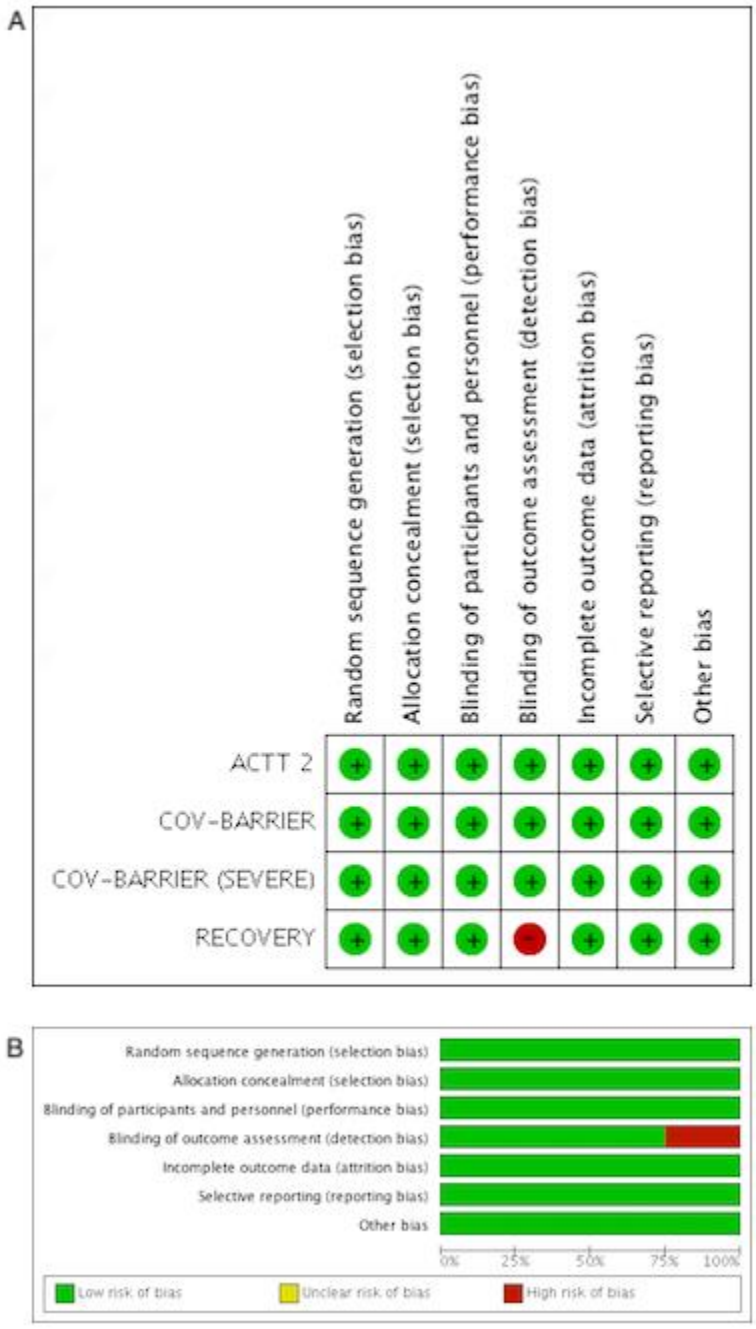
Supplementary Table 1. Exclusion criteria in the selected trials

Reference	Exclusion Criteria
ACTT-2	Alanine aminotransferase (ALT) or an aspartate aminotransferase (AST) > 5 times the upper limit of the normal range; impaired renal function as determined by calculating an estimated glomerular filtration rate (eGFR) or need for hemodialysis or hemofiltration; allergy to study product; pregnancy or breast-feeding; and anticipated discharge from the hospital or transfer to another hospital within 72 hours of enrollment.
COV-BARRIER	At study entry, if patients required invasive mechanical ventilation (National Institute of Allergy and Infectious Disease Ordinal Scale [NIAID-OS] score 7); were receiving immunosuppressants (high-dose corticosteroids, biologics, T-cell-targeted or B-cell-targeted therapies, interferon, or JAK inhibitors); had ever received convalescent plasma or intravenous immunoglobulin for COVID-19; or had neutropenia (absolute neutrophil count
COV-BARRIER (Severe)	Patients on high dose corticosteroids (>20 mg per day [or prednisone equivalent] administered for >14 consecutive days in the month before study, unless indicated per SOC for a concurrent condition, such as asthma, chronic obstructive pulmonary disease, or adrenal insufficiency), immunosuppressants, biologics, T cell or B cell targeted therapies, interferon, or JAK inhibitors; receipt of convalescent plasma or intravenous immunoglobulin for COVID-19; or suspected serious active bacterial, fungal, or other infection, or untreated tuberculosis infection.
RECOVERY	Age<2 years, eGFR <15ml/min/1.73m^2, or on dialysis or hemofiltration, neutrophil count< 0.5 x 10^9/L, had evidence of TB infection, or were pregnant or breast feeding.

Supplementary Table 2. Pooled Odds Risk of Clinical Outcomes Using Fixed-Effects Model

Trial	Baricitinib versus placebo/usual care OR (95% CI)
28-day mortality	0.82, 95% CI 0.73-0.92; I^2= 65%
Progression to respiratory failure needing positive pressure ventilation or death	0.89, 95% CI 0.80-0.99; I^2= 0%
Progression to invasive mechanical ventilation or ECMO	0.80, 95% CI 0.69-0.94; I^2= 49%

Supplementary Figure 1. Cochrane Risk of Bias



Supplementary Figure 2. Subgroup analysis of 28-day mortality in non-critically ill patients