

# INPLASY PROTOCOL

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**Support:** None.

**Review Stage at time of this submission:** Formal screening of search results against eligibility criteria.

**Conflicts of interest:**  
None declared.

## INTRODUCTION

**Review question / Objective:** We aimed to investigate the relationship between creatinine/cystatin C ratio (CCR) and sarcopenia and the prognostic value of CCR in hospitalized patients.

## Serum creatinine/cystatin C ratio as a muscle mass evaluating tool and prognostic indicator for hospitalized patients: a meta-analysis

Zheng, WH<sup>1</sup>; Zhu, YB<sup>2</sup>; Yao, Y<sup>3</sup>; Huang, HB<sup>4</sup>.

**Review question / Objective:** We aimed to investigate the relationship between creatinine/cystatin C ratio (CCR) and sarcopenia and the prognostic value of CCR in hospitalized patients.

**Information sources:** We will search for the references in the included studies and personal files. We will request advice from experts in the field. Additionally, we will search for associated articles from critical care, surgical, infection meetings; and contacted the authors of included trials, if needed.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 September 2022 and was last updated on 20 September 2022 (registration number INPLASY202290097).

**Condition being studied:** Serum creatinine/cystatin C ratio as a muscle mass evaluating tool and prognostic indicator for hospitalized patients. The authors of the current study come from a tertiary hospital in China, and all the members have extensive experience in treating critically ill patients with malnutrition. Furthermore, these authors have published several

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meta-analyses, which can guarantee the completion of the current study.

## METHODS

**Participant or population:** In-hospita adult patients.

**Intervention:** Patients with high Serum creatinine/cystatin C ratio.

**Comparator:** Patients without high Serum creatinine/cystatin C ratio.

**Study designs to be included:** Eligible studies had a cohort, case-control, or randomized controlled study design.

**Eligibility criteria:** We included articles investigating the correlation between CCR and CT-assessed skeletal muscle and the predictive prognosis value of CCR in hospitalized patients.

**Information sources:** We will search for the references in the included studies and personal files. We will request advice from experts in the field. Additionally, we will search for associated articles from critical care, surgical, infection meetings; and contacted the authors of included trials, if needed.

**Main outcome(s):** The suitability of CCR as a predictive mortality tool in hospitalized patients.

**Quality assessment / Risk of bias analysis:** Using the Newcastle-Ottawa Scale.

**Strategy of data synthesis:** We used the I<sup>2</sup> statistic to quantify heterogeneity (I<sup>2</sup> 50% were classified as low and high heterogeneity, respectively)[29]. When there was significant heterogeneity, a random-effects model was used; otherwise, a fixed-effects model was utilized[30]. We then performed sensitivity analyses, removing one study at a time to demonstrate the impact of that study on the pooled effect estimates. Visually inspecting funnel plots for asymmetry was used to determine publication bias. A meta-analysis was conducted when data

from at least 3 studies were available. P values of less than 0.05 were regarded as statistically significant. We utilized R version 3.6.2 for all statistical analyses in the current meta-analysis.

**Subgroup analysis:** (1) Geographic location; (2) Patient population; (3) Gender.

**Sensitivity analysis:** No.

**Country(ies) involved:** China.

**Keywords:** creatinine/cystatin C ratio, mortality, hospitalized, mortality, meta-analysis.

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