

# INPLASY PROTOCOL

To cite: Liu et al. Effects of the sacubitril/valsartan on cardiac remodeling in patients with Acute Myocardial Infarction: a meta-analysis. Inplasy protocol 202170044. doi: 10.37766/inplasy2021.7.0044

Received: 14 July 2021

Published: 14 July 2021

**Corresponding author:**  
Xiaofang Liu

1277621213@qq.com

## **Author Affiliation:**

The Second Affiliated Hospital  
of Chongqing Medical  
university.

**Support:** None.

**Review Stage at time of this  
submission:** Preliminary  
searches.

**Conflicts of interest:**  
None declared.

## Effects of the sacubitril/valsartan on cardiac remodeling in patients with Acute Myocardial Infarction: a meta-analysis

Liu, X<sup>1</sup>; Liu, D<sup>2</sup>.

**Review question / Objective:** The aim of this meta-analysis is to evaluate the effects of Sacubitril/Valsartan on cardiac remodeling in patients with Acute Myocardial Infarction.

**Condition being studied:** Acute myocardial infarction (AMI).

**Information sources:** A systematic literature search of PubMed, the Cochrane Library, Web of Science, Embase, CHKD-CNKI, VIP, WanFang, from 01/2010 to 10/2021, and no language restrictions.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 14 July 2021 and was last updated on 14 July 2021 (registration number INPLASY202170044).

## INTRODUCTION

**Review question / Objective:** The aim of this meta-analysis is to evaluate the effects of Sacubitril/Valsartan on cardiac remodeling in patients with Acute Myocardial Infarction.

**Condition being studied:** Acute myocardial infarction(AMI).

## METHODS

**Search strategy:** The search was done with various keywords, including: Sacubitril/Valsartan, Angiotensin Receptor-Nepriylsin Inhibitor, LCZ696, entresto, myocardial infarction and AMI. We also screened the reference lists of included studies for additional eligible studies not retrieved by our search.

---

**Participant or population:** The patients were diagnosed acute myocardial infarction, with no exclusions based on ethnicity or age.

**Intervention:** Sacubitril/valsartan.

**Comparator:** RAS inhibitors (ACEI/ARB), placebo, self-control.

**Study designs to be included:** Randomized controlled trials (RCTs).

**Eligibility criteria:** Study selection included the following terms: The patients were diagnosed acute myocardial infarction with baseline and follow-up data for at least 1 CRR index measured by echocardiography or cardiac magnetic resonance imaging.

**Information sources:** A systematic literature search of PubMed, the Cochrane Library, Web of Science, Embase, CHKD-CNKI, VIP, WanFang, from 01/2010 to 10/2021, and no language restrictions.

**Main outcome(s):** The primary study outcomes were changes in functional capacity (NYHA functional class, 6MWD), cardiac remodeling indices (LVEF, ESV, EDV, ESD, EDD, LVMI, LAV), and biomarkers (NT-proBNP, sST2).

**Quality assessment / Risk of bias analysis:** The methodological qualities of the RCTs were assessed using the Cochrane Collaboration bias risk tools for random sequence generation, allocation concealment, blinding, incomplete outcome data, selective outcome reporting, and other potential sources of bias. Quality assessment was finalized independently by 2 authors.

**Strategy of data synthesis:** We will pool the results using a random-effects meta-analysis. Dichotomous variables were reported as proportions, and continuous variables were primarily expressed as mean  $\pm$  SD. The mean differences (MD) with 95% CIs for the indices were plotted as forest plots. Statistically significant results were identified as CIs excluding a null

effect and a 50% indicating high heterogeneity.

**Subgroup analysis:** Subgroup analyses were conducted based on type of MI, control drugs, dosage of ARNI, follow-up durations, LVEF.

**Sensitivity analysis:** The effect of each study on the overall effect size was assessed by sensitivity analysis using the leave-one-out approach.

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

**Keywords:** acute myocardial infarction, Sacubitril valsartan, Cardiac Remodeling.

**Contributions of each author:**

Author 1 - Xiaofang Liu.

Author 2 - Dichuan Liu.