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INPLASY

Controlling nutritional status score as an early acute kidney injury biomarker for hospitalization patients: a systematic review and meta-analysis

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Data analysis.

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 19 July 2026 and was last updated on 19 July 2026.

INTRODUCTION

Review question / Objective This systematic review and meta-analysis was conducted to determine the prognostic value of the Controlling Nutritional Status (CONUT) score regarding AKI susceptibility and to assess its diagnostic performance.

Condition being studied The research team comes from the Department of Critical Care Medicine of a tertiary hospital in China, and all the team members have perfect clinical experience in critical care and resuscitation. Moreover, our team members have published more than 50 meta analyses, which can guarantee the successful completion of the current research.

METHODS

Participant or population Included adult hospitalization patients (aged ≥18 years).

Intervention CONUT measured within 24 hours of admission or before operation, exceptionally high or low group.

Comparator CONUT measured within 24 hours of admission or before operation, as control group.

Study designs to be included Prospective and retrospective cohort designs, case-control studies.

Eligibility criteria Eligible studies met the following criteria: (1) observational in design (prospective or retrospective cohort, or cross-sectional with defined follow-up duration); (2) included adult hospitalization patients (aged ≥18 years); (3) CONUT measured within 24 hours of admission or before operation.

Information sources PubMed, Embase, and Cochrane Library.

Main outcome(s) Primary outcome was relation between CONUT and AKI risk defined by internationally recognized guidelines.

Quality assessment / Risk of bias analysis The risk of bias in non-randomized studies was evaluated using the Newcastle-Ottawa Scale (NOS).

Strategy of data synthesis Meta-analysis.

Subgroup analysis The analyses were stratified by: population subtype; data source; definition of AKI; baseline AKI risk; threshold separating low and high CONU; timing of AKI assessment.

Sensitivity analysis A "leave-one-out" sensitivity analysis was conducted by iteratively excluding individual studies and recalculating the effect sizes.

Country(ies) involved China.

Keywords Controlling Nutritional Status; Acute kidney injury; Biomarker; Meta-analysis.

Contributions of each author

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