

# INPLASY

## Pre-transplant myosteatosi worsens the survival after liver transplantation: a systematic review and meta-analysis

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### ADMINISTRATIVE INFORMATION

**Support** - Science and Technological Innovation Project of China Academy of Chinese Medical Sciences (CACMS) Innovation Fund (CI2021A02904).

**Review Stage at time of this submission** - Data analysis.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202420050

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 11 February 2024 and was last updated on 11 February 2024.

### INTRODUCTION

**Review question / Objective** We performed this meta-analysis to evaluate the impact of myosteatosi on survival after liver transplantation.

**Condition being studied** 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 treatments for external nutrition. Moreover, our team members have published more than 30 meta-analyses, which can guarantee the successful completion of the current research.

### METHODS

**Participant or population** Patients received liver transplantation.

**Intervention** Patients with myosteatosi.

**Comparator** Patients without myosteatosi.

**Study designs to be included** RCT, observational studies.

**Eligibility criteria** 1) adult patients after LT, regardless of etiology; 2) evaluation of CT-assessed skeletal muscle density (intramuscular fat content) by any clear and objective method; and 3) studies should report any survival data of patients.

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**Information sources** Articles available only in abstract form or meeting reports were also excluded.

**Main outcome(s)** The risk of mortality in patients after LT with myosteatosi compared to patients without myosteatosi.

**Quality assessment / Risk of bias analysis** The Newcastle-Ottawa Scale (NOS) for cohort studies was used to assess the quality of each included study independently by the authors mentioned above.

**Strategy of data synthesis** We pooled the results of all relevant studies to estimate pooled odds ratios (ORs) and associated 95% confidence intervals (CIs) for dichotomous outcomes and mean differences (MDs) and 95% CIs for continuous outcomes. We calculated ORs and 95% CIs for studies that reported mortality rates between patients with and without myosteatosi. We used the I<sup>2</sup> statistic to examine heterogeneity among the included studies. An I<sup>2</sup> > 50% indicates significant heterogeneity. We selected fixed-effect models for I<sup>2</sup> < 50% and random-effect models for I<sup>2</sup> ≥ 50%.

**Subgroup analysis** None.

**Sensitivity analysis** For studies that used regression analysis to investigate the relationship between myosteatosi and mortality, we combined mortality estimates with corresponding standard errors using the generic inverse variance method.

**Country(ies) involved** China.

**Keywords** pectin; critical illness; enteral nutrition; diarrhea; meta-analysis.

#### **Contributions of each author**

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