factor analysis OR provides the relevant data that can be converted to OR value, 95%CI and standard error.

Exclusion criteria: (1) non-Chinese and English literature; (2) The data information is not detailed or the full text cannot be obtained; (3) Repeated publication. (4) Patients with neurological tumors.

Information sources Chinese databases include CNKI, Wanfang, VIP, Sinomed. Foreign language databases include Pubmed, Web of science, Scopus, Pro Quest, CINAHL, Embase.

Main outcome(s) Social demographic factors, treatment related factors, etc.

Quality assessment / Risk of bias analysis The Newcastle-Ottawa Scale (NOS) was used in cohort and case-control studies. The cross-sectional study used the Agency for Healthcare Research and Quality (AHRQ) scale for quality assessment.

Strategy of data synthesis Stata 17.0 software was used for statistical analysis. The OR value was used as the effect index. mean difference (MD) was used as the effect index, and 95%CI was the statistic of effect analysis. The I2 value was used to determine the heterogeneity between studies. If 120.10, the inter-study heterogeneity was acceptable, and a fixed-effect model was adopted. If I2≥50% and P≤0.10, a random effects model is used. Sensitivity analysis, subgroup analysis or descriptive analysis were performed for the indicators with obvious heterogeneity. If there are few relevant studies or effect sizes cannot be combined, only descriptive analysis is performed. P<0.05 was considered to be statistically significant.

Subgroup analysis None reported.

Sensitivity analysis The Stata software performs a sensitivity analysis to reflect the sensitivity of the article by the change in the effect size after deleting one of the articles.

Country(ies) involved China.

Keywords Cancer; Cancer-related cognitive impairment; Influencing factor; systematic evaluation.

Contributions of each author

Author 1 - yu zihui. Author 2 - chen lihua.