

Supplemental material

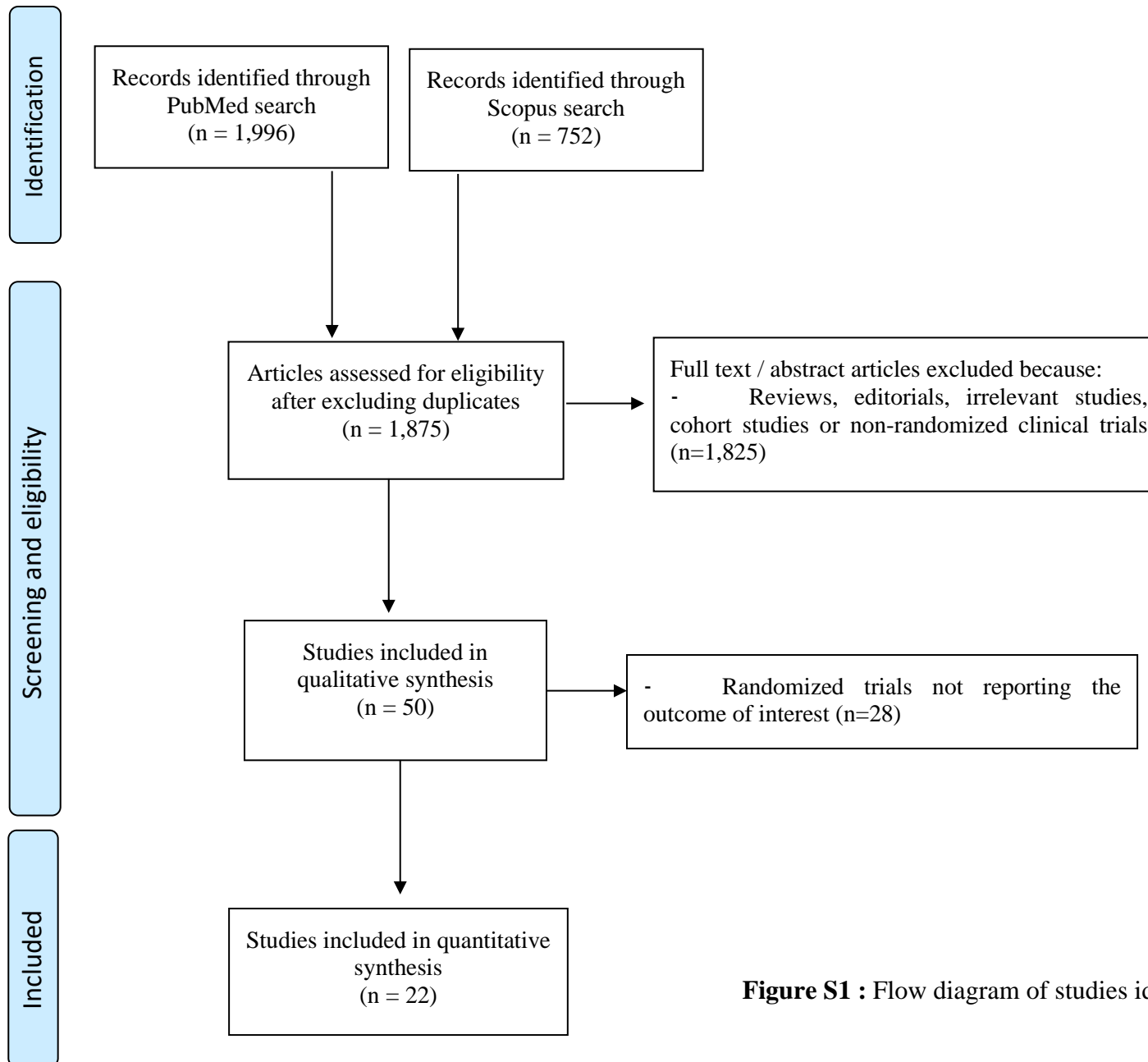


Figure S1 : Flow diagram of studies identified, screened and included in the meta-analysis

Table S1. Studies of immunomodulatory agents for COVID-19

Drug	Drug class	Number of clinical trials (completed or ongoing)	Available studies
tocilizumab	anti-IL6	72	Clinical trials
adalimumab	anti-TNFa	1	Clinical trial
infliximab	anti-TNFa	5	Clinical trials
baricitinib	Jak inhibitor	18	Clinical trials
ruxolitinib	Jak inhibitor	16	Clinical trials
interferon	Signaling protein - Immunomodulatory agent	141	Clinical trials
IVIG	Immunomodulatory agent	23	Clinical trials
colchicine	Anti-inflammatory		Clinical trials
GM-CSF (e.g. sargramostin)	GM-CSF	41	Clinical trials
anakinra	anti-IL1	31	Clinical trials
hyperimmune or convalescent plasma	-	460	Clinical trials

GM-CSF: Granulocyte-macrophage colony-stimulating factor, IL: interleukin, IVIG: intravenous immunoglobulin, Jak: Janus kinase, TNF: tumor necrosis factor

B.

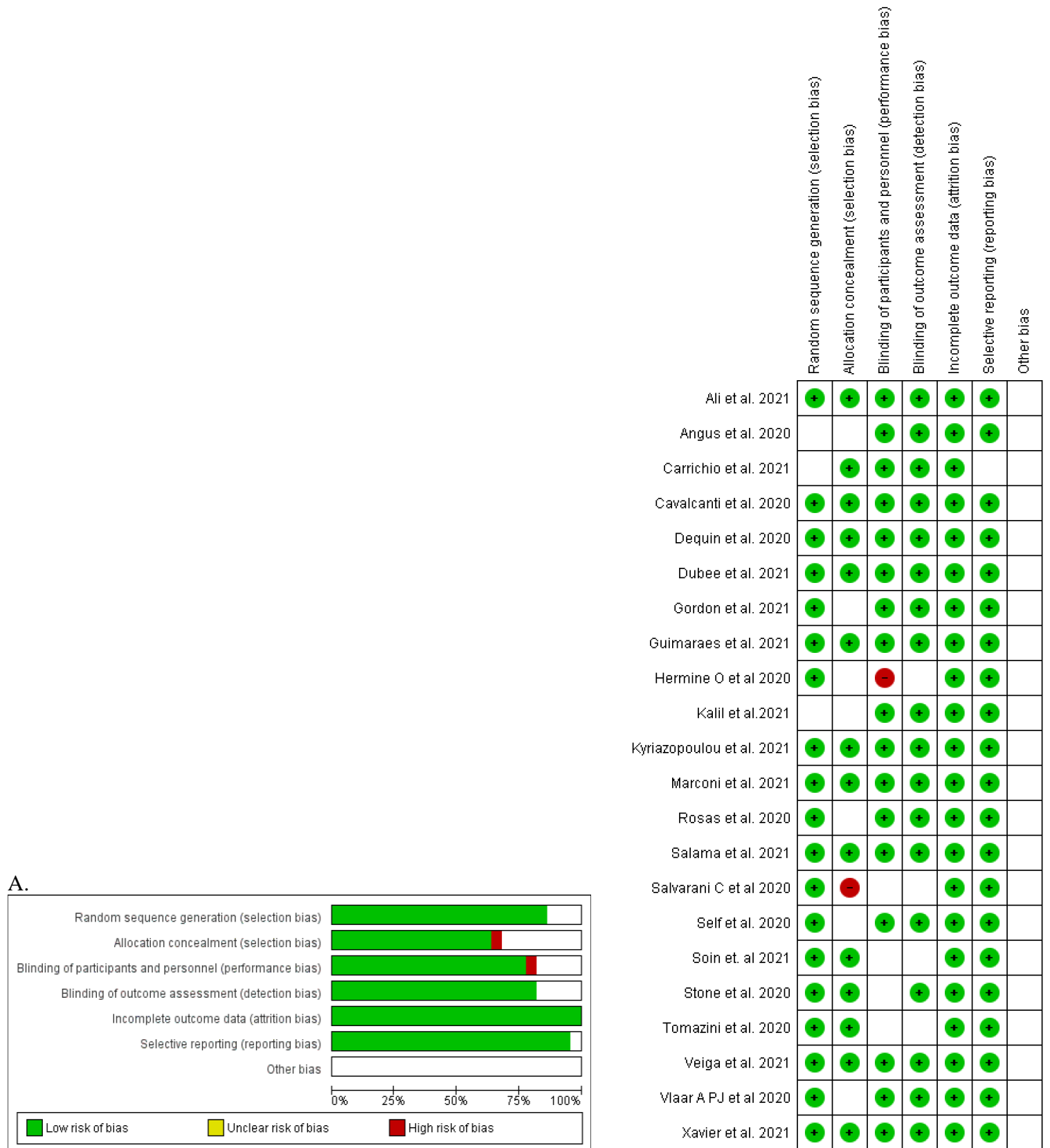


Figure S2.A.Risk of bias graph: review authors' judgements about each risk of bias item presented as percentages across all included studies; **B.**Risk of bias summary: review authors' judgements about each risk of bias item for each included study.

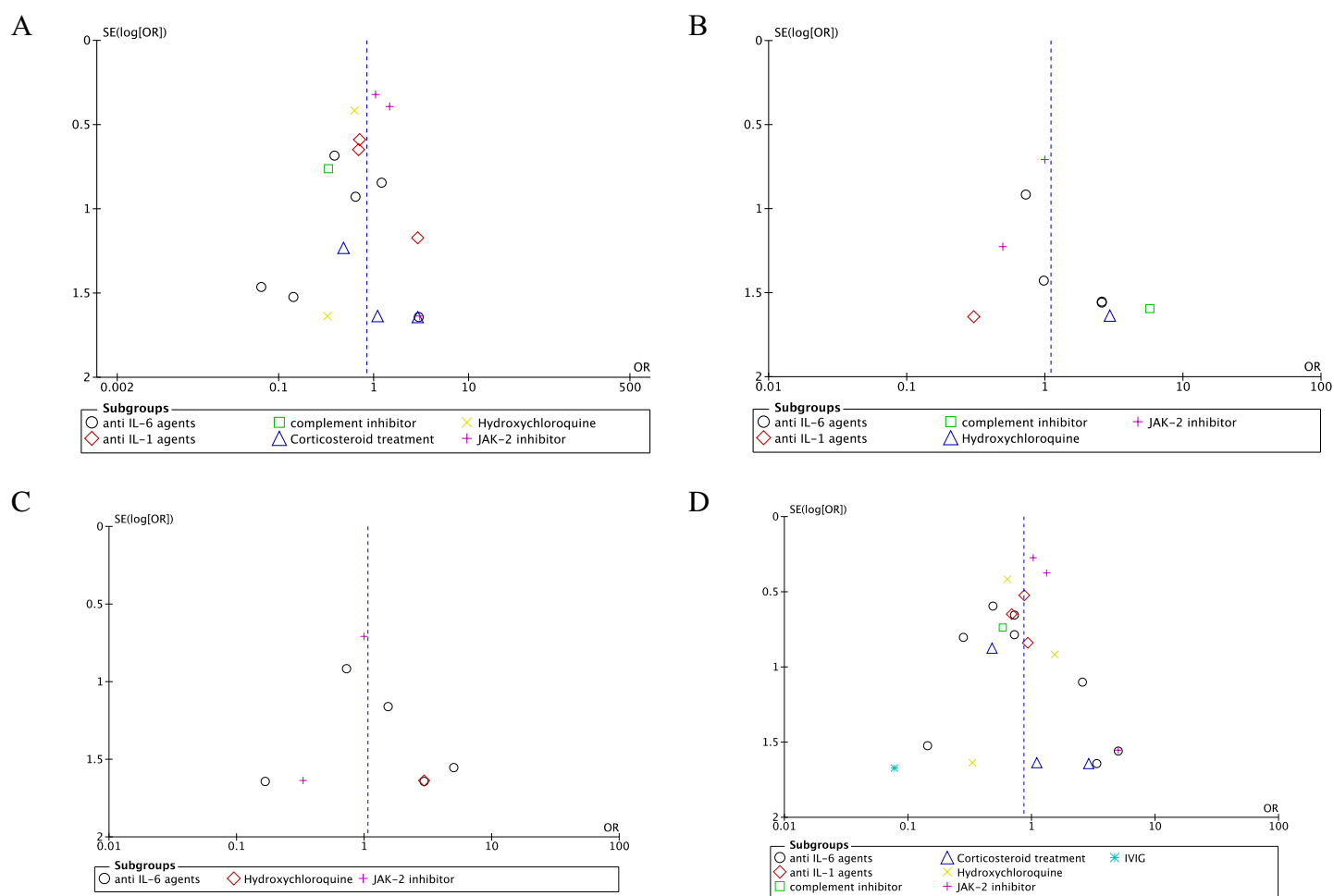


Figure S3 .Diagnostic plots for each outcome based on the use of immunomodulatory agents or placebo.Panel A: Venous thromboembolism, Panel B: Ischemic Stroke or systemic embolism, Panel C: myocardial infarction, Panel D: Any thromboembolic event

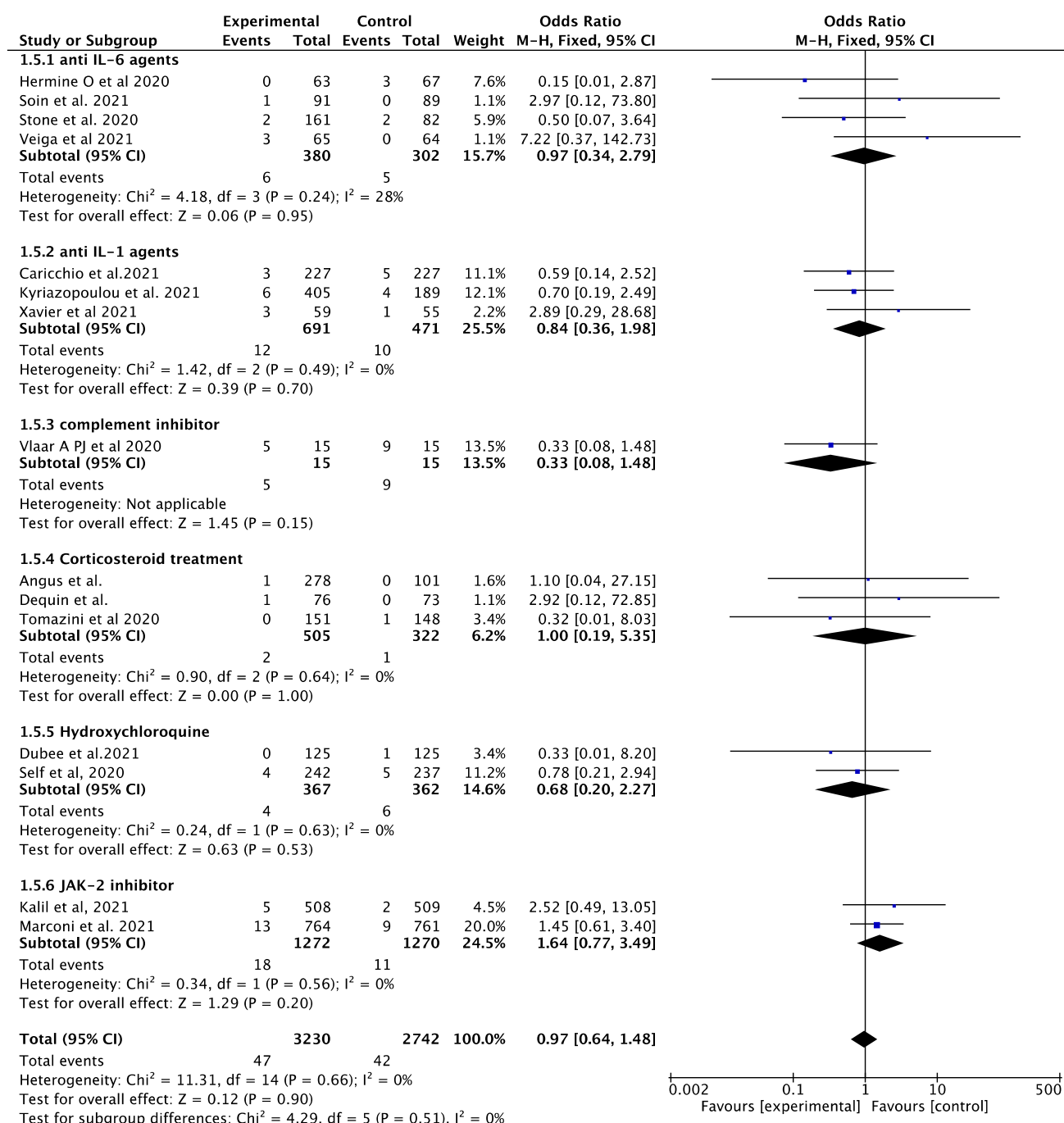


Figure S4: Odds ratio (OR) and 95% Confidence Intervals for the occurrence of pulmonary embolism among hospitalized COVID-19 patients assigned to immunomodulatory agents as an add-on to SOC vs. SOC only. Boxes represent the OR and lines represent the 95% CIs for individual studies. The diamonds and their width represent the pooled ORs and the 95% CIs, respectively. CI, confidence intervals for the Mantel-Hansen estimator, I^2 : heterogeneity

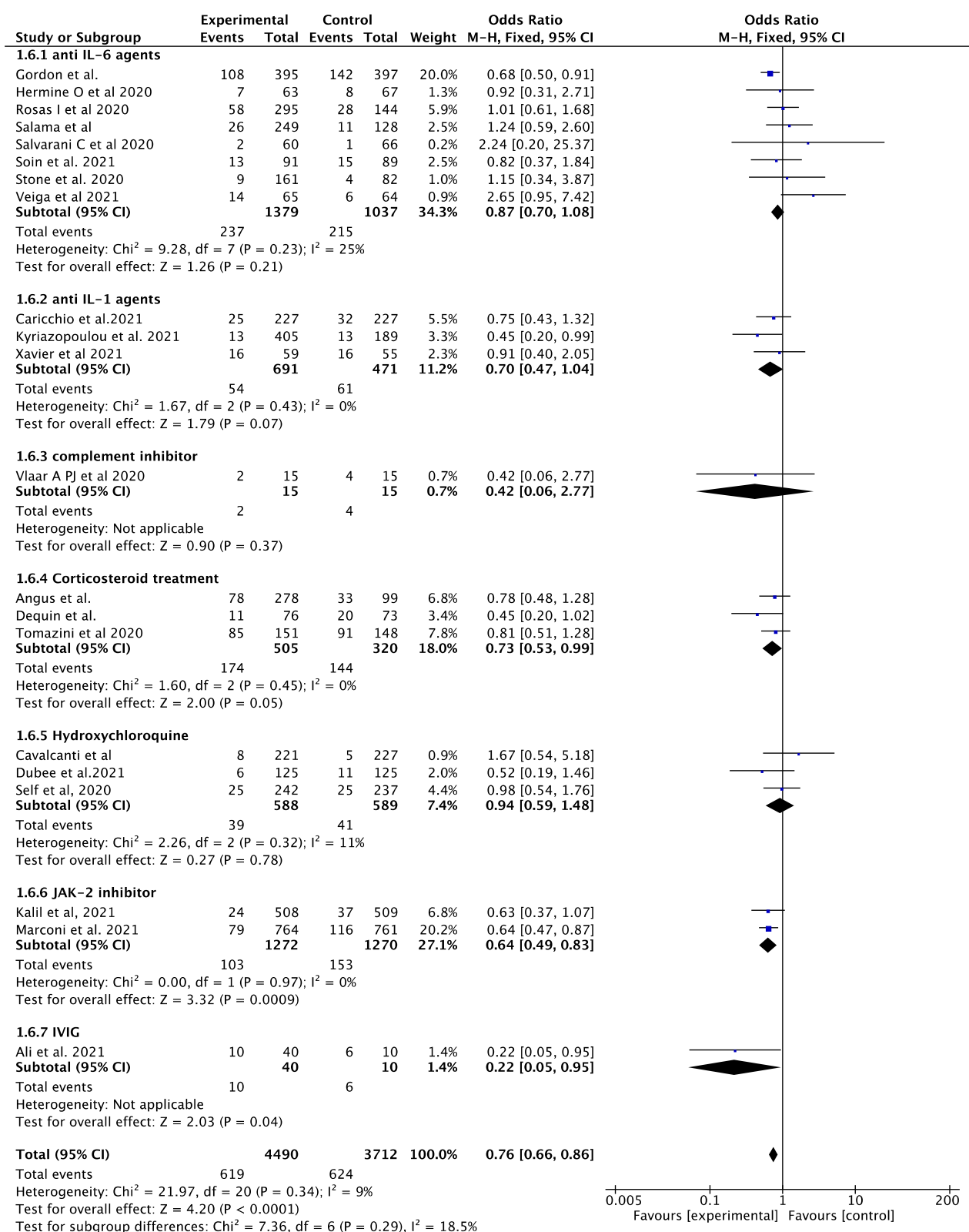


Figure S5: Odds ratio (OR) and 95% Confidence Intervals for mortality among hospitalized COVID-19 patients assigned to immunomodulatory agents as an add-on to SOC vs. SOC only. Boxes represent the OR and lines represent the 95% CIs for individual studies. The diamonds and their width represent the pooled ORs and the 95% CIs, respectively. CI, confidence intervals for the Mantel-Hansen estimator, I^2 : heterogeneity