

Background

- Anemia is present in 15-43% of patients presenting with acute myocardial infarction (AMI)
- There is no clear consensus on hemoglobin cut-off for red cell transfusions for anemia in AMI patients

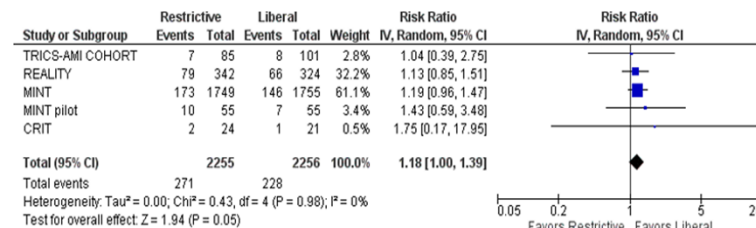
Objective

- To determine the outcomes of restrictive versus liberal blood transfusion in patients with acute myocardial infarction and anemia

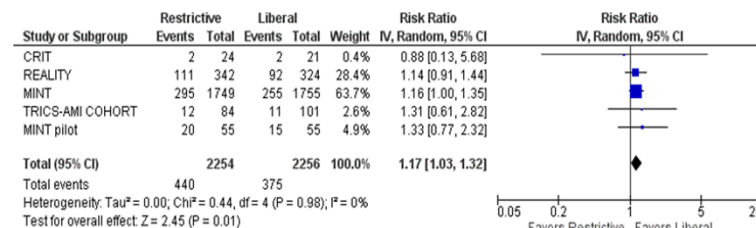
Methods

- We searched PubMed, EMBASE, Ovid MEDLINE, and CENTRAL for studies that compared transfusion strategies in AMI.
- The pre-specified endpoints were 30-day all-cause mortality, MACE, cardiac death, myocardial re-infarction, urgent revascularization, stroke, acute worsening, or new heart failure.

Outcome	Risk ratio (CI)	p-value
All-cause mortality	1.13 (0.67 - 1.89)	0.65
MACE	1.10 (0.77 - 1.57)	0.59
Myocardial re-infarction	1.14 (0.92 - 1.42)	0.22
Urgent revascularization	1.09 (0.73 - 1.63)	0.66
Stroke	1.11 (0.67 - 1.82)	0.68
Cardiac death	1.29 (0.58 - 2.88)	0.54



All-cause mortality at the longest term reported.



Major adverse cardiovascular events at the longest term reported.

Results

- Four RCTs including 4,325 patients (2170 in the restrictive arm and 2155 in the liberal transfusion group) met the eligibility
- At 30 days: the risk for all-cause mortality, MACE, myocardial reinfarction, urgent unplanned revascularization, acute worsening or new heart failure, cardiovascular-related mortality, and stroke did not differ significantly between the two intervention arms

Conclusion

- Blood transfusion to maintain hemoglobin levels > 10g/dl is not more effective than transfusing to maintain levels > 7g/dl.

Declaration

- The authors have no competing interest to declare