

# INPLASY PROTOCOL

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None declared.

## Comparison of perioperative safety of carotid artery stenting and endarterectomy for the Treatment of Carotid Artery Stenosis: a meta-analysis

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**Review question / Objective:** 1) Population: limited the comparison to atherosclerotic carotid stenosis population; 2) intervention: used strictly carotid artery stenting and carotid endarterectomy); 3) comparison: compared the results about efficiency and complications; 4) outcome measures: the primary outcomes included mortality, Myocardial infarction and stroke and cranial-nerve injury ;5) study design: an official published full-text English written randomized controlled trial (RCT).

**Condition being studied:** We focused on patients with carotid atherosclerosis treated with carotid artery stenting or carotid endarterectomy. The mortality rate, stroke rate, myocardial infarction rate, and cranial nerve damage rate of patients with carotid atherosclerosis during the perioperative period were evaluated, and the endpoint events such as mortality rate and stroke rate at the end of follow-up were evaluated.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 29 November 2022 and was last updated on 29 November 2022 (registration number INPLASY2022110149).

### INTRODUCTION

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## METHODS

**Participant or population:** patients with carotid atherosclerosis treated with carotid artery stenting or carotid endarterectomy.

**Intervention:** Patients treated with carotid artery stenting.

**Comparator:** Patients treated with or carotid endarterectomy.

**Study designs to be included:** An official published full-text English written randomized controlled trial (RCT).

**Eligibility criteria:** Nonrandomized studies, single-arm studies, case series, letters, comments, editorials, proceedings, personal communications, and studies conducted on patients with symptomatic carotid stenosis were excluded from the analysis.

**Information sources:** EMBASE, PubMed, Web of science, and the Cochrane Library.

**Main outcome(s):** The mortality rate, stroke rate, myocardial infarction rate, cranial nerve damage rate of patients with carotid atherosclerosis during the perioperative period, and endpoint events such as the mortality rate, stroke rate at the end of follow-up.

**Quality assessment / Risk of bias analysis:** we assessed the study quality by using the Cochrane Risk of Bias Tool.

**Strategy of data synthesis:** We use STATA version 14.0 (Stata Corporation, College Station, Texas, USA) software for statistical analyses. The I<sup>2</sup> statistic indicates the percentage of the observed between-study variability due to heterogeneity. If I<sup>2</sup> was > 50% , we conducted a meta-analysis using random-effects model according to the Cochrane Handbook for Systematic Reviews of Interventions.

**Subgroup analysis:** Subgroup analyses were performed according to patients who were symptomatic or asymptomatic , if necessary, Subgroup analyses were performed according to follow-up period.

**Sensitivity analysis:** Stata software was used for Sensitivity analysis using the leave-one-out approach.

**Country(ies) involved:** Department of Neurology, Chongqing University Three Gorges Hospital, Chongqing, China.

**Keywords:** Carotid artery stenting; Carotid endarterectomy; Carotid stenosis; CAS; CEA; Meta-analysis.

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