

INPLASY PROTOCOL

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Conflicts of interest:
None declared.

INTRODUCTION

Review question / Objective: Effect of Mediterranean diet on Body Composition and Metabolic Parameters of Cancer Patients.

Effects of Mediterranean diet on body composition and metabolic parameters of cancer patients: systematic evaluation and meta-analysis

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Review question / Objective: Effect of Mediterranean diet on Body Composition and Metabolic Parameters of Cancer Patients.

Condition being studied: Although the research on how nutrition affects cancer was first proposed only half a century ago. On the one hand, comprehensive research including population, clinical and basic research shows that our diet is closely related to these conditions. On the other hand, because our food and oncology are extremely complex, the relationship between them is not clear. We are trying to analyze the influence of Mediterranean diet on clinical outcomes and biochemical indicators of cancer patients.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 02 February 2023 and was last updated on 02 February 2023 (registration number INPLASY202320006).

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METHODS

Participant or population: Cancer patient.

Intervention: Mediterranean diet.

Comparator: Mediterranean diet and non-Mediterranean diet

Study designs to be included: Randomized controlled trial.

Eligibility criteria: Randomized controlled trials and cohort studies that met the following criteria were selected: participants were adults diagnosed with cancer/tumor; dietary intervention must include Mediterranean diet (or the subtype of Mediterranean diet). Articles were excluded if they: were non-human species; have no comparison group; were conference abstracts, book chapters, reviews, or other forms without detailed empirical data and have no exposure or outcome of interest. Based on the above inclusion and exclusion criteria, the titles and abstracts of the selected articles were screened independently by three authors who were not blinded to the authors and the article titles. The full-text versions of potentially eligible articles were retrieved for further evaluation. Any discrepancy that occurred during this process was resolved by consensus.

Information sources: Pubmed, embase, Cochrane Library.

Main outcome(s): The Effects of Mediterranean diet Ketogenic Diets on Body Composition. Effect on Blood Glucose, Insulin, and IGF-1. Effects of Mediterranean diet on Lipid Profiles.

Additional outcome(s): Renal Function Test. Liver Function Test.

Quality assessment / Risk of bias analysis: Quality assessment was performed by using the Cochrane bias-risk tool, which includes six domains: selection bias, performance bias, detection bias, attrition bias, reporting bias and other bias. The risk of each included study was rated as "high bias risk", "unclear bias risk" or "low bias risk" according to the information extracted.

Strategy of data synthesis: The analysis of comparable data was conducted by Review Manager 5.3 (Cochrane Collaboration). We assessed the continuous outcomes using mean difference (MD) and dichotomous outcomes using the odds ratio (OR). We estimated the comparable data using 95% confidence interval (CI). The I² test would be accounted to evaluate statistical heterogeneity. A random-effects model would be adopted for the result if the I² > 50%; otherwise, a fixed-effects model was chosen. $p < 0.05$ would be considered statistically significant.

Subgroup analysis: Subgroup analysis based on the heterogeneity of meta-analysis.

Sensitivity analysis: Sensitivity analysis based on the heterogeneity of meta-analysis

Country(ies) involved: China (Department of General Surgery, Beijing Shijitan Hospital Affiliated Capital Medical University).

Keywords: Mediterranean diet ketogenic diets; body composition; metabolic parameters; cancer patients; food function; nutrition.

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