

# INPLASY PROTOCOL

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submission:** Data analysis.

**Conflicts of interest:**  
None of the authors have any  
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## INTRODUCTION

**Review question / Objective:** To evaluate the comparative efficacy of intravitreal pharmacotherapy for macular edema secondary to retinal vein occlusion.

**Condition being studied:** Different anti-vascular endothelial growth factor drugs,

## Comparative efficacy of intravitreal pharmacotherapy for macular edema secondary to retinal vein occlusion: a systematic review and network meta-analysis

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**Review question / Objective:** To evaluate the comparative efficacy of intravitreal pharmacotherapy for macular edema secondary to retinal vein occlusion.

**Condition being studied:** Different anti-vascular endothelial growth factor drugs, intravitreal corticosteroids, and laser photocoagulation are available for patients with macular edema secondary to retinal vein occlusion. However, the comparative efficacy of different intravitreal pharmacotherapy for macular edema secondary to retinal vein occlusion is still unknown.

**Information sources:** We will systematically search for eligible randomized controlled trials in PubMed, Embase, and the Cochrane Library.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 03 July 2020 and was last updated on 03 July 2020 (registration number INPLASY202070012).

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## METHODS

**Search strategy:** We will systematically search for eligible randomized controlled trials in PubMed, Embase, and the Cochrane Library without search date and language restrictions. The search terms will include "macular edema", "retinal vein occlusion", "ranibizumab", "aflibercept", "bevacizumab", "angiogenesis inhibitors", "dexamethasone intravitreal implant", "triamcinolone", "laser photocoagulation".

**Participant or population:** Patients with macular edema secondary to retinal vein occlusion.

**Intervention:** Ranibizumab, aflibercept, bevacizumab, dexamethasone intravitreal implant, triamcinolone acetonide, laser photocoagulation.

**Comparator:** Sham injection control.

**Study designs to be included:** Published randomized controlled trials.

**Eligibility criteria:** We included RCTs that compared two or more of the following treatment strategies (placebo and different intravitreal pharmacotherapy, including ranibizumab, aflibercept, bevacizumab, dexamethasone intravitreal implant, triamcinolone acetonide, laser photocoagulation with different therapeutic regimens) for patients with macular edema secondary to retinal vein occlusion.

**Information sources:** We will systematically search for eligible randomized controlled trials in PubMed, Embase, and the Cochrane Library.

**Main outcome(s):** The mean change in best-corrected visual acuity (BCVA) from baseline.

**Additional outcome(s):** 1. Mean change in central retinal thickness (CRT) from baseline; 2. The proportion of patients who gained  $\geq 15$  letters in BCVA from baseline.

**Quality assessment / Risk of bias analysis:** The risk of bias will be assessed using the Cochrane Collaboration's tool for randomized controlled trials.

**Strategy of data synthesis:** Fixed effect and random effects models will be used to pool the data, and R 3.5.0 software and Stata version 14.0 (College Station, TX) will be used to conduct the data synthesis.

**Subgroup analysis:** Subgroup analyses are planned based on selected participant characteristics.

**Sensibility analysis:** Not planned.

**Language:** No language restriction.

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

**Keywords:** intravitreal pharmacotherapy, macular edema secondary to retinal vein occlusion, network meta-analysis.

### Contributions of each author:

**Author 1 - Yun Zhang -** Yun Zhang designed the study, screened the studies and extracted data, reviewed the results, interpreted the data, prepared the manuscript, and wrote and reviewed the manuscript.

**Author 2 - Zhaolun Cai -** Zhaolun Cai designed the study, assessed the risk of bias, performed the statistical analyses, interpreted the data, and reviewed the manuscript.

**Author 3 - Jianan Duan -** Jianan Duan screened the studies and extracted data, reviewed the results.

**Author 4 - Ge Ge -** Ge Ge participated in discussion to resolved disagreements.

**Author 5 - Miao Wang -** Miao Wang screened the studies and extracted data.

**Author 6 - Meixia Zhang -** Meixia Zhang designed the study, reviewed the results and manuscript. She had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.