Antibody and cellular therapies for the treatment of covid-19: A living systematic review and network meta-analysis

Supplementary Materials

Search strategy

English search strategy

Search Strategy:

Database	Strategy
Medline (Ovid) 1946-	(coronavir* OR corona virus* OR betacoronavir* OR covid19 OR covid 19 OR nCoV OR novel CoV OR CoV 2 OR CoV2 OR sarscov2 OR 2019nCoV OR wuhan virus*).mp. OR ((wuhan OR hubei OR huanan) AND (severe acute respiratory OR pneumonia*) AND outbreak*).mp. OR Coronavirus Infections/ OR Coronavirus/ OR betacoronavirus/ Limits: 2020- OR (novel coronavir* OR novel corona virus* OR covid19 OR covid 19 OR nCoV OR novel CoV OR CoV 2 OR CoV2 OR sarscov2 OR 2019nCoV OR wuhan virus*).mp. OR ((wuhan OR hubei OR huanan) AND (severe acute respiratory OR pneumonia*) AND outbreak*).mp. OR ((wuhan OR hubei OR huanan) AND (coronavir* OR betacoronavir*)).mp. Limits: 2019-
Embase (Ovid) 1947-	(coronavir* OR corona virus* OR betacoronavir* OR covid19 OR covid 19 OR nCoV OR novel CoV OR CoV 2 OR CoV2 OR sarscov2 OR 2019nCoV OR wuhan virus*).mp. OR ((wuhan OR hubei OR huanan) AND (severe acute respiratory OR pneumonia*) AND outbreak*).mp. OR Coronavirus infection/ OR coronavirinae/ OR exp betacoronavirus/ Limits: 2020- OR (novel coronavir* OR novel corona virus* OR covid19 OR covid 19 OR nCoV OR novel CoV OR CoV 2 OR CoV2 OR sarscov2 OR 2019nCoV OR wuhan virus*).mp. OR ((wuhan OR hubei OR huanan) AND (severe acute respiratory OR pneumonia*) AND outbreak*).mp. OR ((wuhan OR hubei OR huanan) AND (coronavir* OR betacoronavir*)).mp. Limits: 2019-

CAB Abstracts (Ovid) 1910-	(coronavir* OR corona virus* OR betacoronavir* OR covid19 OR covid 19 OR nCoV OR novel CoV OR CoV 2 OR CoV2 OR sarscov2 OR 2019nCoV OR wuhan virus*).mp. OR ((wuhan OR hubei OR huanan) AND (severe acute respiratory OR pneumonia*) AND outbreak*).mp. OR exp Betacoronavirus/ Limits: 2020- OR (novel coronavir* OR novel corona virus* OR covid19 OR covid 19 OR nCoV OR novel CoV OR CoV 2 OR CoV2 OR sarscov2 OR 2019nCoV OR wuhan virus*).mp. OR ((wuhan OR hubei OR huanan) AND (severe acute respiratory OR pneumonia*) AND outbreak*).mp. OR ((wuhan OR hubei OR huanan) AND (coronavir* OR betacoronavir*)).mp. Limits: 2019-

Global Health (Ovid) 1910-	(coronavir* OR corona virus* OR betacoronavir* OR covid19 OR covid 19 OR nCoV OR novel CoV OR CoV 2 OR CoV2 OR sarscov2 OR 2019nCoV OR wuhan virus*).mp. OR ((wuhan OR hubei OR huanan) AND (severe acute respiratory OR pneumonia*) AND outbreak*).mp. OR exp Betacoronavirus/ Limits: 2020- OR (novel coronavir* OR novel corona virus* OR covid19 OR covid 19 OR nCoV OR novel CoV OR CoV 2 OR CoV2 OR sarscov2 OR 2019nCoV OR wuhan virus*).mp. OR ((wuhan OR hubei OR huanan) AND (severe acute respiratory OR pneumonia*) AND outbreak*).mp. OR ((wuhan OR hubei OR huanan) AND (coronavir* OR betacoronavir*)).mp. Limits: 2019-

PsycInfo (Ovid) 1806-	(coronavir* OR corona virus* OR betacoronavir* OR covid19 OR covid 19 OR nCoV OR novel CoV OR CoV 2 OR CoV2 OR sarscov2 OR 2019nCoV OR wuhan virus*).mp. OR ((wuhan OR hubei OR huanan) AND (severe acute respiratory OR pneumonia*) AND outbreak*).mp. Limits: 2020- OR (novel coronavir* OR novel corona virus* OR covid19 OR covid 19 OR nCoV OR novel CoV OR CoV 2 OR CoV2 OR sarscov2 OR 2019nCoV OR wuhan virus*).mp. OR ((wuhan OR hubei OR huanan) AND (severe acute respiratory OR pneumonia*) AND outbreak*).mp. OR ((wuhan OR hubei OR huanan) AND (coronavir* OR betacoronavir*)).mp. Limits: 2019-

Cochrane Library	#1(coronavir* OR "corona virus" OR betacoronavir* OR covid19 OR "covid 19" OR nCoV OR "CoV 2" OR CoV2 OR sarscov2 OR 2019nCoV OR "novel CoV" OR "wuhan virus"):ti,ab,kw OR ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia*) AND outbreak*):ti,ab,kw #2MeSH descriptor: [Coronavirus] this term only #3MeSH descriptor: [Coronavirus Infections] this term only #4MeSH descriptor: [Betacoronavirus] this term only #5 #1 OR #2 OR #3 OR#4 Limits: 2020- OR #1 ("novel coronavirus" OR "novel corona virus" OR covid19 OR "covid 19" OR nCoV OR "novel CoV" OR "CoV 2" OR CoV2 OR sarscov2 OR 2019nCoV OR "wuhan virus"):ti,ab,kw OR ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia*) AND outbreak*):ti,ab,kw OR ((wuhan OR hubei OR huanan) AND (coronavir* OR betacoronavir*)):ti,ab,kw Limits: 2019-

Scopus 1960-	TITLE-ABS-KEY (coronavir* OR "corona virus" OR betacoronavir* OR covid19 OR "covid 19" OR ncov OR "CoV 2" OR cov2 OR sarscov2 OR 2019ncov OR "novel CoV" OR "wuhan virus") OR (TITLE-ABS-KEY (wuhan OR hubei OR huanan) AND TITLE-ABS-KEY ("severe acute respiratory" OR pneumonia*) AND TITLE-ABS-KEY (outbreak*)) AND (LIMIT-TO (PUBYEAR , 2020)) OR TITLE-ABS-KEY ("novel coronavirus" OR "novel corona virus" OR covid19 OR "covid 19" OR ncov OR "CoV 2" OR cov2 OR sarscov2 OR 2019ncov OR "novel CoV" OR "wuhan virus") OR TITLE-ABS-KEY ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia*) AND outbreak*) OR TITLE-ABS-KEY ((wuhan OR hubei OR huanan) AND (coronavir* OR betacoronavir*)) AND (LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019))
Academic Search Complete (Ebsco)	TI,AB,SU((coronavir* OR "corona virus" OR betacoronavir* OR covid19 OR "covid 19" OR nCoV OR "CoV 2" OR CoV2 OR sarscov2 OR 2019nCoV OR "novel CoV" OR "wuhan virus") OR ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia*) AND (outbreak*))) Limits: Dec. 2019-, peer-reviewed
Africa Wide Information (Ebsco)	TI,AB,SU((coronavir* OR "corona virus" OR betacoronavir* OR covid19 OR "covid 19" OR nCoV OR "CoV 2" OR CoV2 OR sarscov2 OR 2019nCoV OR "novel CoV" OR "wuhan virus") OR ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia*) AND (outbreak*))) Limits: 2020-, peer-reviewed OR TI,AB,SU(("novel coronavirus" OR "novel corona virus" OR covid19 OR "covid 19" OR nCoV OR "CoV 2" OR CoV2 OR sarscov2 OR 2019nCoV OR "novel CoV" OR "wuhan virus") OR ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia*) AND outbreak*) OR ((wuhan OR hubei OR huanan) AND (coronavir* OR betacoronavir*))) Limits: 2019-, peer-reviewed

CINAHL (Ebsco)	TI,AB,SU((coronavir* OR "corona virus" OR betacoronavir* OR covid19 OR "covid 19" OR nCoV OR "CoV 2" OR CoV2 OR sarscov2 OR 2019nCoV OR "novel CoV" OR "wuhan virus") OR ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia*) AND (outbreak*))) OR (MH "Coronavirus") OR (MH "Coronavirus Infections") Limits: Dec. 2019-, peer-reviewed
ProQuest Central (Proquest) 1952-	TI,AB,SU((coronavir* OR "corona virus" OR betacoronavir* OR covid19 OR "covid 19" OR nCoV OR "CoV 2" OR CoV2 OR sarscov2 OR 2019nCoV OR "novel CoV" OR "wuhan virus") OR ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia*) AND (outbreak*))) Limits: Dec. 2019-, peer-reviewed
PubMed Central	TITLE-ABSTRACT((coronavirus OR "corona virus" OR coronavirinae OR coronaviridae OR betacoronavirus OR covid19 OR "covid 19" OR nCoV OR "CoV 2" OR CoV2 OR sarscov2 OR 2019nCoV OR "novel CoV" OR "wuhan virus") OR ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia) AND (outbreak))) OR "COVID-19" [Supplementary Concept] OR "severe acute respiratory syndrome coronavirus 2" [Supplementary Concept] Limits: Dec. 2019-
Medline (PubMed)	TITLE-ABSTRACT((coronavirus OR "corona virus" OR coronavirinae OR coronaviridae OR betacoronavirus OR covid19 OR "covid 19" OR nCoV OR "CoV 2" OR CoV2 OR sarscov2 OR 2019nCoV OR "novel CoV" OR "wuhan virus") OR ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia) AND (outbreak))) OR "COVID-19" [Supplementary Concept] OR "severe acute respiratory syndrome coronavirus 2" [Supplementary Concept] Limits: Dec. 2019-

LitCovid (NLM)	https://www.ncbi.nlm.nih.gov/research/coronavirus/

SciFinder (CAS)	References (coronavir* OR "corona virus" OR betacoronavir* OR covid19 OR covid OR nCoV OR "CoV 2" OR CoV2 OR sarscov2 OR 2019nCoV OR "novel CoV" OR "wuhan virus") Limits: 2020- OR References ("novel coronavirus" OR "novel corona virus" OR covid19 OR covid OR nCoV OR "CoV 2" OR CoV2 OR sarscov2 OR 2019nCoV OR "novel CoV" OR "wuhan virus") Limits: 2019-
Virtual Health Library (WHO)	Filter VHL created: https://bvsalud.org/vitrinas/post_vitrines/novo_coronavirus/ **Database changed on 6/16/2020 and integrated into the larger WHO database** Limited: 2019- OR TI,AB:((coronavirus OR "corona virus" OR coronavirinae OR coronaviridae OR betacoronavirus OR covid19 OR "covid 19" OR nCoV OR "CoV 2" OR CoV2 OR sarscov2 OR 2019nCoV OR "novel CoV" OR "wuhan virus") OR ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia) AND (outbreak))) Limits: 2020- OR TI,AB("novel coronavirus" OR "novel corona virus" OR covid19 OR "covid 19" OR nCoV OR "CoV 2" OR CoV2 OR sarscov2 OR 2019nCoV OR "novel CoV" OR "wuhan virus") OR ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia) AND outbreak) OR ((wuhan OR hubei OR huanan) AND (coronavirus OR betacoronavirus)) Limits: 2019-
WHO Novel Coronavirus page	Download of their global research on COVID 19 database: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov

	OR Hand search
CDC Novel Coronavirus page	https://www.cdc.gov/coronavirus/2019-ncov/publications.html OR Hand search
EuroSurveillance	https://www.eurosurveillance.org/content/2019-ncov?pageSize=100&page=1
China CDC MMWR	Hand search
Homeland Security Digital Library	Title or Summary: Coronavirus OR "Corona virus" OR Betacoronavirus OR Coronaviridae OR coronavirinae OR Covid OR Covid19 OR nCoV OR CoV OR CoV2 OR Wuhan Limits: 2019-
ClinicalTrials	Condition, disease, other term: Coronavirus OR "Corona virus" OR Betacoronavirus OR Coronaviridae OR coronavirinae OR Covid OR Covid19 OR nCoV OR CoV OR CoV2 OR Wuhan Limits: 2019-
bioRxiv medRxiv chemRxiv (preprints)	Condition, disease, other term: Coronavirus OR "Corona virus" OR Betacoronavirus OR Coronaviridae OR coronavirinae OR Covid OR Covid19 OR nCoV OR CoV OR CoV2 OR Wuhan Limits: 2019-
SSRN (preprints)	Condition, disease, other term: Coronavirus OR "Corona virus" OR Betacoronavirus OR Coronaviridae OR coronavirinae OR Covid OR Covid19 OR nCoV OR CoV OR CoV2 OR Wuhan Limits: 2019-

Search Strategy for Chinese databases

中文数据库检索策略及结果

Database	Strategy
WanFang万方医学 (med.wanfangdata.com.cn)	#1 (主题:(2019冠状病毒 OR 新型冠状病毒 OR 新冠肺炎)*主题:(临床试验 OR 系统评价 OR Meta分析 OR 随机对照实验 OR 对照研究))*Date:2019- #2 (主题:(2019-nCoV OR SARS-CoV-2 OR Novel coronavirus OR nCoV OR new coronavirus)*主题:(临床试验 OR 系统评价 OR Meta分析 OR 随机对照实验 OR 对照研究))*Date:2019- #3 #1 OR #2
CBM	(("2019冠状病毒"[常用字段:智能] OR "新型冠状病毒"[常用字段:智能] OR "新冠肺炎"[常用字段:智能] OR "2019-nCoV"[常用字段:智能] OR "SARS-CoV-2"[常用字段:智能] OR "Novel coronavirus"[常用字段:智能] OR "nCoV"[常用字段:智能] OR "Emerging Coronaviruses"[常用字段:智能] OR "new coronavirus"[常用字段:智能] OR "COVID-19"[常用字段:智能] OR "coronavirus"[常用字段:智能] AND ("Wuhan"[常用字段] OR "Hubei"[常用字段] OR "China"[常用字段])) AND 2019-2020[日期]) AND ("循证文献"[文献类型] OR "临床试验"[文献类型] OR "随机对照试验"[文献类型] OR "综述"[文献类型] OR "Meta分析"[文献类型])
CNKI	在期刊文献类型下： #1主题=("2019冠状病毒" OR "新型冠状病毒" OR "新冠肺炎") AND （主题=临床试验 OR 系统评价 OR 随机对照实验 OR Meta分析） #2主题=(2019-nCoV OR SARS-CoV-2 OR Novel coronavirus OR nCoV) AND (主题=临床试验 OR 系统评价 OR 随机对照实验 OR Meta分析) 2019-[日期]
VIP 维普	#1 (主题:(2019冠状病毒 OR 新型冠状病毒 OR 新冠肺炎)*主题:(临床试验 OR 系统评价 OR Meta分析 OR 随机对照实验 OR 对照研究))*

	#2 主题=(SARS-CoV-2 OR Novel coronavirus OR nCoV) AND (主题=临床试验 OR 系统评价 OR 随机对照实验 OR Meta分析) Date:2019-
中华医学期刊网（预印本） http://medjournals.cn/2019NCP/index.do	#1主题=("2019冠状病毒" OR "新型冠状病毒" OR "新冠肺炎") AND （主题=临床试验 OR 系统评价 OR 随机对照实验 OR Meta分析） #2主题=(2019-nCoV OR SARS-CoV-2 OR Novel coronavirus OR nCoV) AND (主题=临床试验 OR 系统评价 OR 随机对照实验 OR Meta分析) 2019-[日期]
中科院预印本 http://chinaxiv.org/home.htm	Hand search.

Table of studies excluded at full text screening stage (n=440)

This table does not list 30 prophylaxis and 500 drug treatment studies, which are ineligible for the antiviral antibody and cellular treatment network meta-analysis, but are each included in their own respective network meta-analysis. References available upon request.

Study	Title	Reason for exclusion
Li 2020	Evaluation of low-dose CT protocol of novel coronavirus pneumonia based on infection prevention and control	Diagnostic imaging
Luo 2020	Application of chest low-dose CT screening of Corona Virus Disease 2019 with a third-generation dual-source scanner	Diagnostic imaging
Li 2020	Application of CareDose 4D combined with Karl 3D technology in the low dose computed tomography for the follow-up of COVID-19	Diagnostic imaging
Gonzalez-Gerez 2021	Short-Term Effects of a Respiratory Telerehabilitation Program in Confined COVID-19 Patients in the Acute Phase: A Pilot Study	Exercise/rehabilitation
Rodriguez-Blanco 2021	Short-Term Effects of a Conditioning Telerehabilitation Program in Confined Patients Affected by COVID-19 in the Acute Phase. A Pilot Randomized Controlled Trial	Exercise/rehabilitation
Tian 2021	Efficacy and safety of short-wave diathermy treatment for moderate COVID-19 patients: a prospective, double-blind, randomized controlled clinical study	Exercise/rehabilitation
Ozlu 2021	The effects of progressive muscle relaxation exercises on the anxiety and sleep quality of patients with COVID-19: A randomized controlled study	Exercise/rehabilitation
Liangjianghuang 2021	Ultra-short-wave diathermy shortens the course of moderate and severe COVID-19: a randomized controlled trial	Exercise/rehabilitation
De Marchi 2020	Effects of photobiomodulation therapy combined with static magnetic field (PBMT-sMF) in patients with severe COVID-19 requiring intubation: a pragmatic randomized placebo-controlled trial	Exercise/rehabilitation
Liu 2020	[Significance and operation mode of moxibustion intervention for the group under quarantine after close contact with COVID-19]	Exercise/rehabilitation
Liu 2020	Effects of progressive muscle relaxation on anxiety and sleep quality in patients with COVID-19	Exercise/rehabilitation
Wanfangdan 2020	Influence of Baduanjin on the health effects of patients with cold-dampness-stagnation type of new coronavirus pneumonia	Exercise/rehabilitation
Supady 2021	Cytokine adsorption in patients with severe COVID-19 pneumonia requiring extracorporeal membrane oxygenation (CYCOV): a single centre, open-label, randomised, controlled trial.	External organ support
Bosch 2021	Effect of dexamethasone on direct Xa-inhibitor oral anticoagulant plasma levels in patients with COVID-19	Not a randomized trial
Jin 2021	Retraction Note to: Methylene blue photochemical treatment as a reliable SARS-CoV-2 plasma virus inactivation method for blood safety and convalescent plasma therapy for COVID-19.	Not a randomized trial
Karina 2021	The Effect of Intravenous Autologous Activated Platelet-Rich Plasma Therapy on "Profibrotic Cytokine" IL-1Œ≤ Levels in Severe and Critical COVID-19 Patients: A Preliminary Study	Not a randomized trial
Avdeev 2021	N-acetylcysteine for the treatment of COVID-19 among hospitalized patients	Not a randomized trial
Umemura 2021	Efficacy and safety of nintedanib for pulmonary fibrosis in severe pneumonia induced by COVID-19: An interventional study.	Not a randomized trial
Kim 2021	Dexamethasone may improve severe COVID-19 via ameliorating endothelial injury and inflammation: A preliminary pilot study.	Not a randomized trial
Lanthier 2021	[In patients hospitalized for COVID-19 with hypoxia and systemic inflammation, does tocilizumab reduce 28-days mortality compared to standard treatment, and is it safe?]	Not a randomized trial
Hulbert 2021	Respiratory disease, and treatment / thematic poster session a novel approach to medical monitoring during the sars-cov-2 pandemic supporting the activ 4b outpatient anticoagulation trial	Not a randomized trial

Vityala 2021	Potential effects of itolizumab treatment on plasma interleukin-6 levels in patients with severe COVID-19.	Not a randomized trial
Collins 2021	Administration of COVID-19 convalescent plasma in a metropolitan health care system	Not a randomized trial
Youssef 2021	Vip in the treatment of critical COVID-19 respiratory failure in patients with severe comorbidities	Not a randomized trial
AlShehry 2021	Safety and Efficacy of Convalescent Plasma for Severe COVID-19: Interim Report of a Multicenter Phase II Study from Saudi Arabia (vol 9, pg 16, 2021)	Not a randomized trial
McQuade 2021	ChAdOx1 nCoV-19 vaccine: asymptomatic efficacy estimates	Not a randomized trial
Richier 2021	EfficacitV© du Tocilizumab dans la COVID-19¬†modV©rV©e V† sV©vV®re¬†: une cohorte franVßaise exposV©-non exposV©	Not a randomized trial
Patchen 2021	Genetically Predicted Serum Vitamin D and COVID-19: A Mendelian Randomization Study	Not a randomized trial
Spagnuolo 2021	Viral clearance after early corticosteroid treatment in patients with moderate or severe covid-19 (vol 10, 21291, 2020)	Not a randomized trial
Diaz 2020	Geographical disparities in clinical outcomes of severe COVID-19 patients treated with remdesivir	Not a randomized trial
Meister 2021	Virucidal Efficacy of Different Oral Rinses Against Severe Acute Respiratory Syndrome Coronavirus 2 (vol 222, pg 1289, 2020)	Not a randomized trial
Selvaraj 2021	Tocilizumab in Hospitalized Patients with COVID-19: A Meta Analysis of Randomized Controlled Trials	Not a randomized trial
Bian 2021	Safety and efficacy of meplazumab in healthy volunteers and COVID-19 patients: a randomized phase 1 and an exploratory phase 2 trial.	Not a randomized trial
Castagna 2020	Baseline characteristics associated with clinical improvement and mortality in hospitalized patients with moderate COVID-19	Not a randomized trial
English 2021	Results of the cellular immuno-therapy for covid-19 related acute respiratory distress syndrome (circa-phase i trial	Not a randomized trial
Arrieta 2021	Safety and Antibody Kinetics of COVID-19 Convalescent Plasma for the Treatment of Moderate to Severe Cases of SARS-CoV-2 Infection in Pediatric Patients.	Not a randomized trial
Bakhshaliyev 2021	The impact of hydroxychloroquine-azithromycin combination on Tpeak-to-end and Tpeak-to-end/QT ratio during a short treatment course.	Not a randomized trial
Hashemian 2020	Blood purification techniques, inflammatory mediators and mortality in COVID-19 patients	Not a randomized trial
Abu-Raddad 2021	Effectiveness of the BNT162b2 Covid-19 Vaccine against the B.1.1.7 and B.1.351 Variants.	Not a randomized trial
Okumus 2021	Evaluation of the effectiveness and safety of adding ivermectin to treatment in severe COVID-19 patients.	Not a randomized trial
Pulsipher 2021	Remdesivir Use in COVID-19 Patients: Cutaneous Adverse Effect or Disease Manifestation?	Not a randomized trial
Padilla 2021	Clinical Outcomes of COVID-19 Patients Treated with Convalescent Plasma or Remdesivir Alone and in Combination at a Community Hospital in California's Central Valley.	Not a randomized trial
Wang 2021	Safety and immunogenicity of COVID-19 vaccination in patients with non-alcoholic fatty liver disease (CHESS2101): a multicenter study	Not a randomized trial
KvÐrper 2021	Donors for SARS-CoV-2 Convalescent Plasma for a Controlled Clinical Trial: Donor Characteristics, Content and Time Course of SARS-CoV-2 Neutralizing Antibodies	Not a randomized trial
Kamran 2021	Clearing the Fog: Is Hydroxychloroquine Effective in Reducing Coronavirus Disease-2019 Progression? A Randomized Controlled Trial	Not a randomized trial
Arribas 2020	Impact of concomitant hydroxychloroquine use on safety and efficacy of remdesivir in moderate COVID-19 patients	Not a randomized trial
Efimov 2021	The effect of azoximer bromide (Polyoxidonium¬Æ) in patients hospitalized with coronavirus disease (COVID-19): an open-label, multicentre, interventional clinical study	Not a randomized trial
Agusti 2021	Early treatment with inhaled budesonide to prevent clinical deterioration in patients with COVID-19	Not a randomized trial
Caracciolo 2021	Efficacy and Effect of Inhaled Adenosine Treatment in Hospitalized COVID-19 Patients.	Not a randomized trial

Chowdhury 2021	A Comparative Study on Ivermectin-Doxycycline and Hydroxychloroquine-Azithromycin Therapy on COVID-19 Patients	Not a randomized trial
Lin 2021	Decreased mortality in acute respiratory distress syndrome patients treated with corticosteroids: an updated meta-analysis of randomized clinical trials with trial sequential analysis	Not a randomized trial
Majewski 2021	Chloroquine and hydroxychloroquine - safety profile of potential COVID-19 drugs from the rheumatologist's perspective.	Not a randomized trial
Goldberg 2021	A real-life setting evaluation of the effect of remdesivir on viral load in COVID-19 patients admitted to a large tertiary centre in Israel.	Not a randomized trial
Altuntas 2021	Convalescent plasma therapy in patients with COVID-19	Not a randomized trial
Kow 2021	The association between the use of ivermectin and mortality in patients with COVID-19: a meta-analysis.	Not a randomized trial
Meza 2021	Angiotensin-converting-enzyme inhibitors and angiotensin II receptor blockers for COVID-19: A living systematic review of randomized clinical trials	Not a randomized trial
Benenson 2021	BNT162b2 mRNA Covid-19 Vaccine Effectiveness among Health Care Workers.	Not a randomized trial
Bradley 2021	Antibody Responses after a Single Dose of SARS-CoV-2 mRNA Vaccine.	Not a randomized trial
Wei 2020	Early antiviral therapy of abidol combined with lopinavir/ritonavir and recombinant interferon Œ±-2b for patients with COVID-19 in Zhejiang: A multicenter prospective study	Not a randomized trial
Latorre 2021	4CPS-338,ÄÖUse and efficacy of tocilizumab in patients with severe COVID-19 pneumonia	Not a randomized trial
Aleem 2021	Hepatic manifestations of COVID-19 and effect of remdesivir on liver function in patients with COVID-19 illness	Not a randomized trial
Chavarria 2021	Antioxidants and pentoxifylline as coadjuvant measures to standard therapy to improve prognosis of patients with pneumonia by COVID-19	Not a randomized trial
Hernandez-Cedeno 2021	CIGB-258, a peptide derived from human heat-shock protein 60, decreases hyperinflammation in COVID-19 patients.	Not a randomized trial
Perez-Jacobo 2020	Phase I and Preliminary Results of a Phase II Study (TERAPLASCoV2) of Convalescent Plasma in Patients with Severe and Life-Threatening Pneumonia Caused By Sars-Cov-2	Not a randomized trial
Vergori 2020	Prophylactic dose of low-molecular-weight heparin (LMWH) might not be sufficient to mitigate the clinical scenario in patients with COVID-19 and severe pneumonia	Not a randomized trial
Gupta 2020	Determining the usage and efficacy of COVID-19 convalescent plasma harvested at our blood centre	Not a randomized trial
Donato 2021	Clinical and laboratory evaluation of patients with SARS-CoV-2 pneumonia treated with high-titer convalescent plasma.	Not a randomized trial
Mammen 2021	Assessing of the Factors Associated with Mortality Among the Patients of PLACID Trial (A Phase II, Open Label, Randomized Controlled Trial to Assess the Safety and Efficacy of Convalescent Plasma to Limit COVID-19 Associated Complications in Moderate Dise	Not a randomized trial
Vowels 2021	Partner Support and Goal Outcomes during COVID-19: A Mixed Methods Study	Not a randomized trial
Wakita 2021	Comparison of the clinical performance and usefulness of five SARS-CoV-2 antibody tests.	Not a randomized trial
Abou-Arab 2021	Microvascular flow alterations in critically ill COVID-19 patients: A prospective study.	Not a randomized trial
Alemanno 2021	COVID-19 cognitive deficits after respiratory assistance in the subacute phase: A COVID-rehabilitation unit experience.	Not a randomized trial
Liu 2021	Arbidol combined with the Chinese medicine Lianhuaqingwen capsule versus arbidol alone in the treatment of COVID-19.	Not a randomized trial
Hariri 2021	Rate control in atrial fibrillation using Landiolol is safe in critically ill Covid-19 patients.	Not a randomized trial
Singh 2021	The outcome of fluticasone nasal spray on anosmia and triamcinolone oral paste in dysgeusia in COVID-19 patients.	Not a randomized trial
Acosta-Ampudia 2021	COVID-19 convalescent plasma composition and immunological effects in severe patients	Not a randomized trial

Chen 2020	Corticosteroid Therapy Is Associated With Improved Outcome in Critically Ill Coronavirus Disease 2019 Patients With Hyperinflammatory Phenotype.	Not a randomized trial
Ball 2021	Nebulised heparin for patients on ventilation: implications for COVID-19 pneumonia.	Not a randomized trial
Brüggemann 2021	TChloroquine for treatment of COVID-19 results in subtherapeutic exposure and prolonged QTc intervals	Not a randomized trial
Dixon 2020	The Relevance of Oxytocin & Dynorphin in COVID-19: Towards a Prophylactic Treatment (preprint)	Not a randomized trial
Singh 2021	The outcome of fluticasone nasal spray on anosmia and triamcinolone oral paste in taste dysgeusia in COVID-19 patients	Not a randomized trial
Katia 2021	Efficacy of canakinumab in mild or severe COVID-19 pneumonia	Not a randomized trial
Al Shehry 2021	Safety and Efficacy of Convalescent Plasma for Severe COVID-19: Interim Report of a Multicenter Phase II Study from Saudi Arabia	Not a randomized trial
Janapala 2020	Novaferon, treatment in COVID-19 patients.	Not a randomized trial
Poulakou 2021	Beneficial Effects of Intermediate Dosage of Anticoagulation Treatment on the Prognosis of Hospitalized COVID-19 Patients: The ETHRA Study.	Not a randomized trial
Papamanoli 2020	76. Effect of Early Administration of Systemic Corticosteroids on Outcomes in Patients with COVID-19 Pneumonia	Not a randomized trial
Kollias 2020	Anticoagulation therapy in COVID-19: Is there a dose-dependent benefit?	Not a randomized trial
Namazi 2020	Ellagic acid can possibly be an adjuvant treatment for COVID-19	Not a randomized trial
Gautret 2021	Safety profile of hydroxychloroquine and azithromycin combined treatment in COVID-19 patients	Not a randomized trial
Reig 2020	560. Repurposing Eravacycline for the Treatment of SARS-CoV-2 Infections	Not a randomized trial
Feng 2020	Differentiation between COVID-19 and bacterial pneumonia using radiomics of chest computed tomography and clinical features	Not a randomized trial
Mugheddu 2020	Safety of secukinumab treatment in COVID-19 affected psoriatic patients.	Not a randomized trial
Carbillon 2021	Hydroxychloroquine at usual doses as an option for coronavirus disease 2019 treatment.	Not a randomized trial
Flisiak 2020	Remdesivir-based therapy improved recovery of patients with COVID-19 in the SARSTer multicentre, real-world study.	Not a randomized trial
Al-Sadawi 2020	Hydroxychloroquine and Azithromycin Usage in African American Patients With Coronavirus Disease 2019 (COVID-19) and Their Effects on QT Interval	Not a randomized trial
Panigada 2020	Effect of heparin on viscoelastic parameters of COVID-19 critically ill patients. A Viscoelastic Coagulation Monitor (VCM) analysis	Not a randomized trial
Moniuszko-Malinowska 2021	Convalescent Plasma Transfusion for the Treatment of COVID-19,ÄîExperience from Poland: A Multicenter Study	Not a randomized trial
Chen 2020	Clinical efficacy and safety of favipiravir in the treatment of COVID-19 patients	Not a randomized trial
Alamdari 2020	Application of methylene blue -vitamin C - N-acetyl cysteine for treatment of critically ill COVID-19 patients, report of a phase-I clinical trial. (Special Issue: Therapeutic targets and pharmacological treatment of COVID-19.)	Not a randomized trial
Piralla 2020	Residual SARS-CoV-2 RNA in nasal swabs of convalescent COVID-19 patients: Is prolonged quarantine always justified?	Not a randomized trial
Potere 2020	Low-dose subcutaneous tocilizumab to prevent disease progression in patients with moderate COVID-19 pneumonia and hyperinflammation. (Special Issue: Coronavirus (COVID-19) collection.)	Not a randomized trial
Bautin 2020	Inhalation surfactant therapy in the integrated treatment of severe COVID-19 pneumonia	Not a randomized trial
Hong 2020	Celebrex Adjuvant Therapy on Coronavirus Disease 2019: An Experimental Study	Not a randomized trial
Zhou 2020	Low-dose corticosteroid combined with immunoglobulin reverses deterioration in severe cases with COVID-19.	Not a randomized trial
Erdem 2020	Treatment of SARS-cov-2 pneumonia with favipiravir: Early results from the Ege University cohort, Turkey.	Not a randomized trial

Strohbehn 2020	COVIDOSE: A phase 2 clinical trial of low-dose tocilizumab in the treatment of non-critical COVID-19 pneumonia.	Not a randomized trial
Dhibar 2020	Post-exposure prophylaxis with hydroxychloroquine for the prevention of COVID-19, a myth or a reality? The PEP-CQ Study.	Not a randomized trial
Spoorthi 2020	Utility of Ivermectin and Doxycycline combination for the treatment of SARS-CoV-2	Not a randomized trial
Masiv° 2020	Lack of detrimental effect of corticosteroids on antibody responses to SARS-CoV-2 and viral clearance in patients hospitalized with COVID-19	Not a randomized trial
Wu 2020	Phase 1 trial for treatment of COVID-19 patients with pulmonary fibrosis using hESC-IMRCs	Not a randomized trial
Garcia-Fernandez 2020	Usefulness and safety of self-electrocardiographic monitoring during treatment with hydroxychloroquine and azithromycin in COVID-19 patients	Not a randomized trial
Chang 2020	Safety and Efficacy of Bronchoscopy in Critically Ill Patients with Coronavirus Disease 2019	Not a randomized trial
Petrak 2020	Early Tocilizumab Dosing is Associated with Improved Survival In Critically Ill Patients Infected With Sars-CoV-2	Not a randomized trial
Hashim 2020	Controlled randomized clinical trial on using Ivermectin with Doxycycline for treating COVID-19 patients in Baghdad, Iraq	Not a randomized trial
BelenguerMuncharaz 2020	Effectiveness of non-invasive ventilation in intensive care unit admitted patients due to SARS-CoV-2 pneumonia	Not a randomized trial
Lanthier 2020	[In patients hospitalized for COVID-19, does dexamethasone reduce 28-days mortality compared to standard treatment?]	Not a randomized trial
Kintscher 2020	Plasma Angiotensin Peptide Profiling and ACE (Angiotensin-Converting Enzyme)-2 Activity in COVID-19 Patients Treated With Pharmacological Blockers of the Renin-Angiotensin System	Not a randomized trial
Yang 2020	Clinical Characteristics and Outcomes of COVID-19 Patients Receiving Compassionate Use Leronlimab	Not a randomized trial
Singh 2020	In adults exposed to COVID-19, hydroxychloroquine did not reduce confirmed or probable COVID-19;trial stopped for futility	Not a randomized trial
Villa 2020	Blood purification therapy with a hemodiafilter featuring enhanced adsorptive properties for cytokine removal in patients presenting COVID-19: a pilot study	Not a randomized trial
Khan 2020	Ivermectin treatment may improve the prognosis of patients with COVID-19	Not a randomized trial
Gergi 2020	Thrombo-inflammation response to Tocilizumab in COVID-19	Not a randomized trial
Ayerdi 2020	Preventive efficacy of tenofovir/emtricitabine against SARS-CoV-2 among PREP users	Not a randomized trial
Guan 2020	Erratum to hydrogen/oxygen mixed gas inhalation improves disease severity and dyspnea in patients with Coronavirus disease 2019 in a recent multicenter, open-label clinical trial	Not a randomized trial
Li 2020	Regarding ‚ÄúRuxolitinib in treatment of severe coronavirus disease 2019 (COVID-19): A¬†multicenter, single-blind, randomized controlled trial,‚Äù	Not a randomized trial
Rasmussen 2020	Pulmonary administration of remdesivir in the treatment of COVID-19	Not a randomized trial
Hacibekiro_lu 2020	Efficacy of convalescent plasma according to blood groups in COVID-19 patients	Not a randomized trial
López Zúñiga 2020	High-Dose Corticosteroid Pulse Therapy¬†Increases the Survival Rate in COVID-19 Patients at Risk of Cytokine Storm (preprint)	Not a randomized trial
Zhdanov 2020	Clinical efficacy and safety of nebulized prostacyclin in patients with sARs-CoV-2 (prospective comparative study). [Russian]	Not a randomized trial
Sinha 2020	Interleukin-6 Receptor Inhibitor Therapy Is Associated with Improved Outcomes in Patients with Severe COVID-19 Disease (preprint)	Not a randomized trial
Eslami 2020	The impact of sofosbuvir/daclatasvir or ribavirin in patients with severe COVID-19	Not a randomized trial
Qamar 2020	Protective Effects of CVD and DM Medications in SARS-CoV-2 Infection	Not a randomized trial
Hong 2020	Early Hydroxychloroquine Administration for Rapid Severe Acute Respiratory Syndrome Coronavirus 2 Eradication	Not a randomized trial

kamran 2020	Clearing the fog: Is HCQ effective in reducing COVID-19 progression: A randomized controlled trial (preprint)	Not a randomized trial
Xiong 2020	Efficacy of herbal medicine (Xuanfei Baidu decoction) combined with conventional drug in treating COVID-19:A pilot randomized clinical trial	Not a randomized trial
Pang 2020	Efficacy and tolerability of bevacizumab in patients with severe Covid -19	Not a randomized trial
Xue Ping 2020	Observation on the application of small and medium-dose glucocorticoids in the treatment of elderly patients with common new type coronavirus pneumonia	Not a randomized trial
Li Xingang 2020	Clinical study of glucocorticoids in the treatment of severe patients with new coronavirus pneumonia	Not a randomized trial
Awasthi 2021	Plasma IL-6 levels following corticosteroid therapy as an indicator of ICU length of stay in critically ill COVID-19 patients	Not a randomized trial
Cantarelli 2021	5PSQ-178,ÄÖHepatotoxicity associated with acute tocilizumab treatment in patients with SARS-CoV-2 infection	Not a randomized trial
Cabanov 2020	Treatment with tocilizumab does not inhibit induction of anti-COVID-19 antibodies in patients with severe SARS-CoV-2 infection	Not a randomized trial
Abolghasemi 2020	Clinical efficacy of convalescent plasma for treatment of COVID-19 infections: Results of a multicenter clinical study	Not a randomized trial
Govind 2020	Clozapine Treatment and Risk of COVID-19	Not a randomized trial
Gokhale 2020	Tocilizumab improves survival in patients with persistent hypoxia in severe COVID-19 pneumonia	Not a randomized trial
Guan 2020	Hydrogen/oxygen mixed gas inhalation improves disease severity and dyspnea in patients with Coronavirus disease 2019 in a recent multicenter, open-label clinical trial	Not a randomized trial
Bao 2020	Successful treatment of patients severely ill with COVID-19	Not a randomized trial
Chen 2020	Antiviral Activity and Safety of Darunavir/Cobicistat for Treatment of COVID-19	Not a randomized trial
Wu 2020	Identification and validation of a novel clinical signature to predict the prognosis in confirmed COVID-19 patients	Not a randomized trial
Salazar 2020	Treatment of Coronavirus Disease 2019 (COVID-19) Patients with Convalescent Plasma	Not a randomized trial
CallejasRubio 2020	Eficacia de los pulsos de corticoides en pacientes con sV≠ndrome de liberaciV≥n de citocinas inducido por infecciV≥n por SARS-CoV-2	Not a randomized trial
Zhang 2020	A comparative study on the time to achieve negative nucleic acid testing and hospital stays between Danoprevir and Lopinavir/Ritonavir in the treatment of patients with COVID-19	Not a randomized trial
LuisCallejasRubio 2020	De Los Pulsos De Corticoides En Pacientes Con SV≠ndrome De LiberaciV≥n De Citoquinas Inducido Por InfecciV≥n Por Sars-Cov-2	Not a randomized trial
Feily 2020	COVID-19: Pentoxifylline as a potential adjuvant treatment	Not a randomized trial
Hong 2020	Celebrex adjuvant therapy on COVID-19: An experimental study	Not a randomized trial
Havlichek 2020	A Trial of Lopinavir-Ritonavir in Covid-19	Not a randomized trial
Toniati 2020	Tocilizumab for the treatment of severe COVID-19 pneumonia with hyperinflammatory syndrome and acute respiratory failure: A single center study of 100 patients in Brescia, Italy	Not a randomized trial
Xiao Qi 2020	Analysis of the value of traditional Chinese medicine Shufeng Jiedu Capsules combined with Arbidol in the treatment of mild new coronavirus pneumonia	Not a randomized trial
Ankrum 2020	Can cell therapies halt cytokine storm in severe COVID-19 patients?	Not a randomized trial
Diurno 2020	Eculizumab treatment in patients with COVID-19: preliminary results from real life ASL Napoli 2 Nord experience	Not a randomized trial
Karaahmet 2020	Potential effect of natural and anabolizan steroids in elderly patient with COVID-19	Not a randomized trial
LabibSalem 2020	The possible beneficial adjuvant effect of Influenza vaccine to minimize the severity of COVID-19	Not a randomized trial
Cantini 2020	Baricitinib therapy in COVID-19: A pilot study on safety and clinical impact	Not a randomized trial

Liu 2020	Respiratory rehabilitation in elderly patients with COVID-19: A randomized controlled study	Not a randomized trial
Zhu 2020	Arbidol Monotherapy is Superior to Lopinavir/ritonavir in Treating COVID-19	Not a randomized trial
Zhou 2020	Interferon-a2b treatment for COVID-19	Not a randomized trial
Zha 2020	Corticosteroid treatment of patients with coronavirus disease 2019 (COVID-19)	Not a randomized trial
Ye 2020	Clinical efficacy of lopinavir/ritonavir in the treatment of Coronavirus disease 2019	Not a randomized trial
Xie 2020	Effect of regular intravenous immunoglobulin therapy on prognosis of severe pneumonia in patients with COVID-19	Not a randomized trial
Meng 2020	An experimental trial of recombinant human interferon alpha nasal drops to prevent coronavirus disease 2019 in medical staff in an epidemic area	Not a randomized trial
Mahevas 2020	No evidence of clinical efficacy of hydroxychloroquine in patients hospitalized for COVID-19 infection with oxygen requirement: results of a study using routinely collected data to emulate a target trial	Not a randomized trial
Gautret 2020	Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an open-label non-randomized clinical trial	Not a randomized trial
Cai 2020	Experimental Treatment with Favipiravir for COVID-19: An Open-Label Control Study	Not a randomized trial
Bian 2020	Meplazumab treats COVID-19 pneumonia: an open-labelled, concurrent controlled add-on clinical trial	Not a randomized trial
Lenkens 2020	[Medication and comedication in COVID-19 patients]	Not a randomized trial
Wang 2020	Efficacy and Safety of Leflunomide for Refractory COVID-19: An Open-label Controlled Study	Not a randomized trial
Boyko 2020	The first experience of using the drug Angiovit in the complex treatment of the acute stage of COVID-19 infection	Not a randomized trial
Myasnikov 2020	Efficacy of Interferon Gamma in the Prevention of SARS-CoV-2 Infection (COVID-19): Results of a Prospective Controlled Trial	Not a randomized trial
Selman 2020	Results of a Chilean Nation-Wide Network of Blood Banks for Convalescent Plasma Collection for Pandemic SARS-CoV-2 Treatment	Not a randomized trial
Liu 2020	The dual role of anti-viral therapy in the treatment of Coronavirus disease 2019.	Not a randomized trial
Karan 2020	Clinical outcomes in patients with COVID-19 infection during phase IV studies of cladribine tablets for treatment of multiple sclerosis	Not a randomized trial
Embase 2021	THERAPEUTIC EFFECT of VITAMIN A on COVID-19 PATIENTS and ITS PROPHYLACTIC EFFECT on CONTACTS	Not a randomized trial
Kara 2021	Effect of a single high dose of Vitamin D-3 on hospital length of stay in patients with moderate to severe COVID-19 A randomized clinical trial	Not a randomized trial
Sarmiento 2021	Ruxolitinib for Severe COVID-19-Related Hyperinflammation in Nonresponders to Steroids	Not a randomized trial
Gautret 2020	Hydroxychloroquine and Azithromycin as a treatment of COVID-19: preliminary results of an open-label non-randomized clinical trial	Not a randomized trial
Casadevall 2020	A Randomized Trial of Convalescent Plasma for COVID-19-Potentially Hopeful Signals	Not a randomized trial
Gautret 2021	Clinical efficacy and safety profile of hydroxychloroquine and azithromycin against COVID-19	Not a randomized trial
Dillon 2020	A real-world data study of coronavirus-2019 disease severity in patients with multiple sclerosis treated with ocrelizumab	Not a randomized trial
LeBon 2021	Efficacy and safety of oral corticosteroids and olfactory training in the management of COVID-19-related loss of smell.	Not a randomized trial
DiTano 2021	[The AFFIRM-AHF trial: results, impact of COVID-19 and clinical implications].	Not a randomized trial
Jiang 2020	A combination regimen by lopinave/litonawe, emtricitabine and tenofovir alafenamide fumarate for treatment of novel coronavirus pneumonia (TARCoV)	Not a randomized trial
Gonzalez-Castro 2021	Combined therapy of tocilizumab and corticosteroids in severe SARS-CoV-2 disease.	Not a randomized trial

Pandit 2021	Effectiveness and safety of thymosin alpha-1 in patients with severe COVID-19: A prospective open-label study	Not a randomized trial
Dal 2021	Covid-19 Clinical Course and Blood Groups: Turkish Population-Based Study	Not a randomized trial
Zolotovskaia 2021	[Post-COVID-19 asthenic syndrome]	Not a randomized trial
Carr 2020	A new clinical trial to test high-dose vitamin C in patients with COVID-19	Not a randomized trial
Andrani 2020	Effectiveness of helmet CPAP to reduce intubation and mortality rate in patients with COVID-19	Not a randomized trial
Aschieri 2020	Hospital mortality and safety of therapeutic vs. prophylactic doses of low molecular weight heparin in COVID-19 patients	Not a randomized trial
Karina 2021	Phase I/II Clinical Trial of Autologous Activated Platelet-Rich Plasma (aaPRP) in the Treatment of Severe Coronavirus Disease 2019 (COVID-19) Patients	Not a randomized trial
Gagneux-Brunon 2021	Acceptability of a COVID-19 pre-exposure prophylaxis trial with hydroxychloroquine in French healthcare workers during the first wave of COVID-19 pandemic	Not a randomized trial
Keyhani 2021	A telehealth-based randomized controlled trial: A model for outpatient trials of off-label medications during the COVID-19 pandemic.	Not a randomized trial
Gyselinck 2021	Correction to: Direct antivirals working against the novel coronavirus: azithromycin (DAWn-AZITHRO), a randomized, multicenter, open-label, adaptive, proof-of-concept clinical trial of new antivirals working against SARS-CoV-2-azithromycin trial.	Not a randomized trial
Terpos 2020	Rapid Reduction of Anti-Sars-Cov-2 Antibodies in Convalescent Plasma Donors;Results of a Phase 2 Clinical Study	Not a randomized trial
Hu Cong 2020	The clinical efficacy of high-dose or low-dose chloroquine diphosphate as an adjuvant treatment for hospitalized patients with novel coronavirus pneumonia	Not a randomized trial
NR 2020	Ruijin Hospital Affiliated to Shanghai Jiaotong University School of Medicine released the results of a multi-center clinical study of hydroxychloroquine in the treatment of novel coronavirus pneumonia %J Journal of Shanghai Jiaotong University (Medical Edition	Not a randomized trial
Wei Runan 2020	A multi-center, prospective study of early abidol + lopinavir/ritonavir + recombinant interferon α-2b combined antiviral therapy in patients with novel coronavirus pneumonia in Zhejiang Province	Not a randomized trial
Silveira 2021	Efficacy of Brazilian Green Propolis (EPP-AF¬Æ) as an adjunct treatment for hospitalized COVID-19 patients: a randomized, controlled clinical trial	Nutrition and supplements
dePaulaEduardo 2021	Salivary SARS-CoV-2 load reduction with mouthwash use: a randomized pilot clinical trial	Others
Sehgal 2021	A randomised trial of Mycobacterium w in critically ill patients with COVID-19: ARMY-1	Others
Carrouel 2021	Use of an antiviral mouthwash as a barrier measure in the sars-cov-2 transmission in adults with asymptomatic to mild COVID-19: a multicenter, randomized, double-blind controlled trial	Others
DiDomenico 2021	Effectiveness of hydrogen peroxide as auxiliary treatment for COVID-19 hospitalized patients - preliminary results of a randomized double-blind clinical trial	Others
Kosari 2021	The effect of propolis plus Hyoscyamus niger L. methanolic extract on clinical symptoms in patients with acute respiratory syndrome suspected to COVID-19: A clinical trial.	Others
Lin 2021	Mycobacterium vaccae Nebulization in the Treatment of COVID-19: A Randomized, Double-Blind, Placebo-Controlled Trial	Others
HannaHuang 2021	Use of Chlorhexidine to Eradicate Oropharyngeal SARS-CoV-2 in COVID-19 Patients.	Others
Guenezan 2021	Povidone Iodine Mouthwash, Gargle, and Nasal Spray to Reduce Nasopharyngeal Viral Load in Patients With COVID-19: A Randomized Clinical Trial.	Others
Gold 2020	Efficacy of m-Health for the detection of adverse events following immunization - The stimulated telephone assisted rapid safety surveillance (STARSS) randomised control trial	Others
Seneviratne 2020	Efficacy of commercial mouth-rinses on SARS-CoV-2 viral load in saliva: Randomized Control Trial in Singapore (preprint)	Others

Mohamed 2020	EARLY VIRAL CLEARANCE AMONG COVID-19 PATIENTS WHEN GARGLING WITH POVIDONE-IODINE AND ESSENTIAL OILS: A PILOT CLINICAL TRIAL (preprint)	Others
Tan Shigang 2020	Effect of Intravenous Lidocaine on Central Venous Puncture Analgesia in Cases of Suspected or Confirmed COVID-19	Others
Bretthauer 2020	Randomized Re-Opening of Training Facilities during the COVID-19 pandemic	Others
Mohammadzadeh 2020	Effectiveness of electronic health care and drug monitoring program to prevent COVID-19 and adherence to therapeutic regimen in patients with ischemic heart disease - A pilot study	Others
Wang Yali 2020	Preliminary clinical efficacy analysis of traditional Chinese medicine taken orally plus fumigation combined with super-high dose vitamin C in the treatment of new coronavirus pneumonia	Others
Kjellberg 2021	Randomised, controlled, open label, multicentre clinical trial to explore safety and efficacy of hyperbaric oxygen for preventing ICU admission, morbidity and mortality in adult patients with COVID-19	Oxygen delivery
Sozio 2021	CORonavirus-19 mild to moderate pneumonia Management with blood Ozonization in patients with Respiratory failure (CORMOR) multicentric prospective randomized clinical trial	Oxygen delivery
Adly 2021	Telemanagement of Home-Isolated COVID-19 Patients Using Oxygen Therapy With Noninvasive Positive Pressure Ventilation and Physical Therapy Techniques: Randomized Clinical Trial.	Oxygen delivery
Sahin 2021	Effectiveness of ozone therapy in addition to conventional treatment on mortality in patients with COVID-19.	Oxygen delivery
Kharat 2021	Self-proning in covid-19 patients on low-flow Oxygen therapy. A cluster randomised Controlled trial	Oxygen delivery
Grieco 2021	Effect of Helmet Noninvasive Ventilation vs High-Flow Nasal Oxygen on Days Free of Respiratory Support in Patients With COVID-19 and Moderate to Severe Hypoxemic Respiratory Failure: The HENIVOT Randomized Clinical Trial.	Oxygen delivery
Kharat 2021	Self-proning in COVID-19 patients on low-flow oxygen therapy: a cluster randomised controlled trial	Oxygen delivery
ProQuestCentral 2021	Self-proning in COVID-19 patients on low-flow oxygen therapy. A cluster randomised controlled trial	Oxygen delivery
Shah 2020	Safety and efficacy of ozone therapy in mild to moderate COVID-19 patients: A Phase 1/11 Randomized control Trial (SEOT study)	Oxygen delivery
Shogenova 2020	Effect of thermal helium-oxygen mixture on viral load in COVID-19	Oxygen delivery
Araimo 2020	Ozone as Adjuvant Support in the Treatment of COVID-19: A Preliminary Report of Probiozovid Trial	Oxygen delivery
Li Min 2020	Observation of the application effect of high-flow humidification oxygen therapy through the nose in the treatment of new coronavirus pneumonia complicated with acute respiratory failure	Oxygen delivery
Summer Games 2020	Comparison of the clinical effects of conventional nasal catheter oxygen inhalation and high-flow oxygen inhalation in the treatment of new coronavirus pneumonia	Oxygen delivery
Kienbacher 2021	The use of personal protection equipment does not impair the quality of cardiopulmonary resuscitation: A prospective triple-cross over randomised controlled non-inferiority trial	Personal protective equipment
Felinska 2021	Surgical Performance Is Not Negatively Impacted by Wearing a Commercial Full-Face Mask with Ad Hoc 3D-Printed Filter Connection as a Substitute for Personal Protective Equipment during the COVID-19 Pandemic: A Randomized Controlled Cross-Over Trial	Personal protective equipment
Bundgaard 2020	Effectiveness of Adding a Mask Recommendation to Other Public Health Measures to Prevent SARS-CoV-2 Infection in Danish Mask Wearers : A Randomized Controlled Trial.	Personal protective equipment
NoorAzhar 2020	COVID-19 aerosol box as protection from droplet and aerosol contaminations in healthcare workers performing airway intubation: a randomised cross-over simulation study	Personal protective equipment
Shaw 2020	Wearing of Cloth or Disposable Surgical Face Masks has no Effect on Vigorous Exercise Performance in Healthy Individuals	Personal protective equipment
Fong 2020	Impact of aerosol box on intubation during COVID-19: a simulation study of normal and difficult airways	Personal protective equipment

Madabhushi 2020	Time to adapt in the pandemic era: a prospective randomized non -inferiority study comparing time to intubate with and without the barrier box	Personal protective equipment
Hua 2020	Short-term skin reactions following use of N95 respirators and medical masks	Personal protective equipment
Pompeii 2020	Training and Fit Testing of Health Care Personnel for Reusable Elastomeric Half-Mask Respirators Compared With Disposable N95 Respirators	Personal protective equipment
Li 2020	The Effect of Cognitive Behavioral Therapy on Depression, Anxiety, and Stress in Patients With COVID-19: A Randomized Controlled Trial	Psychological and educational
Younie 2020	Improving young children's handwashing behaviour and understanding of germs: The impact of A Germ's Journey educational resources in schools and public spaces.	Psychological and educational
Zhu Xiaoqing 2020	Study on the application value of psychological nursing in pregnant women suspected of new coronavirus pneumonia	Psychological and educational
Suppan 2020	Effect of an E-Learning Module on Personal Protective Equipment Proficiency by Prehospital Personnel: Web-Based, Randomized Controlled Trial	Psychological and educational
Li 2020	COVID-19: Repeatedly Video-Watching vs Combined Video-Watching and Live Demonstration as Training to Healthcare Providers for Donning and Doffing Personal Protective Equipment	Psychological and educational
Mertes 2021	Liposomal encapsulation of trans-crocetin enhances oxygenation in patients with COVID-19-related ARDS receiving mechanical ventilation	Randomized trial with no results (e.g. trial registry)
Polineni 2021	A phase iia, double-blinded, randomized placebo-controlled trial of mapkapk2 inhibition by ati-450 in treatment of moderate-severe covid-19 pneumonia	Randomized trial with no results (e.g. trial registry)
Wolak 2021	Inhaled nitric oxide for the treatment of COVID-19 and other viral pneumonias in adults	Randomized trial with no results (e.g. trial registry)
Bosaeed 2021	Multicentre randomised double-blinded placebo-controlled trial of favipiravir in adults with mild COVID-19.	Randomized trial with no results (e.g. trial registry)
Lopes 2021	Randomized Clinical Trial to Evaluate a Routine Full Anticoagulation Strategy in Patients with Coronavirus Infection (SARS-CoV2) Admitted to Hospital: Rationale and Design of the ACTION (AntiCoagulaTlon cOroNavirus),ÄìCoalition IV Trial	Randomized trial with no results (e.g. trial registry)
McEneny-King 2021	Pharmacokinetic and Pharmacodynamic Evaluation of Ravulizumab in Adults with Severe Coronavirus Disease 2019.	Randomized trial with no results (e.g. trial registry)
Goldin 2021	Treatment-dose LMWH versus prophylactic/intermediate dose heparins in high risk COVID-19 inpatients: Rationale and design of the HEP-COVID Trial.	Randomized trial with no results (e.g. trial registry)
Chambers 2020	COVID-19-Associated Coagulopathy: Safety and Efficacy of Prophylactic Anticoagulation Therapy in Hospitalized Adults with COVID-19	Randomized trial with no results (e.g. trial registry)
Dummer 2020	Clinical Trial to Evaluate an Approved ITP Therapy Targeting Spleen Tyrosine Kinase (SYK) for Prevention and Treatment of COVID-19 Related Complications	Randomized trial with no results (e.g. trial registry)
Srivastava 2021	A double blinded placebo controlled comparative clinical trial to evaluate the effectiveness of Siddha medicines, Kaba Sura Kudineer (KSK) & Nilavembu Kudineer (NVK) along with standard Allopathy treatment in the management of symptomatic COVID 19 pat	Randomized trial with no results (e.g. trial registry)
Vanassche 2020	A randomized, open-label, adaptive, proof-of-concept clinical trial of modulation of host thromboinflammatory response in patients with COVID-19: the DAWn-Antico study (vol 21, 1005, 2020)	Randomized trial with no results (e.g. trial registry)
Devos 2020	Correction to: A randomized, multicentre, open-label phase II proof-of-concept trial investigating the clinical efficacy and safety of the addition of convalescent plasma to the standard of care in patients hospitalized with COVID-19: the Donated Antibodi	Randomized trial with no results (e.g. trial registry)
Sivapalan 2020	Proactive prophylaxis with azithromycin and hydroxychloroquine in hospitalized patients with COVID-19 (ProPAC-COVID): a statistical analysis plan	Randomized trial with no results (e.g. trial registry)
Fragoso-Saavedra 2020	A parallel-group, multicenter randomized, double-blinded, placebo-controlled, phase 2/3, clinical trial to test the efficacy of pyridostigmine bromide at low doses to reduce mortality or invasive mechanical ventilation in adults with severe SARS-CoV-2 inf	Randomized trial with no results (e.g. trial registry)
Li 2020	Convalescent Plasma Treatment in Severe and Life-Threatening COVID-19: A Randomized Controlled Clinical Trial	Randomized trial with no results (e.g. trial registry)

Takayama 2020	A multi-center, randomized controlled trial by the Integrative Management in Japan for Epidemic Disease (IMJEDI study-RCT) on the use of Kampo medicine, kakkonto with shosaikotokakikyosekko, in mild-to-moderate COVID-19 patients for symptomatic relief and	Randomized trial with no results (e.g. trial registry)
Center 2020	Pilot Randomized Controlled Trial: Fluoxetine to Reduce Hospitalization From COVID-19 Infection (FloR COVID-19)	Randomized trial with no results (e.g. trial registry)
Sheng 2020	Canakinumab to reduce deterioration of cardiac and respiratory function in SARS-CoV-2 associated myocardial injury with heightened inflammation (canakinumab in Covid-19 cardiac injury: The three C study)	Randomized trial with no results (e.g. trial registry)
Han 2020	RUXCOVID: A phase 3, randomized, placebo-controlled study evaluating the efficacy and safety of ruxolitinib in patients with COVID-19-associated cytokine storm	Randomized trial with no results (e.g. trial registry)
Strohbehn 2020	COVIDOSE: Low-dose tocilizumab in the treatment of COVID-19 pneumonitis	Randomized trial with no results (e.g. trial registry)
Liu 2020	Efficacy of chloroquine versus lopinavir/ritonavir in mild/general COVID-19 infection: a prospective, open-label, multicenter, randomized controlled clinical study	Randomized trial with no results (e.g. trial registry)
Feeney 2020	The COVIRL-001 Trial: A multicentre, prospective, randomised trial comparing standard of care (SOC) alone, SOC plus hydroxychloroquine monotherapy or SOC plus a combination of hydroxychloroquine and azithromycin in the treatment of non-critical, SARS-CoV	Randomized trial with no results (e.g. trial registry)
Plaze 2020	[Repurposing chlorpromazine to treat COVID-19: the reCoVery study]	Randomized trial with no results (e.g. trial registry)
Plaze 2020	Repurposing of chlorpromazine in COVID-19 treatment: the reCoVery study	Randomized trial with no results (e.g. trial registry)
Biosciences 2020	Efficacy and Safety Study of Allogeneic HB-adMSCs for the Treatment of COVID-19	Randomized trial with no results (e.g. trial registry)
Center 2020	COVID-19 Patient Positioning Pragmatic Trial	Randomized trial with no results (e.g. trial registry)
Center 2020	Hyperbaric Oxygen Therapy Effect in COVID-19 RCT (HBOTCOVID19)	Randomized trial with no results (e.g. trial registry)
Colombia 2020	Effectiveness and Safety of Medical Treatment for SARS-CoV-2 (COVID-19) in Colombia	Randomized trial with no results (e.g. trial registry)
Center 2020	Plasma Collection From Convalescent and/or Immunized Donors for the Treatment of COVID-19	Randomized trial with no results (e.g. trial registry)
Branch-Elliman 2020	Sarilumab for Patients With Moderate COVID-19 Disease: A Randomized Controlled Trial With a Play-The-Winner Design	Randomized trial with no results (e.g. trial registry)
Castello 2020	Pilot Study on Cytokine Filtration in COVID-19 ARDS	Randomized trial with no results (e.g. trial registry)
Center 2020	Ruxolitinib for Treatment of Covid-19 Induced Lung Injury ARDS	Randomized trial with no results (e.g. trial registry)
Zeng 2020	Comparative effectiveness and safety of ribavirin plus interferon-alpha, lopinavir/ritonavir plus interferon-alpha and ribavirin plus lopinavir/ritonavir plus interferon-alphain in patients with mild to moderate novel coronavirus pneumonia	Randomized trial with no results (e.g. trial registry)
Azhar 2020	Hydroxychloroquine, Oseltamivir and Azithromycin for the Treatment of COVID-19 Infection: An RCT	Randomized trial with no results (e.g. trial registry)
Alabama 2020	Trial of Hydroxychloroquine In Covid-19 Kinetics	Randomized trial with no results (e.g. trial registry)
Marshall 2020	A phase II trial to promote recovery from COVID-19 with endocrine therapy	Randomized trial with no results (e.g. trial registry)
Liu Huijun 2020	Clinical effect of dulaglutide injection in the treatment of new type of coronavirus pneumonia with type 2 diabetes	Randomized trial with no results (e.g. trial registry)
Bosaeed 2021	Favipiravir and Hydroxychloroquine Combination Therapy in Patients with Moderate to Severe COVID-19 (FACCT): An Open-Label, Multicentre, Randomised, Controlled Trial (preprint)	Removed from preprint server

Ibrahim 2020	Factors Associated with Good Patient Outcomes Following Convalescent Plasma in COVID-19: A Prospective Phase 2 Clinical Trial (preprint)	Removed from preprint server
Liu 2021	Combination of Hua Shi Bai Du Granule (Q-14) and Standard Care in the Treatment of Patients with Coronavirus Disease 2019 (COVID-19): A Single-center, Open-label, Randomized Controlled Trial	Traditional Chinese or alternative medicine
Al-Haidari 2021	Clinical trial of black seeds against covid ,Äì 19 in Kirkuk city/ Iraq	Traditional Chinese or alternative medicine
Nursilawatisyamsi 2021	The effectiveness of poly-herbal adjuvants for the standard treatment of COVID 19 in patients withmoderate degree	Traditional Chinese or alternative medicine
ArvindChopra 2021	Coadministration of AYUSH 64 as an adjunct to Standard of Care in mild and moderate COVID-19: A randomised, controlled, multicentric clinical trial	Traditional Chinese or alternative medicine
Feng 2021	Traditional Chinese Medicine Shenhuang Granule in Patients with Severe/Critical COVID-19: A Randomized Controlled Multicenter Trial	Traditional Chinese or alternative medicine
Babamahmoodi 2021	Effect of a herbal medicine containing Satureja hortensis L., Hypericum perforatum L. and foeniculum vulgare L. on patients with COVID-19 infection	Traditional Chinese or alternative medicine
Sanger 2021	A randomized controlled clinical trial to evaluate the potential of ayurvedic medicines in patients with mild symptoms of COVID-19	Traditional Chinese or alternative medicine
Ni 2021	Effects of Shuanghuanglian oral liquids on patients with COVID-19: a randomized, open-label, parallel-controlled, multicenter clinical trial	Traditional Chinese or alternative medicine
Xu 2021	Efficacy and safety of Reduning injection in the treatment of COVID-19: a randomized, multicenter clinical study.	Traditional Chinese or alternative medicine
Mesri 2021	The effects of combination of <i>Zingiber officinale</i> and Echinacea on alleviation of clinical symptoms and hospitalization rate of suspected COVID-19 outpatients: a randomized controlled trial.	Traditional Chinese or alternative medicine
Dutt 2021	A randomized and comparative study to assess safety and efficacy of supplemental treatment of a herbal formulation - Aayudh Advance comprising essential oils in patients with corona virus 2019 (COVID-19)	Traditional Chinese or alternative medicine
Rais 2021	A Randomized open label parallel group pilot study to evaluate efficacy of Ayurveda interventions in the management of Asymptomatic and Mild COVID-19 patients-Experiences of a Lucknow based Level 2 hospital of Uttar Pradesh, India	Traditional Chinese or alternative medicine
Devpura 2021	Randomized Placebo-Controlled Pilot Clinical Trial on the Efficacy of Ayurvedic Treatment Regime on COVID-19 Positive Patients	Traditional Chinese or alternative medicine
Luo 2021	The preventive effect of Xuebijing injection against Cytokine Storm for severe patients with COVID-19: a prospective randomized controlled trial	Traditional Chinese or alternative medicine
Chitra 2021	An Open Clinical Evaluation Of Selected Siddha Regimen In Expediting The Management Of Covid-19 ,ÄìA Randomized Controlled Study	Traditional Chinese or alternative medicine
JiaLiu 2021	Chinese medicine (Q-14) in the Treatment of Patients with Coronavirus Disease 2019 (COVID-19): A Single-center, Open label, Randomised Controlled Trial	Traditional Chinese or alternative medicine
Raj 2020	Effect of a novel ayurvedic preparation, Raj Nirvan Bati (rnb), on symptomatic patients of covid-19	Traditional Chinese or alternative medicine
Liu 2020	[Effect of moxibustion on clinical symptoms, peripheral inflammatory indexes and T lymphocyte subsets in COVID-19 patients]	Traditional Chinese or alternative medicine
Sardari 2021	Therapeutic effect of thyme (Thymus vulgaris) essential oil on patients with covid19: A randomized clinical trial	Traditional Chinese or alternative medicine
Rao 2020	AYUSH medicine as add-on therapy for mild category COVID-19; an open label randomised, controlled clinical trial.	Traditional Chinese or alternative medicine
Yan 2020	Effects and Safety of Herbal Medicines among Community-dwelling Residents during COVID-19 Pandemic: A Large Prospective, Randomized Controlled Trial (RCT)	Traditional Chinese or alternative medicine
Wanjarkhedkar 2020	A prospective clinical study of an Ayurveda regimen in COVID 19 patients	Traditional Chinese or alternative medicine
Ai 2020	Therapeutic effect of integrated traditional Chinese and western medicine on COVID-19 in Guangzhou	Traditional Chinese or alternative medicine
Zhou 2020	Clinical study on the treatment of patients with novel coronavirus pneumonia and asymptomatic infection with integrated traditional Chinese and western medicine	Traditional Chinese or alternative medicine

Chen 2020	The efficacy and safety of traditional Chinese medicines, modified Radix Fici Simplicissimae, combined with Western medicines amongst patients infected with the 2019 novel coronavirus (SARS-CoV-2) in tropical tourist area, China	Traditional Chinese or alternative medicine
Xiao 2020	Efficacy of Huoxiang Zhengqi dropping pills and Lianhua Qingwen granules in treatment of COVID-19: A randomized controlled trial	Traditional Chinese or alternative medicine
Yan 2020	Large-scale prospective clinical study on prophylactic intervention of COVID-19 in community population using Huoxiang Zhengqi Oral Liquid and Jinhao Jiere Granules. [Chinese]	Traditional Chinese or alternative medicine
Ai Xiangying 2020	Effect of Integrated Traditional Chinese and Western Medicine on T Lymphocyte Subsets of Patients with Normal Type of COVID-19	Traditional Chinese or alternative medicine
Shi Suofang 2020	Clinical Observation of the Rehabilitation Formula for Banking up Earth to Generate Metal in Treating COVID-19 Patients with Deficiency of Lung and Spleen Syndrome in the Recovery Stage	Traditional Chinese or alternative medicine
Wu Haiyan 2020	Effect of emotional care based on traditional Chinese medicine combining respiratory muscle training on depression and anxiety among patients with COVID-19	Traditional Chinese or alternative medicine
Wang 2020	Exploring an Integrative Therapy for Treating COVID-19: A Randomized Controlled Trial	Traditional Chinese or alternative medicine
Zhao 2020	Yidu-toxicity blocking lung decoction ameliorates inflammation in severe pneumonia of SARS-COV-2 patients with Yidu-toxicity blocking lung syndrome by eliminating IL-6 and TNF-a	Traditional Chinese or alternative medicine
Hu 2020	Efficacy and Safety of Lianhuaqingwen Capsules, a repurposed Chinese Herb, in Patients with Coronavirus disease 2019: A multicenter, prospective, randomized controlled trial	Traditional Chinese or alternative medicine
Ye 2020	Guideline-based Chinese herbal medicine treatment plus standard care for severe coronavirus disease 2019 (G-CHAMPS): evidence from China	Traditional Chinese or alternative medicine
Hu 2020	Chansu Injection Improves the Respiratory Function of Severe COVID-19 Patients	Traditional Chinese or alternative medicine
Wen 2020	[Effect of Xuebijing injection on inflammatory markers and disease outcome of coronavirus disease 2019]	Traditional Chinese or alternative medicine
Duan Can 2020	Clinical Observation of Jinhua Qinggan Granule in Treating Pneumonia Infected by Novel Coronavirus	Traditional Chinese or alternative medicine
Hu Fen 2020	Multi-center clinical observation of honeysuckle oral liquid combined with western medicine in the treatment of common type of COVID-19	Traditional Chinese or alternative medicine
Gupta 2021	Prospective, randomized, open-label, blinded end point, two-arm, comparative clinical study to evaluate the efficacy and safety of a Fixed Ayurvedic Regimen (FAR) as add-on to conventional treatment in the management of mild and moderate COVID-19 patients	Traditional Chinese or alternative medicine
Yu 2020	Effects of Lianhua Qingwen Granules Plus Arbidol on Treatment of Mild Corona Virus Disease-19. [Chinese]	Traditional Chinese or alternative medicine
Yan Bohua 2020	Large-sample prospective clinical study of Huoxiangzhengqi Oral Liquid and Jinhaojiere Granules in the preventive intervention of COVID-19 in the community %J Chinese Journal of Chinese Materia Medica	Traditional Chinese or alternative medicine
Sun Huimin 2020	Clinical Observation of Lianhua Qingke Granules in Treating Mild and Common New Type Coronavirus Pneumonia	Traditional Chinese or alternative medicine
Shi Suofang 2020	Clinical Study on Treatment of 30 Cases of Qi and Yin Deficiency Syndrome in the Recovery Period of Novel Coronavirus Pneumonia by Comprehensive Therapy of Traditional Chinese Medicine	Traditional Chinese or alternative medicine
Liu Lin 2020	Effect of moxibustion on clinical symptoms, peripheral blood inflammatory indexes and T lymphocyte subsets in patients with new coronavirus pneumonia	Traditional Chinese or alternative medicine
Huffin 2020	Multicenter clinical observation of honeysuckle oral liquid combined with western medicine in the treatment of common type of new coronavirus pneumonia	Traditional Chinese or alternative medicine
Zhang Youli 2020	Analysis of Clinical Efficacy of Honeysuckle Oral Liquid in the Treatment of 80 Cases of New Coronavirus Pneumonia	Traditional Chinese or alternative medicine
Ding Xiaojuan 2020	Clinical efficacy and mechanism of Qingfei Touxie Fuzheng Recipe in the treatment of new coronavirus pneumonia	Traditional Chinese or alternative medicine
Ding Xiaojuan 2020	Study on the Clinical Efficacy and Mechanism of Qingfei Toxie Fuzheng Decoction in the Treatment of Novel Coronavirus Pneumonia	Traditional Chinese or alternative medicine

Yu Ping 2020	Efficacy of Lianhua Qingwen Granules combined with Arbidol in the treatment of mild new coronavirus pneumonia	Traditional Chinese or alternative medicine
Duan Can 2020	Clinical Observation of Jinhua Qinggan Granules in Treating New Type Coronavirus Infected Pneumonia	Traditional Chinese or alternative medicine
Zhang Chuantao 2020	Clinical study on the treatment of new type of coronavirus pneumonia (COVID-19	Traditional Chinese or alternative medicine
Fu Xiaoxia 2020	Clinical Study on 37 Cases of Novel Coronavirus Pneumonia Treated by Integrated Traditional Chinese and Western Medicine	Traditional Chinese or alternative medicine
Yan Bohua 2020	Large-sample prospective clinical study on the preventive intervention of COVID-19 in the community by the combined use of Huoxiangzhengqi oral liquid and Jinhaojiere granules	Traditional Chinese or alternative medicine
Qiu Min 2020	Observation on the Efficacy of Maxing Xuanfei Jiedu Decoction in the Treatment of New Type Coronavirus Pneumonia	Traditional Chinese or alternative medicine
Wang Yali 2020	Preliminary clinical efficacy analysis of oral Chinese medicine plus fumigation combined with super-high dose vitamin C in the treatment of new coronavirus pneumonia	Traditional Chinese or alternative medicine
Sun Huimin 2020	Study on the clinical efficacy of Lianhua Qingke Granules in the treatment of mild and common new coronavirus pneumonia	Traditional Chinese or alternative medicine
Liu Mailan 2020	Research on the Significance and Operation Mode of Moxibustion Intervention for New Coronavirus Pneumonia Close Contact and Isolated Persons	Traditional Chinese or alternative medicine
Edara 2021	Infection and Vaccine-Induced Neutralizing-Antibody Responses to the SARS-CoV-2 B.1.617 Variants	Vaccine
Guo 2021	Safety and immunogenicity of an inactivated SARS-CoV-2 vaccine in healthy adults aged 18 years or older: A randomized, double-blind, placebo-controlled, phase 1/2 trial	Vaccine
Tanriover 2021	Efficacy and safety of an inactivated whole-virion SARS-CoV-2 vaccine (CoronaVac): interim results of a double-blind, randomised, placebo-controlled, phase 3 trial in Turkey	Vaccine
Hsieh 2021	Safety and immunogenicity of a Recombinant Stabilized Prefusion SARS-CoV-2 Spike Protein Vaccine (MVCCOV1901) Adjuvanted with CpG 1018 and Aluminum Hydroxide in healthy adults: A Phase 1, dose-escalation study	Vaccine
Heath 2021	Safety and Efficacy of NVX-CoV2373 Covid-19 Vaccine	Vaccine
Han 2021	Safety, tolerability, and immunogenicity of an inactivated SARS-CoV-2 vaccine (CoronaVac) in healthy children and adolescents: a double-blind, randomised, controlled, phase 1/2 clinical trial	Vaccine
Borobia 2021	Immunogenicity and reactogenicity of BNT162b2 booster in ChAdOx1-S-primed participants (CombiVacS): a multicentre, open-label, randomised, controlled, phase 2 trial	Vaccine
Frater 2021	Safety and immunogenicity of the ChAdOx1 nCoV-19 (AZD1222) vaccine against SARS-CoV-2 in HIV infection: a single-arm substudy of a phase 2/3 clinical trial	Vaccine
Pan 2021	Immunogenicity and safety of a severe acute respiratory syndrome coronavirus 2 inactivated vaccine in healthy adults: randomized, double-blind, and placebo-controlled phase 1 and phase 2 clinical trials.	Vaccine
Takuva 2021	Thromboembolic Events in the South African Ad26.COV2.S Vaccine Study.	Vaccine
AlKaabi 2021	Effect of 2 Inactivated SARS-CoV-2 Vaccines on Symptomatic COVID-19 Infection in Adults: A Randomized Clinical Trial	Vaccine
Madhi 2021	Efficacy of the ChAdOxl nCoV-19 Covid-19 Vaccine against the B.1.351 Variant	Vaccine
Barrett 2021	Author Correction: Phase 1/2 trial of SARS-CoV-2 vaccine ChAdOx1 nCoV-19 with a booster dose induces multifunctional antibody responses	Vaccine
Iannone 2021	Safety and efficacy of the BNT162b2 mRNA Covid-19 vaccine during Ixekizumab treatment for hidradenitis suppurativa	Vaccine
Ward 2021	Phase 1 randomized trial of a plant-derived virus-like particle vaccine for COVID-19.	Vaccine
Pimpinelli 2021	Fifth-week immunogenicity and safety of anti-SARS-CoV-2 BNT162b2 vaccine in patients with multiple myeloma and myeloproliferative malignancies on active treatment: preliminary data from a single institution.	Vaccine

Stephenson 2021	Immunogenicity of the Ad26.COV2.S Vaccine for COVID-19.	Vaccine
Freeman 2021	Effects of different types of written vaccination information on COVID-19 vaccine hesitancy in the UK (OCEANS-III): a single-blind, parallel-group, randomised controlled trial.	Vaccine
PhilipeGobeil 2021	Interim Report of a Phase 2 Randomized Trial of a Plant-Produced Virus-Like Particle Vaccine for Covid-19 in Healthy Adults Aged 18-64 and Older Adults Aged 65 and Older	Vaccine
Shinde 2021	Efficacy of NVX-CoV2373 Covid-19 Vaccine against the B.1.351 Variant.	Vaccine
Gras-Valenti 2021	[Effectiveness of the first dose of BNT162b2 vaccine to preventing covid-19 in healthcare personnel.]	Vaccine
Pan 2021	Immunogenicity and safety of a SARS-CoV-2 inactivated vaccine in healthy adults: randomized, double-blind, and placebo-controlled phase 1 and phase 2 clinical trials	Vaccine
Ella 2021	Safety and immunogenicity of an inactivated SARS-CoV-2 vaccine, BBV152: a double-blind, randomised, phase 1 trial (Jan, 10.1016/S1473-3099(20)30942-7, 2021)	Vaccine
Li 2021	Safety and immunogenicity of the SARS-CoV-2 BNT162b1 mRNA vaccine in younger and older Chinese adults: a randomized, placebo-controlled, double-blind phase 1 study.	Vaccine
Chappell 2021	Safety and immunogenicity of an MF59-adjuvanted spike glycoprotein-clamp vaccine for SARS-CoV-2: a randomised, double-blind, placebo-controlled, phase 1 trial.	Vaccine
Sadoff 2021	Safety and Efficacy of Single-Dose Ad26.COV2.S Vaccine against Covid-19.	Vaccine
Goepfert 2021	Safety and immunogenicity of SARS-CoV-2 recombinant protein vaccine formulations in healthy adults: interim results of a randomised, placebo-controlled, phase 1-2, dose-ranging study.	Vaccine
Ryzhikov 2021	A single blind, placebo-controlled randomized study of the safety, reactogenicity and immunogenicity of the "EpiVacCorona" Vaccine for the prevention of COVID-19, in volunteers aged 18-60 years (phase I-II) (vol 11, pg 283, 2021)	Vaccine
Ryzhikov 2021	A SINGLE BLIND, PLACEBO-CONTROLLED RANDOMIZED STUDY OF THE SAFETY, REACTOGENICITY AND IMMUNOGENICITY OF THE "EPIVACCORONA" VACCINE FOR THE PREVENTION OF COVID-19, IN VOLUNTEERS AGED 18-60 YEARS (PHASE I-II)	Vaccine
Voysey 2021	Single-dose administration and the influence of the timing of the booster dose on immunogenicity and efficacy of ChAdOx1 nCoV-19 (AZD1222) vaccine: a pooled analysis of four randomised trials (vol 397, pg 881, 2021)	Vaccine
Pu 2021	The safety and immunogenicity of an inactivated SARS-CoV-2 vaccine in Chinese adults aged 18-59 years: a phase I randomized, double-blinded, controlled trial	Vaccine
Kadali 2021	Adverse effects of COVID-19 mRNA-1273 vaccine: A randomized, cross-sectional study on healthcare workers with detailed self-reported symptoms.	Vaccine
Hong-XingPan 2021	Immunogenicity and Safety of a SARS-CoV-2 Inactivated Vaccine (KCONVAC) in Healthy Adults: Two Randomized, Double-blind, and Placebo-controlled Phase 1/2 Clinical Trials	Vaccine
SusanMBueno 2021	Interim Report: Safety And Immunogenicity Of An Inactivated Vaccine Against Sars-Cov-2 In Healthy Chilean Adults In A Phase 3 Clinical Trial	Vaccine
Emary 2021	Efficacy of ChAdOx1 nCoV-19 (AZD1222) vaccine against SARS-CoV-2 variant of concern 202012/01 (B.1.1.7): an exploratory analysis of a randomised controlled trial	Vaccine
Yang 2021	Safety and immunogenicity of a recombinant tandem-repeat dimeric RBD-based protein subunit vaccine (ZF2001) against COVID-19 in adults: two randomised, double-blind, placebo-controlled, phase 1 and 2 trials	Vaccine
Madhi 2021	Efficacy of the ChAdOx1 nCoV-19 Covid-19 Vaccine against the B.1.351 Variant	Vaccine
Stephenson 2021	Immunogenicity of the Ad26.COV2.S Vaccine for COVID-19	Vaccine
Logunov 2021	Safety and efficacy of an rAd26 and rAd5 vector-based heterologous prime-boost COVID-19 vaccine: an interim analysis of a randomised controlled phase 3 trial in Russia (vol 397, pg 671, 2021)	Vaccine
Ella 2021	Safety and immunogenicity of an inactivated SARS-CoV-2 vaccine, BBV152: interim results from a double-blind, randomised, multicentre, phase 2 trial, and 3-month follow-up of a double-blind, randomised phase 1 trial	Vaccine

ArturoChang-Monteagudo 2021	A single dose of SARS CoV 2 FINLAY FR 1A dimeric RBD recombinant vaccine enhances neutralization response in COVID19 convalescents, with excellent safety profile. A preliminary report of an open-label phase 1 clinical trial	Vaccine
VivekShinde 2021	Preliminary Efficacy of the NVX-CoV2373 Covid-19 Vaccine Against the B.1.351 Variant	Vaccine
Ramasamy 2020	Safety and immunogenicity of ChAdOx1 nCoV-19 vaccine administered in a prime-boost regimen in young and old adults (COV002): a single-blind, randomised, controlled, phase 2/3 trial (vol 396, pg 1979, 2020)	Vaccine
Voysey 2021	Single-dose administration and the influence of the timing of the booster dose on immunogenicity and efficacy of ChAdOx1 nCoV-19 (AZD1222) vaccine: a pooled analysis of four randomised trials	Vaccine
Chu 2021	A preliminary report of a randomized controlled phase 2 trial of the safety and immunogenicity of mRNA-1273 SARS-CoV-2 vaccine	Vaccine
Voysey 2021	Single Dose¬†Administration,¬†And¬†The¬†Influence Of¬†The¬†Timing Of¬†The¬†Booster Dose¬†On Immunogenicity and Efficacy Of¬†ChAdOx1 nCoV-19¬†(AZD1222)¬†Vaccine (preprint)	Vaccine
Emary 2021	Efficacy of ChAdOx1 nCoV-19¬†(AZD1222)¬†Vaccine Against SARS-CoV-2 VOC¬†202012/01¬†(B.1.1.7) (preprint)	Vaccine
Wu 2021	Safety, tolerability, and immunogenicity of an inactivated SARS-CoV-2 vaccine (CoronaVac) in healthy adults aged 60 years and older: a randomised, double-blind, placebo-controlled, phase 1/2 clinical trial	Vaccine
Chappell 2021	First Report of a Phase 1 Randomised Trial of Molecular Clamp-Stabilised Spike Protein-Based and MF59-Adjuvanted Vaccine for SARS-CoV-2 (preprint)	Vaccine
Logunov 2021	Safety and efficacy of an rAd26 and rAd5 vector-based heterologous prime-boost COVID-19 vaccine: an interim analysis of a randomised controlled phase 3 trial in Russia.	Vaccine
Voysey 2021	Safety and efficacy of the ChAdOx1 nCoV-19 vaccine (AZD1222) against SARS-CoV-2: an interim analysis of four randomised controlled trials in Brazil, South Africa, and the UK (vol 397, pg 99, 2021)	Vaccine
PaulRHunter 2021	Estimating the effectiveness of the Pfizer COVID-19 BNT162b2 vaccine after a single dose. A reanalysis of a study of 'real-world' vaccination outcomes from Israel.	Vaccine
Voysey 2021	Safety and efficacy of the ChAdOx1 nCoV-19 vaccine (AZD1222) against SARS-CoV-2: an interim analysis of four randomised controlled trials in Brazil, South Africa, and the UK	Vaccine
Richmond 2021	Safety and immunogenicity of S-Trimer (SCB-2019), a protein subunit vaccine candidate for COVID-19 in healthy adults: a phase 1, randomised, double-blind, placebo-controlled trial	Vaccine
Ella 2021	Safety and immunogenicity of an inactivated SARS-CoV-2 vaccine, BBV152: a double-blind, randomised, phase 1 trial.	Vaccine
Sadoff 2021	Interim Results of a Phase 1-2a Trial of Ad26.COV2.S Covid-19 Vaccine.	Vaccine
Folegatti 2020	Safety and immunogenicity of the ChAdOx1 nCoV-19 vaccine against SARS-CoV-2: a preliminary report of a phase 1/2, single-blind, randomised controlled trial (vol 396, pg 467, 2020)	Vaccine
Baden 2020	Efficacy and Safety of the mRNA-1273 SARS-CoV-2 Vaccine.	Vaccine
ShilongYang 2020	Safety and immunogenicity of a recombinant tandem-repeat dimeric RBD protein vaccine against COVID-19 in adults: pooled analysis of two randomized, double-blind, placebo-controlled, phase 1 and 2 trials	Vaccine
RachesElla 2020	Safety and immunogenicity clinical trial of an inactivated SARS-CoV-2 vaccine, BBV152 (a phase 2, double-blind, randomised controlled trial) and the persistence of immune responses from a phase 1 follow-up report	Vaccine
Folegatti 2020	Safety and immunogenicity of the ChAdOx1 nCoV-19 vaccine against SARS-CoV-2: a preliminary report of a phase 1/2, single-blind, randomised controlled trial.	Vaccine
Polack 2020	Safety and Efficacy of the BNT162b2 mRNA Covid-19 Vaccine	Vaccine
Voysey 2020	Safety and efficacy of the ChAdOx1 nCoV-19 vaccine (AZD1222) against SARS-CoV-2: an interim analysis of four randomised controlled trials in Brazil, South Africa, and the UK	Vaccine

Zhang 2020	Safety, tolerability, and immunogenicity of an inactivated SARS-CoV-2 vaccine in healthy adults aged 18-59 years: a randomised, double-blind, placebo-controlled, phase 1/2 clinical trial.	Vaccine
Ramasamy 2020	Safety and immunogenicity of ChAdOx1 nCoV-19 vaccine administered in a prime-boost regimen in young and old adults (COV002): a single-blind, randomised, controlled, phase 2/3 trial	Vaccine
Che 2020	Randomized, double-blinded and placebo-controlled phase II trial of an inactivated SARS-CoV-2 vaccine in healthy adults	Vaccine
Ward 2020	Phase 1 trial of a Candidate Recombinant Virus-Like Particle Vaccine for Covid-19 Disease Produced in Plants	Vaccine
Walsh 2020	Safety and Immunogenicity of Two RNA-Based Covid-19 Vaccine Candidates.	Vaccine
Xia 2020	Safety and immunogenicity of an inactivated SARS-CoV-2 vaccine, BBIBP-CorV: a randomised, double-blind, placebo-controlled, phase 1/2 trial	Vaccine
Pu 2020	An in-depth investigation of the safety and immunogenicity of an inactivated SARS-CoV-2 vaccine (preprint)	Vaccine
Anderson 2020	Safety and Immunogenicity of SARS-CoV-2 mRNA-1273 Vaccine in Older Adults	Vaccine
Sadoff 2020	Safety and immunogenicity of the Ad26.COV2.S COVID-19 vaccine candidate: interim results of a phase 1/2a, double-blind, randomized, placebo-controlled trial (preprint)	Vaccine
Keech 2020	Phase 1-2 Trial of a SARS-CoV-2 Recombinant Spike Protein Nanoparticle Vaccine	Vaccine
Walsh 2020	RNA-Based COVID-19 Vaccine BNT162b2 Selected for a Pivotal Efficacy Study (preprint)	Vaccine
Zhang 2020	Immunogenicity and Safety of a SARS-CoV-2 Inactivated Vaccine in Healthy Adults Aged 18-59 years: Report of the Randomized, Double-blind, and Placebo-controlled Phase 2 Clinical Trial (preprint)	Vaccine
Mulligan 2020	Phase 1/2 study of COVID-19 RNA vaccine BNT162b1 in adults	Vaccine
Xia 2020	Effect of an Inactivated Vaccine Against SARS-CoV-2 on Safety and Immunogenicity Outcomes: Interim Analysis of 2 Randomized Clinical Trials	Vaccine
Keech 2020	First-in-Human Trial of a SARS CoV 2 Recombinant Spike Protein Nanoparticle Vaccine (preprint)	Vaccine
Folegatti 2020	Safety and immunogenicity of the ChAdOx1 nCoV-19 vaccine against SARS-CoV-2: a preliminary report of a phase 1/2, single-blind, randomised controlled trial	Vaccine
Flaxman 2021	Tolerability and Immunogenicity After a Late Second Dose or a Third Dose of ChAdOx1 nCoV-19 (AZD1222) (preprint)	Vaccine
Folegatti 2020	Erratum: Department of Error (The Lancet (2020) 396(10249) (467,Äì478), (S0140673620316044), (10.1016/S0140-6736(20)31604-4))	Vaccine
Torres 2021	Effect of Physician-Delivered COVID-19 Public Health Messages and Messages Acknowledging Racial Inequity on Black and White Adults' Knowledge, Beliefs, and Practices Related to COVID-19: A Randomized Clinical Trial	Wrong population
Vandormael 2021	Effect of a wordless, animated, social media video intervention on COVID-19 prevention: an online randomized controlled trial of 15,163 adults in the USA, Mexico, UK, Germany, and Spain.	Wrong population
Wu 2021	Tolerability, Safety, Pharmacokinetics, and Immunogenicity of a Novel SARS-CoV-2 Neutralizing Antibody, Etesevimab in Chinese Healthy Adults: A Randomized, Double-Blind, Placebo-Controlled, First-In-Human Phase 1 Study.	Wrong population
Jaber 2021	Effect of the use of an endotracheal tube and stylet versus an endotracheal tube alone on first-attempt intubation success: a multicentre, randomised clinical trial in 999 patients.	Wrong population
Oakes 2021	Effect of Opt-In vs Opt-Out Framing on Enrollment in a COVID-19 Surveillance Testing Program: The COVID SAFE Randomized Clinical Trial.	Wrong population
Backer 2021	A randomized, double-blind, placebo-controlled phase 1 trial of inhaled and intranasal niclosamide: A broad spectrum antiviral candidate for treatment of COVID-19.	Wrong population
Bentur 2021	Phase 1 Randomized Placebo-Controlled Study in Healthy Adult Volunteers to Evaluate the Safety, Tolerability, and Pharmacokinetics of Orally Inhaled Aerosolized Hydroxychloroquine Sulfate ‚Äì A Potential Treatment for COVID-19	Wrong population

Fiol-DeRoque 2021	Effectiveness of a Mobile Phone-Based Intervention to Reduce Mental Health Problems in Healthcare Workers During the COVID-19 Pandemic: A Randomized Controlled Trial (PsyCovidApp Trial) (preprint)	Wrong population
Moisset 2021	Nasopharyngeal swab-induced pain for SARS-CoV-2 screening: a randomised controlled trial of conventional and self-swabbing.	Wrong population
Alsan 2020	Comparison of Knowledge and Information-Seeking Behavior After General COVID-19 Public Health Messages and Messages Tailored for Black and Latinx Communities : A Randomized Controlled Trial.	Wrong population
Ikonomidis 2020	Tocilizumab improves oxidative stress and endothelial glycocalyx: a mechanism that may explain the effects of biological treatment on COVID-19. (Special Issue: COVID-19 and treatments: particular emphasis on potential toxic effects.)	Wrong population
Frandell 2020	The Effects of Electronic Alert Letters in the Time of COVID-19 (preprint)	Wrong population
Duong-Quy 2020	The use of exhaled nitric oxide and peak expiratory flow to demonstrate improved breathability and antimicrobial properties of novel face mask made with sustainable filter paper and Folium Plectranthii amboinicii oil: additional option for mask shortage d	Wrong population
Schumacher 2020	The impact of respiratory protective equipment on difficult airway management: a randomised, crossover, simulation study	Wrong population
Villar 2020	Dexamethasone treatment for the acute respiratory distress syndrome: a multicentre, randomised controlled trial	Wrong population

Supplementary Table 1: Characteristics of included studies

Study	Publication status Registration	Number of participants	Country	Mean age	% Male	Comorbidities	Type of care	Severity	% Mechanical ventilation (baseline)	Detailed ventilation (%)	Treatments (dose and duration)	Outcomes
Adas, 2021[1]	Published NCT04392778	20	Turkey	56	63	NR	Inpatient Intensive care (100.0%)	Severe (100%) Severe: Critical (100.0%)	100	Iv (100.0%)	mesenchymal stem cells (3 x 10^6 cells/kg over three consecutive infusions on days 0, 3, 6) standard care	Mortality Adverse effects leading to discontinuation Duration of hospitalization ICU length of stay
Agarwal, 2020 PLACID[2]	Published CTRI/2020/04/024775	464	India	52	76.3	Tuberculosis (4.1%) Copd (3.2%) Coronary artery disease (6.9%) Cerebrovascular disease (0.9%) Diabetes (43.1%) Hypertension (37.3%)	Inpatient	Mild/Moderate (100.0%)	0.2	Supplemental oxygen (21.7%) High-flow or niv (0.2%)	convalescent plasma (200 mL given twice) standard care	Mortality Mechanical ventilation Viral clearance Duration of hospitalization
AlQahtani, 2021[3]	Published NCT04356534	40	Bahrain	51.6	80	Chronic lung disease (7.5%) Cardiac diseases (10.0%) Diabetes (40.0%) Hypertension (25.0%)	Inpatient	Severe (100%) Severe: Critical (7.5%)	10	Nasal cannula or face mask (90.0%) Nonrebreather mask or high-flow (10.0%) Niv or iv (0.0%)	convalescent plasma (200mL over 2 hours daily x 2 days) standard care	Mortality Mechanical ventilation Duration of hospitalization Duration of ventilation
Ali, 2021[4]	Published NCT04521309	50	Pakistan	56.5	70	Chronic lung disease (10.0%) Cardiac disease (8.0%) Diabetes (36.0%) Hypertension (52.0%)	Inpatient	Severe (100%) Severe: Critical (56.0%)	56	Supplemental oxygen (44.0%) Niv or hfo (54.0%) Iv (2.0%)	anti-COVID intravenous immunoglobulin (0.15 g/kg) anti-COVID intravenous immunoglobulin (0.2 g/kg) anti-COVID intravenous immunoglobulin (0.25 g/kg) anti-COVID intravenous immunoglobulin (0.3 g/kg) standard care	Mortality Mechanical ventilation Duration of hospitalization Duration of ventilation Time to symptom/clinical improvement Time to to viral clearance

Avendano-Sola, 2020 ConPlas-19[5]	Pre-print NCT04345523	81	Spain	60.8	54.3	Chronic lung disease (12.3%) Cardiovascular disease (18.5%) Diabetes (21.0%) Hypertension (39.5%)	Inpatient	Severe (100%)	NR	Supplemental oxygen (71.6%)	convalescent plasma (250-300 mL given once) standard care	Mortality Mechanical ventilation Viral clearance TRALI Duration of hospitalization Ventilator-free days Duration of ventilation Time to symptom/clinical improvement
Bajpai, 2020[6]	Pre-print NCT04346446	31	India	48.2	75.9	Cardiopulmonary (0.0%) Copd (0.0%) Coronary artery disease (0.0%)	Inpatient	Severe (100%)	NR	Supplemental oxygen (100.0%)	convalescent plasma (250 mL given twice on consecutive days) fresh frozen plasma (250 mL given twice on consecutive days)	Mortality Mechanical ventilation Allergic reactions Duration of hospitalization ICU length of stay
Balcells, 2021[7]	Published NCT04375098	58	Chile	65.8	50	Asthma (5.2%) Cerebrovascular disease (5.2%) Diabetes (36.2%) Hypertension (67.2%)	Inpatient	NR	0	Supplemental oxygen (79.3%) Mechanical ventilation (0.0%)	convalescent plasma (early) (2 units of 200 mL separated by 24h) convalescent plasma (deferred) (2 units of 200 mL separated by 24h)	Mortality Mechanical ventilation Adverse effects leading to discontinuation Viral clearance TRALI Duration of hospitalization ICU length of stay Duration of ventilation
Bandopadhyay, 2020[8]	Pre-print CTRI/2020/05/025209	33	India	55	82.6	NR	Inpatient	Mild/Moderate (28.3%) Severe: Critical (71.7%)	NR	NR	convalescent plasma (200 mL given twice) standard care	NR
Bennett-Guerrero, 2021 Stony Brook Medicine COVID Plasma Trial[9]	Published NCT04344535	74	United States	66.4	59.5	Chronic obstructive pulmonary disease (12.2%) Chronic heart failure (17.6%) Coronary artery disease, coronary artery bypass graft surgery,percutaneous coronary intervention, myocardial infarction (20.3%)	Inpatient Intensive care (27.0%)	NR	25.7	Nasal cannula or mask (46.0%) High-flow or continuous positive airway pressure/bi level positive airway pressure (6.8%) Iv (18.9%)	convalescent plasma (single dose of 2 U over 1–4 hours, total volume approximately 480 mL) standard plasma (single dose of 2 U over 1–4 hours, total volume approximately 480 mL)	Mortality Adverse effects leading to discontinuation Allergic reactions Ventilator-free days

						Diabetes (33.8%) Hypertension (68.9%)						
Bégin, 2021 CONCOR-1[10]	Pre-print NCT04348656	940	Canada, United States, Brazil	67.5	59.1	Respiratory diseases (24.1%) Cardiac disease (62.0%) Diabetes (35.0%)	Inpatient	Severe (100%)	NR	Supplemental oxygen (100.0%) Intubation (0.0%)	convalescent plasma (500 mL from one or two donors) standard care	Mortality TRALI TACO Allergic reactions Duration of hospitalization ICU length of stay Ventilator-free days
Carmenate, 2021 SENTAD-COVID[11]	Pre-print NCT04473170	141	United Arab Emirates	45.1	92.8	Chronic smoking and asthma (10.8%) Cardiovascular disease and dyslipidemia (9.3%) Diabetes (22.3%) Hypertension (26.6%)	Inpatient	Mild/Moderate (68.3%)	31.7	Oxygen by mass or nasal prongs (12.9%) Niv or hfo (7.2%) Iv (2.2%) Ventilation plus additional support, including vasopressor, renal replacement therapy, or extracorporeal membrane oxygenation (22.3%)	nebulized peripheral blood non-hematopoietic enriched stem cells (two doses of nebulized cells on days 0 and 1) standard care	Mortality
Chen_1, 2020 BLAZE-1[12]	Published NCT04427501	459	United States	45.3	44.9	NR	Outpatient	Mild/Moderate (100.0%)	0	Mechanical ventilation (0.0%)	bamlanivimab (700 mg single intravenous infusion over 1 hour) bamlanivimab (2800 mg single intravenous infusion over 1 hour) bamlanivimab (7000 mg single intravenous infusion over 1 hour) placebo	Mortality Admission to hospital Adverse effects leading to discontinuation Allergic reactions
Chew, 2021 ACTIV-2/A5401[13]	Data from authors NCT04518410	0	United States	44	47	NR	Outpatient	NR	0	Unspecified ventilation (0.0%)	bamlanivimab (7000 mg single dose) placebo	NR

Dougan, 2021 BLAZE-1[14]	Published NCT04427501	1035	United States	53.8	48	Copd (8.1%) Cardiovascular disease (7.3%) Diabetes (27.5%) Hypertension (33.5%)	Outpatient	Mild/Moderate (100.0%)	0	Iv (0.0%)	bamlanivimab, estesevimab (2800 mg of each single dose) placebo	Mortality Admission to hospital Duration of hospitalization Time to symptom/clinical improvement Time to to viral clearance
Eom, 2021[15]	Pre-print NCT04602000 ; EudraCT: 2020-003369-20	327	South Korea, Romania, Spain, and United States	51.3	48.6	Uncontrolled copd (0.0%) Uncontrolled brochiectasis (0.0%) Uncontrolled asthma (0.0%) Congestive heart failure (0.0%) Uncontrolled diabetes (0.0%) Uncontrolled hypertension (0.0%)	Outpatient	Mild/Moderate (100.0%)	0	Unspecified ventilation (0.0%)	CT-P59 monoclonal antibody (40 mg/kg single dose via intravenous infusion over 90 ± 15 mins) CT-P59 monoclonal antibody (80 mg/kg single dose via intravenous infusion over 90 ± 15 mins) placebo	Mortality Mechanical ventilation Admission to hospital Viral clearance Allergic reactions Time to symptom/clinical improvement Time to to viral clearance
Estcourt, 2021 REMAP-CAP[16]	Pre-print NCT02735707	2000	Australia, Canada, United Kingdom, United States	60.2	67.7	Asthma/copd (19.4%) Respiratory disease (23.2%) Severe cardiovascular disease (8.4%) Diabetes (30.6%)	Inpatient Intensive care (100.0%)	Severe (100%)	77.8	None/ supplementary oxygen (0.1%) Hfo (21.9%) Niv (45.3%) Iv (32.5%) Ecmo (0.1%)	convalescent plasma (550 ± 150 mL within 48 hours of randomization) standard care	Mortality Allergic reactions Ventilator-free days
Faqihi, 2021[17]	Published ISRCTN21363594	87	Saudi Arabia	48.5	82.8	Coronary artery disease (2.3%) Diabetes (20.7%) Hypertension (40.2%)	Inpatient Intensive care (100.0%)	Severe (100%) Severe: Critical (100.0%)	100	Iv (100.0%)	therapeutic plasma exchange (1 unit daily up to 5 doses) standard care	Mortality Adverse effects leading to discontinuation Allergic reactions ICU length of stay Duration of ventilation
Gaborit, 2021 POLYCOR[18]	Pre-print NCT04453384	18	France	71	64.7	Asthma (17.6%) Cardiovascular/ cerebrovascular disease (29.4%) Diabetes (11.8%) Hypertension (47.1%)	Inpatient	Mild/Moderate (100.0%)	5.9	Supplemental oxygen (82.3%) Niv or high flow oxygen (5.9%)	XAV-19 (0.5 mg/kg at day 1 and day 5) XAV-19 (2 mg/kg at day 1 and day 5) XAV-19 (2 mg/kg at day 1) placebo	Mortality Mechanical ventilation Adverse effects leading to discontinuation Viral clearance Allergic reactions Duration of hospitalization

Gharbharan, 2021 ConCOVID[19]	Published NCT04342182	86	Netherlands	62	72.1	Pulmonary (26.7%) Cardiac (23.3%) Diabetes (24.4%) Hypertension (25.6%)	Inpatient Intensive care (15.1%)	Severe (100%) Severe: Critical (15.1%)	90.7	Supplemental oxygen, high-flow, or niv (75.6%) Iv or ecmo (15.1%)	convalescent plasma (1 unit single tranfusion with possibility of a second unit after 5 days for patients without clinical response and a persistently positive RT-PCR) standard care	Mortality Duration of hospitalization
Gharebaghi, 2020[20]	Published IRCT20200501047259N1	59	Iran	56	69.5	Chronic lung disease (3.4%) Tuberculosis (0.0%) Pulmonary fibrosis (0.0%) Diabetes (27.1%) Hypertension (22.0%)	Inpatient	Severe (100%)	NR	NR	intravenous immunoglobulin (4 x of 5 g (total 20 g) daily for three consecutive days) placebo	Mortality Duration of hospitalization ICU length of stay
Gonzalez, 2021[21]	Pre-print NCT04381858	190	Mexico	58	62.6	Pulmonary disease (4.7%) Heart disease (3.2%) Diabetes (34.7%) Hypertension (35.3%)	Inpatient	Severe (100%)	100	Invasive mechanical ventilation (85.3%) High-flow oxygen (14.7%)	convalescent plasma (200 mL in 2 hours for 2 days) intravenous immunoglobulin (0.3 g/kg 8-hour infusion every 24 hours for 5 days)	Mortality Adverse effects leading to discontinuation Allergic reactions
Gottlieb, 2021 BLAZE-1[22]	Published NCT04427501	592	United States	44.7	45.4	NR	Outpatient	Mild/Moderate (99.5%)	0	Unspecified ventilation (0.0%)	bamlanivimab (700 mg given as a single, 1-hour, intravenous infusion) bamlanivimab (2800 mg given as a single, 1-hour, intravenous infusion) bamlanivimab (7000 mg given as a single, 1-hour, intravenous infusion) bamlanivimab, etesevimab (2800 mg of each given as a single, 1-hour, intravenous infusion) placebo	Viral clearance Allergic reactions Time to symptom/clinical improvement Time to to viral clearance
Gupta, 2021 COMET-ICE[23]	Pre-print NCT04545060	868	United States, Canada, Brazil, Spain	53	45.6	Chronic obstructive pulmonary disease; 15.8 (4.1%) Congestive heart failure; new york heart association class ii or more (0.7%) Diabetes (22.6%)	Outpatient	NR	0	Supplemental oxygen, niv, iv (0.0%)	sotrovimab (single 500 mg, 1-hour infusion) placebo	Mortality Mechanical ventilation Admission to hospital Allergic reactions

Hamdy Salman, 2020[24]	Published NCT04530370	30	Egypt	57.5	70	Bronchial asthma (16.7%) Cerebrovascular disease (43.3%) Diabetes (30.0%)	Inpatient	Severe (100%)	0	Oxygen therapy (100.0%) Iv (0.0%) Ecmo (0.0%)	convalescent plasma (250 mL single dose) standard care	Mechanical ventilation Viral clearance TRALI TACO Allergic reactions
Horby_1, 2021 RECOVERY[25]	Published NCT04381936	11558	United Kingdom	63.5	64.3	Chronic lung disease (23.5%) Tuberculosis (0.4%) Heart disease (22.3%) Diabetes (26.9%)	Inpatient	NR	92.2	Supplemental oxygen and/or high-flow (86.9%) Iv (5.3%)	convalescent plasma (275 mL ± 75 mL given twice intravenously, the first as soon as possible after randomisation and the second (from a different donor) the following day and at least 12 hours after the first) standard care	Mortality Mechanical ventilation Allergic reactions Duration of hospitalization
Horby_2, 2021 RECOVERY[26]	Pre-print NCT04381936	9785	United Kingdom, Indonesia, Nepal	61.9	62.6	Chronic lung disease (22.9%) Tuberculosis (0.3%) Heart disease (21.4%) Diabetes (26.3%)	Inpatient	NR	32.2	Supplementary oxygen (61.3%) Niv (26.2%) Niv (6.0%)	casirivimab, imdevimab (4 g each, single dose) standard care	Mortality Mechanical ventilation Allergic reactions Duration of hospitalization
Korper, 2021 CAPSID[27]	Pre-print NCT04433910, EudraCT 2020-001310-38	105	Germany	60	73.3	Copd, asthma, other pulmonary disease (16.2%) Cardiovascular disease (21.9%) Diabetes (31.4%) Hypertension (56.2%)	Inpatient	Severe (100%)	93.4	Supplemental oxygen or niv (59.1%) Iv (34.3%)	convalescent plasma (one unit of 250 to 325 mL on day 1, 3 and 5) standard care	Mortality Adverse effects leading to discontinuation Viral clearance Duration of hospitalization ICU length of stay Time to symptom/clinical improvement Time to to viral clearance
Lanzoni, 2020[28]	Published NCT04355728	24	United States	58.7	54.2	Heart disease (12.5%) Diabetes (45.8%) Hypertension (66.7%)	Inpatient	Severe (100%) Severe: Critical (100.0%)	45.8	High-flo, cpap, or bipap (54.2%) Iv, (45.8%)	umbilical cord mesenchymal stem cells (two intravenous infusions of 100±20 x10^6 cells, at 24 hours from randomization and the second 72±6 hours thereafter; 50 mL infused intravenously over 10±5 mins) placebo	Mortality Time to symptom/clinical improvement
Li, 2020[29]	Published ChiCTR2000029757	103	China	70	58.3	Cardiovascular disease (25.2%) Cerebrovascular disease (17.5%) Severe congestive heart failure (0.0%) Diabetes	Inpatient	Severe (100%) Severe: Critical (56.3%)	68.3	Supplemental oxygen (29.7%) High-flow and/or niv (43.6%) Iv or ecmo (24.8%)	convalescent plasma (4 to 13 mL/kg of recipient body weight; 10 mL for the first 15 minutes, which was then increased to approximately 100 mL per hour with close monitoring) standard care	Mortality Allergic reactions Duration of hospitalization Time to symptom/clinical improvement

						(20.4%) Hypertension (54.4%)						
Libster, 2020 Fundacion INFANT-COVID-19[30]	Published NCT04479163	160	Argentina	77.2	37.5	Copd (4.4%) Asthma or other respiratory disease (3.8%) Cardiovascular disease (13.2%) Diabetes (22.6%) Hypertension (71.2%)	Outpatient	Mild/Moderate (100.0%)	0	Supplemental oxygen or mechanical ventilation (0.0%)	convalescent plasma (250 mL over 1.5 to 2 hours) placebo	Mortality Mechanical ventilation TACO Allergic reactions
Lopardo, 2021[31]	Published NCT04494984	245	Argentina	54	65.2	Lung disease (10.4%) Cardiovascular disease (44.8%) Diabetes (23.7%) Hypertension (32.8%)	Inpatient	Mild/Moderate (61.0%) Severe (39.0%)	2.9	Supplemental oxygen (51.9%) Niv or high-flow (2.9%) Iv (0.0%)	purified equine anti-RBD F(ab´)2 fragments (INM005) (two doses of 4 mg/kg separated by 48 hours) placebo	Mortality Adverse effects leading to discontinuation ICU length of stay Duration of ventilation Mechanical ventilation Duration of hospitalization Time to symptom/clinical improvement
Lundgren, 2020 ACTIV-3/TICO[32]	Published NCT04501978	326	United States, Denmark, Singapore	61	56.4	Asthma (8.9%) Copd (5.7%) Mi or acute coronary syndrome (3.2%) Heart failure (4.1%) Cerebrovascular disease (1.3%) Diabetes requiring medication (28.7%) Hypertension requiring medication (49.0%)	Inpatient	Severe (100%)	15.3	Supplemental oxygen (57.3%) High-flow or niv (15.3%) Iv or ecmo, (0.0%)	bamlanivimab (LY-CoV555, 7000 mg single intravenous infusion over 1 hour) placebo	Mortality Mechanical ventilation Allergic reactions Duration of hospitalization

O'Brien_1, 2021[33]	Pre-print NCT04452318	311	United States, Romania, Moldova	40.9	45.4	Diabetes (7.7%)	Outpatient	Mild/moderate (100%)	0	Supplementary oxygen, Niv, Iv (0%)	casirivimab, imdevimab (1200 mg each, single infusion) placebo	Mortality Admission to hospital Allergic reactions Time to symptom/clinical improvement
O'Donnell, 2021[34]	Published NCT04359810	223	United States, Brazil	61	65.9	Chronic pulmonary disease (9.0%) Chronic cardiac disease (37.7%) Diabetes (36.8%) Hypertension (33.6%)	Inpatient	Severe (100%)	37.2	Supplemental oxygen (56.5%) High-flow or noninvasive ventilation (24.7%) Invasive ventilation or ecmo (12.6%)	convalescent plasma (1 unit single transfusion) control plasma (1 unit single transfusion)	Mortality Mechanical ventilation TACO Allergic reactions Duration of hospitalization Time to symptom/clinical improvement
Pouladzadeh, 2021[35]	Published IRCT20200310046736N1	62	Iran	55.4	55	NR	Inpatient	Severe (100%)	NR	NR	convalescent plasma (500 mL with possible second dose 24h apart) standard care	Mortality Mechanical ventilation Duration of hospitalization
Raman, 2021[36]	Published CTRI/2020/06/026222	100	India	48.7	33	Diabetes (27.0%) Hypertension (31.0%)	Inpatient	Mild/Moderate (100.0%)	0	Mechanical ventilation (0.0%)	intravenous immunoglobulin (0.4 g/kg body weight for 5 days) standard care	Mortality Adverse effects leading to discontinuation Viral clearance Duration of hospitalization ICU length of stay Duration of ventilation Time to symptom/clinical improvement Time to to viral clearance Mechanical ventilation
Ray, 2020[37]	Pre-print CTRI/2020/05/025209	80	India	61.4	71.2	NR	Inpatient	Severe (100%) Severe: Critical (100.0%)	0	Mechanical ventilation (0.0%)	convalescent plasma (200 mL given twice over 2 days) standard care	Mortality Duration of hospitalization

Sakoulas, 2020[38]	Published NCT04411667	34	United States	54	60.6	Asthma/copd (12.1%) Coronary artery disease (6.1%) Congestive heart failure (6.1%) Diabetes (36.4%) Hypertension (33.3%)	Inpatient Intensive care (12.1%)	NR	0	Mechanical ventilation (0.0%)	intravenous immunoglobulin (0.5 g/kg daily for 3 days) standard care	Mortality Mechanical ventilation Adverse effects leading to discontinuation Allergic reactions Duration of hospitalization ICU length of stay Duration of ventilation
Sekine, 2021 PLACOVID[39]	Published NCT04547660	160	Brazil	60.5	58.1	Chronic pulmonary disease (13.8%) Cardiovascular disease (21.9%) Diabetes (39.4%) Hypertension (61.2%)	Inpatient Intensive care (66.3%)	Severe (100%) Severe: Critical (66.3%)	75	Supplemental oxygen (32.5%) High-flow or niv (32.5%) Iv or ecmo (42.5%)	convalescent plasma (300 mL given twice 48 hours apart) standard care	Mortality Mechanical ventilation Viral clearance Allergic reactions Duration of hospitalization Ventilator-free days
Shi, 2020[40]	Pre-print NCT04288102	101	China	60.5	56	Chronic bronchitis (5.0%) Copd (2.0%) Diabetes (17.0%) Hypertension (27.0%)	Inpatient	Severe (100%)	1	Supplemental oxygen (75.0%) High-flow or niv (1.0%) Iv (0.0%)	umbilical cord mesenchymal stem cells (4×10^7 cells given on days 0, 3, and 6) placebo	Mortality Mechanical ventilation
Shu, 2020[41]	Published ChiCTR2000031494	41	China	58.8	58.5	Diabetes (19.5%) Hypertension (21.9%)	Inpatient	Severe (100%)	24.4	High-flow or niv (24.4%) Iv or ecmo (0.0%)	umbilical cord mesenchymal stem cells (2×10^6 cells/kg given intravenously over 1 h) standard care	Mortality Mechanical ventilation TRALI TACO Allergic reactions Duration of hospitalization Time to symptom/clinical improvement
Simonovich, 2020 PlasmAr[42]	Published NCT04383535	334	Argentina	62.3	67.6	Copd (7.5%) Asthma (4.2%) Congestive heart failure (3.3%) Diabetes (18.3%) Hypertension (47.8%)	Inpatient Intensive care (27.6%)	Severe (100%)	5.4	Low-flow nasal cannula (64.9%) Venturi or nonrebreather mask (19.5%) High-flow (5.4%) Niv (0.0%)	convalescent plasma (5-10 mL/kg, with an inferior limit around 400 mL for patients whose body weight was below 70 kg and a superior limit of 600 mL for those above 70 kg) placebo	Mortality Mechanical ventilation TRALI TACO Allergic reactions Duration of hospitalization ICU length of stay Time to symptom/clinical improvement

Tabarsi, 2020[43]	Published IRCT20151227025726N20	84	Iran	53.6	77.4	Copd (1.2%) Ischemic heart disease (6.0%) Diabetes (21.4%) Hypertension (20.2%)	Inpatient	Severe (100%)	NR	NR	intravenous immunoglobulin (400 mg/kg daily for three doses) standard care	Mortality Mechanical ventilation Duration of hospitalization ICU length of stay
Weinreich_2_1, 2021[44]	Pre-print NCT04425629	3029	United States	50	47.8	NR	Outpatient	NR	NR	NR	casirivimab, imdevimab (2400 mg each, single infusion) placebo	Mortality Mechanical ventilation Admission to hospital Adverse effects leading to discontinuation Allergic reactions Duration of hospitalization Time to symptom/clinical improvement
Weinreich_2_2, 2021[44]	Pre-print NCT04425629	1678	United States	48.2	48.2	NR	Outpatient	NR	NR	NR	casirivimab, imdevimab (1200 mg each, single infusion) placebo	Mortality Mechanical ventilation Admission to hospital Adverse effects leading to discontinuation Allergic reactions Duration of hospitalization Time to symptom/clinical improvement
Weinreich_2_3, 2021[44]	Pre-print NCT04425629	1360	United States	50.5	49.7	NR	Outpatient	NR	NR	NR	casirivimab, imdevimab (8000 mg each, single infusion) placebo	Mortality Admission to hospital Adverse effects leading to discontinuation Allergic reactions
Weinreich_3, 2021[45]	Pre-print NCT04425629	799	United states, Romania	42	47.1	NR	Outpatient	NR	NR	NR	casirivimab, imdevimab (2400 mg each, single infusion) casirivimab, imdevimab (8000 mg each, single infusion) placebo	Mortality Admission to hospital Adverse effects leading to discontinuation Allergic reactions
Zambrano, 2020 SENTAD-COVID[46]	Pre-print NCT04473170	139	United Arab Emirates	45.1	92.8	Respiratory condition (5.0%) Cardiovascular disease (2.2%) Diabetes (22.3%) Hypertension (26.6%)	Inpatient	NR	31.6	Supplemental oxygen (13.7%) High-flow or niv (6.5%) Iv (3.6%) Mechanical ventilation and additional organ support:	nebulized peripheral blood non-hematopoietic enriched stem cells (two nebulizations of 10 cc, in two consecutive days) standard care	Mortality Duration of hospitalization

										ecmo, crrt, vasopressors (21.6%)		

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Characteristics of convalescent plasma and intravenous immunoglobulin treatment

Ref ID	1st Author	Convalescent plasma characteristics							Intravenous Immunoglobulin (IVIG) characteristics
		Donor eligibility	Antibody titer cut-off for donor eligibility	Antibody titer of donors	Male donors (%)	Donors hospitalized for COVID-19 (%)	Volume of plasma transfused (mL/kg or mL; specify the units in this field)	Days since onset of symptoms at point of randomization /plasma infusion	IVIG Product
12415, 16657	Agarwal	Eligible donors were either males or nulliparous females aged between 18-65 years, weighing over 50 kg, who had received a diagnosis of COVID-19 confirmed with a positive RT-PCR test, suffered from symptomatic COVID-19 with at least fever and cough, which had completely resolved for a period of 28 consecutive days prior to donation or a period of 14 days prior to donation with two negative SARS-CoV-2 RT-PCR tests from nasopharyngeal swabs collected 24 hours apart	NR	1:40	94.3	NR	2 doses of 200 mL	8	NA
17545	AlQahtani	Patients who had recovered from COVID-19 and had been discharged from hospital for more than 2 102 weeks were approached to be volunteer donors. The criteria for donors included (1) ability to give 103 informed consent; (2) men or nulliparous women (all women had a pregnancy test except for 104 postmenopausal women); (3) PCR COVID-19 negative from respiratory tract; (4) patients were 105 symptom free; (5) patients above the ages of 21; (6) body weight more than 50kg; (7) met all donor 106 selection criteria employed for routine plasma collection and plasmapheresis procedures at the 107 collection centre. Convalescent plasma collection was performed followed by plasma extraction as 108 detailed.	NR	NR	NR	100	2 doses of 200 mL	NR	NA
11970	Avendano-Sola	CP donors complied with EU requirements for plasma donors8, had laboratory confirmed SARSCoV- 2 infection,	1:80	1:292	88.46	NR	250 to 300 mL	8	NA

Ref ID	1st Author	Convalescent plasma characteristics							Intravenous Immunoglobulin (IVIG) characteristics
		Donor eligibility	Antibody titer cut-off for donor eligibility	Antibody titer of donors	Male donors (%)	Donors hospitalized for COVID-19 (%)	Volume of plasma transfused (mL/kg or mL; specify the units in this field)	Days since onset of symptoms at point of randomization /plasma infusion	IVIG Product
		anti-SARS-CoV-2 IgG (ratio ≥1.1 with the Euroimmun ELISA test; Euroimmun, Lübeck, Germany) and were asymptomatic for at least 14 days.							
16521	Bajpai	We collected 500ml Convalescent plasma (COPLA) from COVID-19 recovered patients after 14 days of complete resolution of symptoms by Plasmapheresis (MCS+, Hemonetics USA) after due consent. Two consecutive test negative results of Real-time reverse transcriptase Polymerase chain reaction (RT-PCR) were done 24 hours apart from combined oral and nasopharyngeal swab for SARS CoV-2 for donation consideration. Final eligibility was ascertained thorough medical history, physical examination and laboratory tests, as per the Drugs and Cosmetics Act, 1940 and further amended on 11.03.2020.10	≥1:80	1:80	100	NR	2 doses of 250 mL	<3	NA
13304	Balcells	Plasma was obtained from volunteer subjects who had recovered from COVID-19, having been asymptomatic for at least 28 days, with a negative SARS-CoV-2 RT-PCR both in nasopharyngeal swab and in plasma, and anti-SARS-CoV-2 (S1) IgG titers ³ 1:400 (ELISA Euroimmun®). Donor plasma was tested for standard infectious diseases before administration and extracted plasma was immediately frozen at -20°C according to standard national safety measures[19].	1:400	NR	NR	NR	2 doses of 200 mL	5.52	NA
10	Bandopadhyay	Plasma was collected from convalescent donors (recovered from RT-PCR positive SARS-CoV-2 infection at least 28 days prior to donation) by apheresis at the	NR	NR	NR	NR	2 doses of 200 mL	NR	NA

Ref ID	1st Author	Convalescent plasma characteristics							Intravenous Immunoglobulin (IVIG) characteristics
		Donor eligibility	Antibody titer cut-off for donor eligibility	Antibody titer of donors	Male donors (%)	Donors hospitalized for COVID-19 (%)	Volume of plasma transfused (mL/kg or mL; specify the units in this field)	Days since onset of symptoms at point of randomization /plasma infusion	IVIG Product
		Department of Blood Transfusion and Immunohematology, Medical College Hospital, Kolkata, India. All donors were tested for their All rights reserved. No reuse allowed without permission. preprint (which was not certified by peer review) is the author/funder, who has granted medRxiv a license to display the preprint in perpetuity. medRxiv preprint doi: https://doi.org/10.1101/2020.09.21.20199109.this version posted September 23, 2020. The copyright holder for this anti-Spike IgG content in addition to routine screening tests to exclude major blood borne pathogens before apheresis. As per our trial protocol (Clinical Trial Registry of India No. CTRI/2020/05/025209), approved by Central Drugs Standard Control Organisation (CDSCO) India, we randomized the ARDS patients into either standard-of-care (SOC) group as controls or added two consecutive doses of ABO-matched 200ml convalescent plasma on two consecutive days to their standard care (CPT group), the first transfusion being on the day of recruitment (Day 1).							
17102	Chen_6	NA	NA	NA	NA	NA	NA	NA	NA
7688	Gharbharan	ConvP donors were recruited and screened by Sanquin Blood Supply (the Dutch blood bank) according to existing guidelines. They needed to have had a RT-PCR confirmed SARS-CoV-2 infection and be asymptomatic for at least 14 days. Of all donors tested, only plasma with anti- SARS-CoV-2 neutralizing antibodies confirmed by a SARS-COV-2	1:80	1:640	100	NR	300 mL	10	NA

Ref ID	1st Author	Convalescent plasma characteristics							Intravenous Immunoglobulin (IVIG) characteristics
		Donor eligibility	Antibody titer cut-off for donor eligibility	Antibody titer of donors	Male donors (%)	Donors hospitalized for COVID-19 (%)	Volume of plasma transfused (mL/kg or mL; specify the units in this field)	Days since onset of symptoms at point of randomization /plasma infusion	IVIG Product
		plaque reduction neutralization test (PRNT) and a PRNT50 titer of at least 1:80 was used.11 Furthermore, for each patient, we selected the plasma with the highest PRNT50 titer from the ABO compatible donor pool available at the time of inclusion.							
3, 4, 16306	Gharebaghi	NA	NA	NA	NA	NA	NA	NA	Flebogamma DIF
Lanzoni	Lanzoni	NA	NA	NA	NA	NA	NA	NA	NA
5833, 12417	Li	In brief, patientswith a laboratory-confirmed COVID-19 diagnosis, who had fully recovered and been discharged fromthe hospital for more than 2weeks,were recruited. Convalescent plasma–specific donor screening and selectionwere based on the following criteria: age of 18 through 55 years, suitable for blood donation, initially diagnosedwith COVID-19 butwith 2 negative PCRtest results fromnasopharyngeal swabs (at least 24hours apart) prior to hospital discharge, dischargedformore than 2 weeks from the hospital, and no persisting COVID-19 symptoms. Convalescent plasma collection was performed based on routine plasma collection procedures via plasmapheresis. The plasma productswere prepared as fresh-frozen plasma.COVID-19 convalescent plasma was collected and processed at theWuhan Blood Center. S-RBD–specific IgG antibody titer was measured for convalescent plasma products and reported as the following: less than 1:160, 1:160, 1:320, 1:640, 1: 1280, or	1: 160 with a volume of 100-600 ml	NR	NR	100	4 to 13	28.49	NA

Ref ID	1st Author	Convalescent plasma characteristics							Intravenous Immunoglobulin (IVIG) characteristics
		Donor eligibility	Antibody titer cut-off for donor eligibility	Antibody titer of donors	Male donors (%)	Donors hospitalized for COVID-19 (%)	Volume of plasma transfused (mL/kg or mL; specify the units in this field)	Days since onset of symptoms at point of randomization /plasma infusion	IVIG Product
		greater than 1:1280. There was a positive correlation between the SARS-CoV-2 viral neutralization titer and the S-RBD–specific IgG titer (r = 0.622, P = .03). A serum neutralization titer of 1:80 is approximately equivalent to a titer of 1:1280 for S-RBD– specific IgG. To ensure the therapeutic potency of the convalescent plasma, only the plasma units with an S-RBD–specific IgG titer of at least 1:640 were used for this study. Additional details regarding plasma preparation standards can be found in the eMethods in Supplement 3, and the preparation requirements of convalescent plasma used were similar to the recently updated FDA recommendations.10							
Libster	Libster	479 volunteers infected with SARS-CoV2 for a minimum of 10 days, asymptomatic for ≥3 days, and with two negative RT-PCR tests [14] were identified through hospital lists and an online campaign. Candidates were visited at home and screened for SARS-CoV2 S IgG titers >1:1,000 in serum. 135 (28.2%) were invited to donate 750 ml of plasma at four hemotherapy centers in Buenos Aires (Suppl. Material).	1:1000	1:3200	NR	NR	250 mL	1.62	NA
21005	Ray	The inclusion criteria for donors were: age > 18 years, males or nulliparous female convalescent volunteers with history of being positive for SARS-CoV2 on RT-PCR, having weight > 55Kg, complete resolution of symptoms at least 28 days prior to donation, and a negative RT-PCR test for SARS-CoV2 before plasma donation. Consenting convalescent patients not fit to donate blood based on the	NR	NR	80.33	NR	2 doses of 200 mL	NR	NA

Ref ID	1st Author	Convalescent plasma characteristics							Intravenous Immunoglobulin (IVIG) characteristics
		Donor eligibility	Antibody titer cut-off for donor eligibility	Antibody titer of donors	Male donors (%)	Donors hospitalized for COVID-19 (%)	Volume of plasma transfused (mL/kg or mL; specify the units in this field)	Days since onset of symptoms at point of randomization /plasma infusion	IVIG Product
		history and examination, who have had transfusion of blood products in last one year were excluded from donation.							
9262, 20051	Sakoulas	NA	NA	NA	NA	NA	NA	NA	Octagem
18265	Salman	Recovered plasma (CRP) was accepted from donors who had a history of COVID-19 infection confirmed by positive nasopharyngeal swab/oropharyngeal swab test, and have complete recovery of symptoms for at least 2 weeks prior to donation, documented with negative nasopharyngeal/oropharyngeal swab. All blood products followed standard blood handling and processing procedures and regulations.	NR	NR	NR	NR	250 mL	NR	NA
15876	Shi	NA	NA	NA	NA	NA	NA	NA	NA
11072	Shu	NA	NA	NA	NA	NA	NA	NA	NA
Simonovich	Simonovich	Patients with a history of SARS-CoV-2 diagnosis confirmed by RT-PCR, fully recovered from a clinical perspective and discharged from the hospital for at least 2 weeks, and were considered eligible for donation. In accordance with the current Argentinian law and regulations of blood and blood products and recommendations of the National Directorate of Blood and Blood Derivatives, eligibility criteria for plasma donation were as follows: age of 18 through 65 years, suitable for blood donation, with full clinical recovery after 28 days of Covid-19 diagnosis. Multiparous female donors must have a negative test for	1:400	1:300	NR	NR	5-10 ml/kg with an inferior limit around 400 ml for patients whose body weight was below 70 kg and a superior limit of 600 ml for	NR	NA

Ref ID	1st Author	Convalescent plasma characteristics							Intravenous Immunoglobulin (IVIG) characteristics
		Donor eligibility	Antibody titer cut-off for donor eligibility	Antibody titer of donors	Male donors (%)	Donors hospitalized for COVID-19 (%)	Volume of plasma transfused (mL/kg or mL; specify the units in this field)	Days since onset of symptoms at point of randomization /plasma infusion	IVIG Product
		human leukocyte antigens (HLA) with a Luminex® assay. Transfusion-transmissible infections testing was performed in all donors at least two times, pre-donor screening and the convalescent plasma donation day.					those above 70 kg		
18897	Tabarsi	NA	NA	NA	NA	NA	NA	NA	Intratect® (Biotest)

Discrepancies between preprint and peer-reviewed publications

Study	Differences between study preprint and peer-reviewed publications
Agarwal; PLACID	● The peer-reviewed publication reports median CRP and d-dimer levels at baseline. ● The peer-reviewed publication reports a per protocol analysis of secondary outcomes, whereas the preprint reports an intention-to-treat analysis. ● The peer-reviewed publication analyzes more patients and reports more events for invasive mechanical ventilation. ● The peer-reviewed publication analyzes more patients and reports more events for viral clearance at day 7. ● The peer-reviewed publication analyzes duration of hospitalization (n=451) in fewer patients compared to the preprint (n=464).
AlQahtani	● The peer-reviewed publication reports length of hospital stay.
Balcells	● The peer-reviewed publication includes additional details about donor eligibility. ● The peer-reviewed publication includes the proportion of hospitalized convalescent plasma donors.
Gharbharan; Convalescent-plasma-for-COVID (ConCOVID)	● The peer-reviewed publication reports median duration of hospital stay; the preprint does not explicitly report this. ● Risk of bias due to competing risk with death for duration of hospital stay changed from definitely low risk to probably low risk of bias.
Gharebaghi	● The peer-reviewed publication reports the name of the IVIG product.
Horby_1; RECOVERY	● The peer-reviewed publication reports a greater percentage of patients with confirmed COVID-19 at enrolment. ● The peer-reviewed publication reports one additional event for 28-day mortality in the convalescent plasma group. ● The peer-reviewed publication reports more events for need for mechanical ventilation. ● The peer-reviewed publication explicitly reports medians and IQRs for duration of hospital stay.
Lanzoni	● There are minor differences in age, % smokers, % with heart disease, and % with hypertension between the preprint and peer-reviewed publication.
Libster; Fundacion INFANT-COVID-19	● No substantive differences between the preprint and peer-reviewed publications.
Lopardo	● The peer-reviewed publication reports length of hospital stay.

	● Duration of ventilation is reported in the preprint but not in the peer-reviewed publication. We included data from the preprint as the numbers are unlikely to change.
O'Donnell	● No substantive differences between the preprint and peer-reviewed publications.
Sakoulas	● The peer-reviewed publication reports one more patient with coronary artery disease as a comorbidity. ● The preprint reports hospital length of stay only for a subgroup of patients with A-a gradient > 200. The peer-reviewed publication reports hospital length of stay for the total study sample. ● The preprint reports ICU length of stay only for a subgroup of patients with A-a gradient > 200. The peer-reviewed publication reports ICU length of stay for the total study sample. ● Allergic reaction is reported in the preprint but not in the peer-reviewed publication. ● The peer-reviewed publication explicitly reports concealed allocation so risk of bias for the domain randomization changed from probably high to definitely low risk of bias. ● Risk of bias for selective reporting of hospital length of stay changed to low risk since the outcome is not reported for a subgroup in the peer-reviewed publication. ● Risk of bias for selective reporting of ICU length of stay changed to low risk since the outcome is not reported for a subgroup in the peer-reviewed publication.
Simonovich; PlasmAr	● No substantive differences between the preprint and peer-reviewed publications.

Risk of bias assessments by outcome

NON-SEVERE COVID-19

Mortality

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults
CT-P59 monoclonal antibody	placebo/standard care		307					
		Eom	307	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
bamlanivimab	placebo/standard care		452					
		Chen_1	452	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
bamlanivimab, etesevimab	placebo/standard care		1035					
		Dougan	1035	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
casirivimab, imdevimab	placebo/standard care		7015					
		Weinreich_2_1	2696	probably low risk of bias	low risk of bias	probably low risk of bias	low risk of bias	low risk of bias
		Weinreich_2_2	1484	probably low risk of bias	low risk of bias	probably low risk of bias	low risk of bias	low risk of bias
		Weinreich_2_3	1218	probably low risk of bias	low risk of bias	probably low risk of bias	low risk of bias	low risk of bias
		Horby_2	641	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Weinreich_3	665	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		O'Brien_1	311	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
control plasma	convalescent plasma		70					
		O'Donnell	10	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Bennett-Guerrer	60	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
convalescent plasma	placebo/standard care		1602					
		Avendano-Sola	81	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Agarwal	464	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Libster	160	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Horby_1	897	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
placebo/standard care	sotrovimab		583					
		Gupta	583	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias

Mechanical ventilation

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults
CT-P59 monoclonal antibody	placebo/standard care		307					
		Eom	307	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
casirivimab, imdevimab	placebo/standard care		4180					
		Weinreich_2_1	2696	probably low risk of bias	low risk of bias	probably low risk of bias	low risk of bias	low risk of bias
		Weinreich_2_2	1484	probably low risk of bias	low risk of bias	probably low risk of bias	low risk of bias	low risk of bias
control plasma	convalescent plasma		10					
		O'Donnell	10	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
convalescent plasma	placebo/standard care		705					
		Avendano-Sola	81	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Agarwal	464	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		Libster	160	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
placebo/standard care	sotrovimab		583					
		Gupta	583	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias

Hospitalization

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults
CT-P59 monoclonal antibody	placebo/standard care		307					
		Eom	307	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
bamlanivimab	placebo/standard care		452					
		Chen_1	452	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
bamlanivimab, etesevimab	placebo/standard care		1035					
		Dougan	1035	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias

casirivimab, imdevimab	placebo/standard care		6267					
		Weinreich_2_1	2696	probably low risk of bias	low risk of bias	probably low risk of bias	low risk of bias	low risk of bias
		Weinreich_2_2	1484	probably low risk of bias	low risk of bias	probably low risk of bias	low risk of bias	low risk of bias
		Weinreich_2_3	1218	probably low risk of bias	low risk of bias	probably low risk of bias	low risk of bias	low risk of bias
		Weinreich_3	665	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		O'Brien_1	204	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	high risk of bias
placebo/standard care	sotrovimab		583					
		Gupta	583	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias

Viral clearance at 7 days

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults
CT-P59 monoclonal antibody	placebo/standard care		299					
		Eom	299	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
bamlanivimab	bamlanivimab, etesevimab		399					
		Gottlieb	399	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
bamlanivimab	placebo/standard care		444					
		Gottlieb	444	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
bamlanivimab, etesevimab	placebo/standard care		245					
		Gottlieb	245	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
convalescent plasma	placebo/standard care		431					
		Avendano-Sola	81	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Agarwal	350	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias

Length of hospital stay

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults	Other
bamlanivimab, etesevimab	placebo/standard care		44						
		Dougan	44	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias	low risk of bias
casirivimab, imdevimab	placebo/standard care		111						
		Weinreich_2_1	80	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Weinreich_2_2	31	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
convalescent plasma	placebo/standard care		614						
		Avendano-Sola	81	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias	probably low risk of bias
		Agarwal	464	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		Korper	69	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias

Time to symptom resolution

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults	Other
CT-P59 monoclonal antibody	placebo/standard care		307						
		Eom	307	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
bamlanivimab	bamlanivimab, etesevimab		418						
		Gottlieb	418	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
bamlanivimab	placebo/standard care		461						
		Gottlieb	461	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
bamlanivimab, etesevimab	placebo/standard care		1266						
		Gottlieb	261	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		Dougan	1005	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
casirivimab, imdevimab	placebo/standard care		3837						
		Weinreich_2_1	2411	probably low risk of bias	low risk of bias	high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Weinreich_2_2	1353	probably low risk of bias	low risk of bias	high risk of bias	low risk of bias	low risk of bias	low risk of bias
		O'Brien_1	73	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
convalescent plasma	placebo/standard care		150						
		Avendano-Sola	81	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias	probably low risk of bias
		Korper	69	low risk of bias	probably high risk of bias	low risk of bias	high risk of bias	low risk of bias	low risk of bias

SEVERE OR CRITICAL COVID-19

Mortality

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults
XAV-19	placebo/standard care		17					
		Gaborit	17	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably high risk of bias
anti-COVID-19 intravenous immunoglobulin	placebo/standard care		50					
		Ali	50	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
casirivimab, imdevimab	placebo/standard care		9144					
		Horby_2	9144	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
control plasma	convalescent plasma		253					
		Bajpai	29	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		O'Donnell	210	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Bennett-Guerrer	14	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
convalescent plasma	intravenous immunoglobulin		190					
		Gonzalez	190	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
convalescent plasma	placebo/standard care		14366					
		Li	101	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Gharbharan	86	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		AlQahtani	40	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Simonovich	333	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Ray	80	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably high risk of bias
		Horby_1	10661	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Pouladzadeh	60	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		Estcourt	1979	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Bégin	866	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Sekine	160	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
intravenous immunoglobulin	placebo/standard care		276					
		Sakoulas	33	low risk of bias	high risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		Gharebaghi	59	low risk of bias	low risk of bias	probably low risk of bias	low risk of bias	low risk of bias
		Tabarsi	84	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Raman	100	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
placebo/standard care	therapeutic plasma exchange		87					
		Faqihi	87	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably high risk of bias
placebo/standard care	umbilical cord mesenchymal stem cells		185					
		Shu	41	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		Shi	100	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Lanzoni	24	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably high risk of bias
		Adas	20	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias

Mechanical ventilation

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults
XAV-19	placebo/standard care		17					
		Gaborit	17	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
anti-COVID-19 intravenous immunoglobulin	placebo/standard care		50					
		Ali	50	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias
control plasma	convalescent plasma		239					
		Bajpai	29	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		O'Donnell	210	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
convalescent plasma	placebo/standard care		623					
		AlQahtani	40	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Simonovich	333	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Pouladzadeh	60	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		Hamdy Salman	30	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		Sekine	160	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias

intravenous immunoglobulin	placebo/standard care		117					
		Sakoulas	33	low risk of bias	high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Tabarsi	84	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
placebo/standard care	umbilical cord mesenchymal stem cells		141					
		Shu	41	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		Shi	100	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias

Viral clearance at 7 days

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults
XAV-19	placebo/standard care		9					
		Gaborit	9	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
convalescent plasma	placebo/standard care		147					
		Hamdy Salman	30	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		Sekine	117	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
intravenous immunoglobulin	placebo/standard care		100					
		Raman	100	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias

Hospital length of stay

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults	Other
XAV-19	placebo/standard care		17						
		Gaborit	17	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
anti-COVID-19 intravenous immunoglobulin	placebo/standard care		50						
		Ali	50	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
control plasma	convalescent plasma		29						
		Bajpai	29	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	high risk of bias
convalescent plasma	placebo/standard care		1740						
		Li	103	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Gharbharan	80	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		AlQahtani	37	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias	low risk of bias
		Simonovich	333	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Ray	80	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias	low risk of bias
		Pouladzadeh	60	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias	probably high risk of bias
		Korper	36	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Bégin	921	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		Sekine	90	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
intravenous immunoglobulin	placebo/standard care		269						
		Sakoulas	33	low risk of bias	high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Gharebaghi	59	low risk of bias	low risk of bias	probably low risk of bias	low risk of bias	low risk of bias	probably high risk of bias
		Tabarsi	84	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias	low risk of bias
		Raman	93	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
placebo/standard care	umbilical cord mesenchymal stem cells		61						
		Shu	41	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias	low risk of bias
		Adas	20	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias	probably high risk of bias

ICU length of stay

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults	Other
control plasma	convalescent plasma		29						
		Bajpai	29	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	probably high risk of bias
convalescent plasma	placebo/standard care		1071						
		Simonovich	184	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		Korper	36	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Bégin	851	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
intravenous immunoglobulin	placebo/standard care		163						
		Sakoulas	33	low risk of bias	high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Gharebaghi	59	low risk of bias	low risk of bias	probably low risk of bias	low risk of bias	low risk of bias	probably high risk of bias
		Tabarsi	66	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias	low risk of bias

		Raman	5	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
placebo/standard care	therapeutic plasma exchange		87						
		Faqihi	87	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
placebo/standard care	umbilical cord mesenchymal stem cells		20						
		Adas	20	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias	low risk of bias

Ventilator-free days (up to day 28)

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults	Other
control plasma	convalescent plasma		14						
		Bennett-Guerrer	14	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
convalescent plasma	placebo/standard care		2859						
		Estcourt	1976	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Bégin	851	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Sekine	32	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias

Duration of mechanical ventilation

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults	Other
anti-COVID-19 intravenous immunoglobulin	placebo/standard care		0						
		Ali	0	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
convalescent plasma	placebo/standard care		10						
		AlQahtani	10	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	probably low risk of bias	low risk of bias
intravenous immunoglobulin	placebo/standard care		64						
		Sakoulas	33	low risk of bias	high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Raman	31	probably high risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
placebo/standard care	therapeutic plasma exchange		87						
		Faqihi	87	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias

ADVERSE EVENTS - ANY SEVERITY ILLNESS

Adverse effects leading to discontinuation of the intervention

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults
XAV-19	placebo/standard care		18					
		Gaborit	18	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
bamlanivimab	placebo/standard care		452					
		Chen_1	452	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
casirivimab, imdevimab	placebo/standard care		5872					
		Weinreich_2_1	2988	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Weinreich_2_2	1667	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Weinreich_2_3	1337	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Weinreich_3	780	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
control plasma	convalescent plasma		72					
		Bennett-Guerrer	72	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
convalescent plasma	intravenous immunoglobulin		190					
		Gonzalez	190	probably high risk of bias	probably high risk of bias	low risk of bias	high risk of bias	probably low risk of bias
convalescent plasma	placebo/standard care		105					
		Korper	105	low risk of bias	probably high risk of bias	low risk of bias	high risk of bias	low risk of bias
intravenous immunoglobulin	placebo/standard care		133					
		Sakoulas	33	low risk of bias	high risk of bias	low risk of bias	high risk of bias	probably low risk of bias
		Raman	100	probably high risk of bias	probably high risk of bias	low risk of bias	high risk of bias	probably low risk of bias
placebo/standard care	therapeutic plasma exchange		87					
		Faqihi	87	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
placebo/standard care	umbilical cord mesenchymal stem cells		20					
		Adas	20	probably high risk of bias	probably high risk of bias	low risk of bias	high risk of bias	probably low risk of bias

Allergic reaction

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults
CT-P59 monoclonal antibody	placebo/standard care		325					
		Eom	325	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
XAV-19	placebo/standard care		18					
		Gaborit	18	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
bamlanivimab	bamlanivimab, etesevimab		421					
		Gottlieb	421	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
bamlanivimab	placebo/standard care		1231					
		Chen_1	452	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Lundgren	314	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Gottlieb	465	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
bamlanivimab, etesevimab	placebo/standard care		268					
		Gottlieb	268	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
casirivimab, imdevimab	placebo/standard care		17205					
		Weinreich_2_1	3325	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Weinreich_2_2	1667	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Weinreich_2_3	1337	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Horby_2	9785	low risk of bias	probably high risk of bias	low risk of bias	high risk of bias	low risk of bias
		Weinreich_3	780	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		O'Brien_1	311	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
control plasma	convalescent plasma		324					
		Bajpai	29	low risk of bias	probably high risk of bias	low risk of bias	high risk of bias	probably low risk of bias
		O'Donnell	223	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
		Bennett-Guerrer	72	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
convalescent plasma	intravenous immunoglobulin		190					
		Gonzalez	190	probably high risk of bias	probably high risk of bias	low risk of bias	high risk of bias	probably low risk of bias
convalescent plasma	placebo/standard care		15243					
		Li	103	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
		Libster	158	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Simonovich	333	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Horby_1	11558	low risk of bias	probably high risk of bias	low risk of bias	high risk of bias	low risk of bias
		Hamdy Salman	30	low risk of bias	probably high risk of bias	low risk of bias	high risk of bias	probably low risk of bias
		Estcourt	1980	low risk of bias	probably high risk of bias	low risk of bias	high risk of bias	low risk of bias
		Bégin	921	low risk of bias	probably high risk of bias	low risk of bias	high risk of bias	low risk of bias
		Sekine	160	probably high risk of bias	probably high risk of bias	low risk of bias	high risk of bias	low risk of bias
intravenous immunoglobulin	placebo/standard care		33					
		Sakoulas	33	low risk of bias	high risk of bias	low risk of bias	high risk of bias	probably low risk of bias
placebo/standard care	sotrovimab		583					
		Gupta	583	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
placebo/standard care	therapeutic plasma exchange		87					
		Faqihi	87	low risk of bias	probably high risk of bias	low risk of bias	low risk of bias	low risk of bias
placebo/standard care	mbilical cord mesenchymal stem cells		41					
		Shu	41	probably high risk of bias	probably high risk of bias	low risk of bias	high risk of bias	probably low risk of bias

Transfusion-related acute lung injury (TRALI)

Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults
convalescent plasma	placebo/standard care		1365					
		Avendano-Sola	81	probably high risk of bias	probably high risk of bias	low risk of bias	high risk of bias	low risk of bias
		Simonovich	333	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Hamdy Salman	30	low risk of bias	probably high risk of bias	low risk of bias	high risk of bias	probably low risk of bias
		Bégin	921	low risk of bias	probably high risk of bias	low risk of bias	high risk of bias	low risk of bias
placebo/standard care	umbilical cord mesenchymal stem cells		41					

		Shu	41	probably high risk of bias	probably high risk of bias	low risk of bias	high risk of bias	probably low risk of bias

Transfusion-associated circulatory overload (TACO)

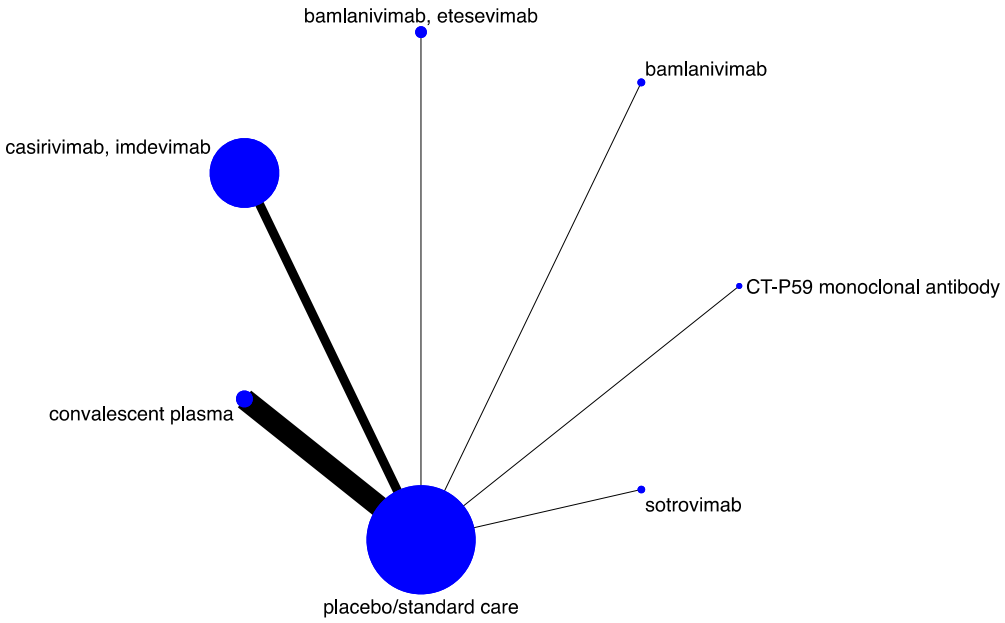
Treatment 1	Treatment 2	First author	N	Randomization	Deviations from the intendedintervention	Missing outcome data	Measurement of outcome	Selection of the reportedresults
control plasma	convalescent plasma		223					
		O'Donnell	223	low risk of bias	low risk of bias	low risk of bias	low risk of bias	probably low risk of bias
convalescent plasma	placebo/standard care		1442					
		Libster	158	probably low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Simonovich	333	low risk of bias	low risk of bias	low risk of bias	low risk of bias	low risk of bias
		Hamdy Salman	30	low risk of bias	probably high risk of bias	low risk of bias	high risk of bias	probably low risk of bias
		Bégin	921	low risk of bias	probably high risk of bias	low risk of bias	high risk of bias	low risk of bias
placebo/standard care	umbilical cord mesenchymal stem cells		41					
		Shu	41	probably high risk of bias	probably high risk of bias	low risk of bias	high risk of bias	probably low risk of bias

Network plots

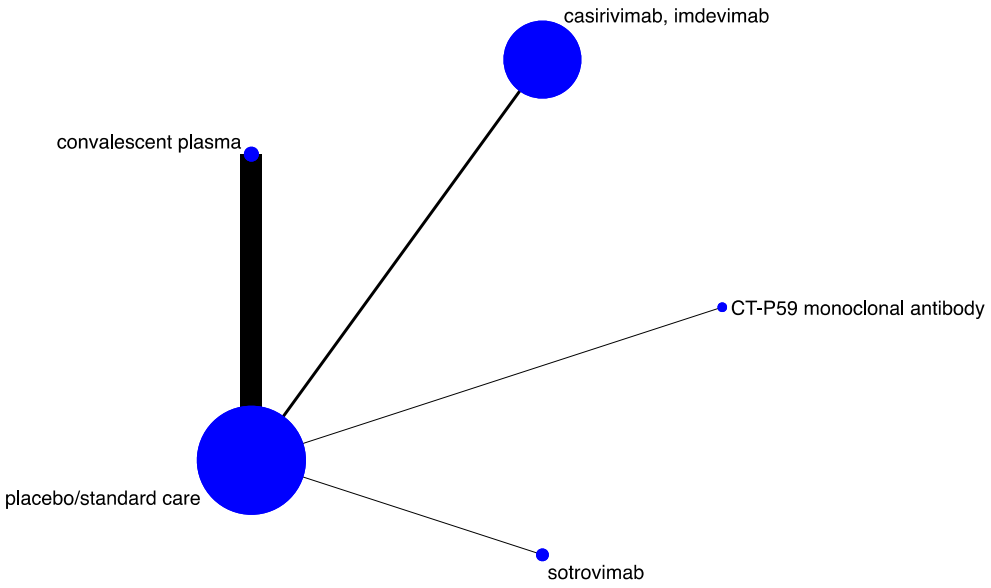
For all of the following network plots, the width of the lines is proportional to the inverse of the variance of the effect estimate for that comparison (i.e., the wider the line, the narrower the credible interval). The diameter of the node is proportional to the number of patients randomized to that intervention.

NON-SEVERE COVID-19

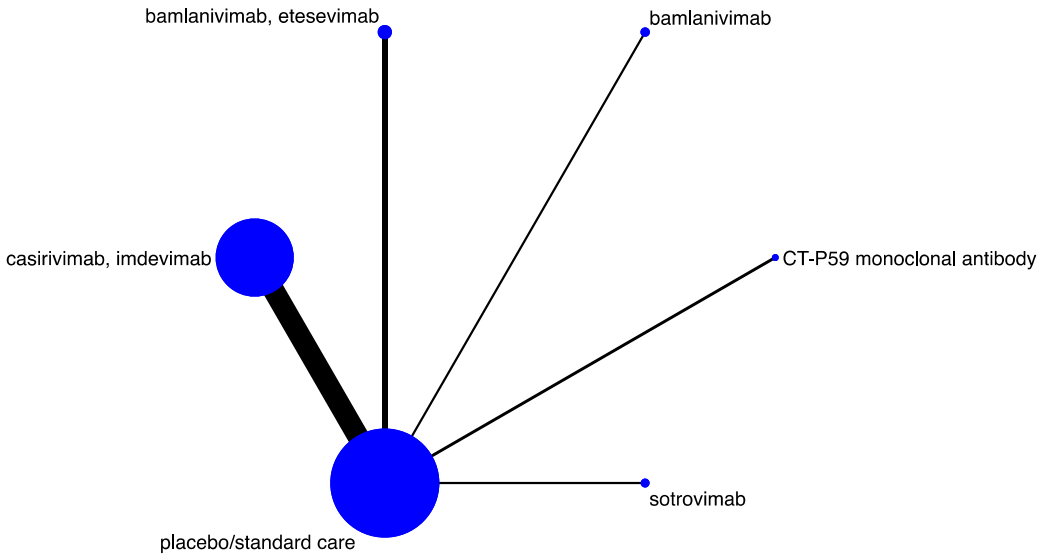
Mortality



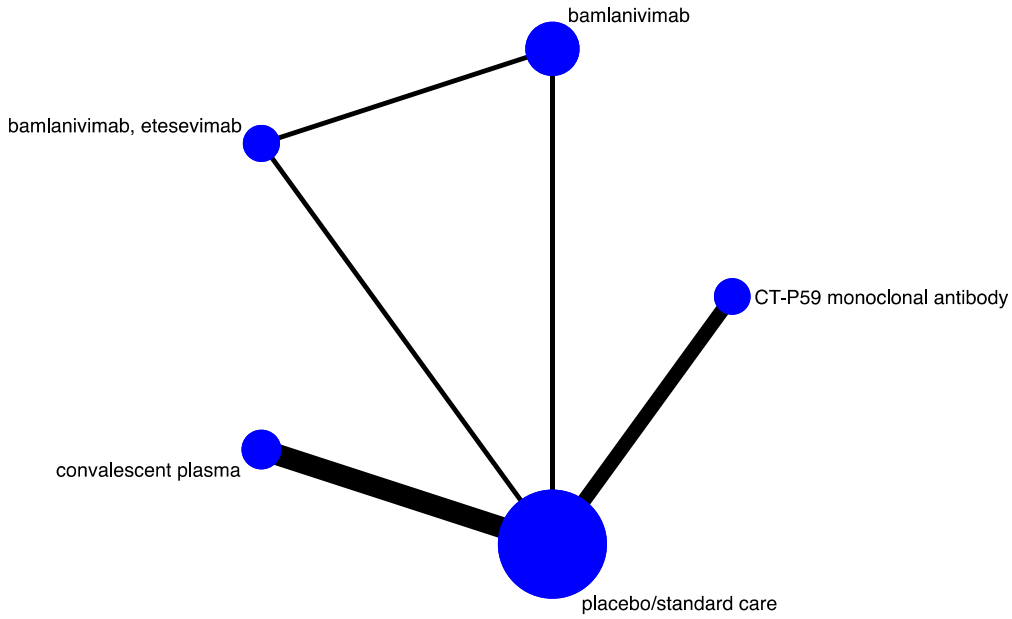
Mechanical ventilation



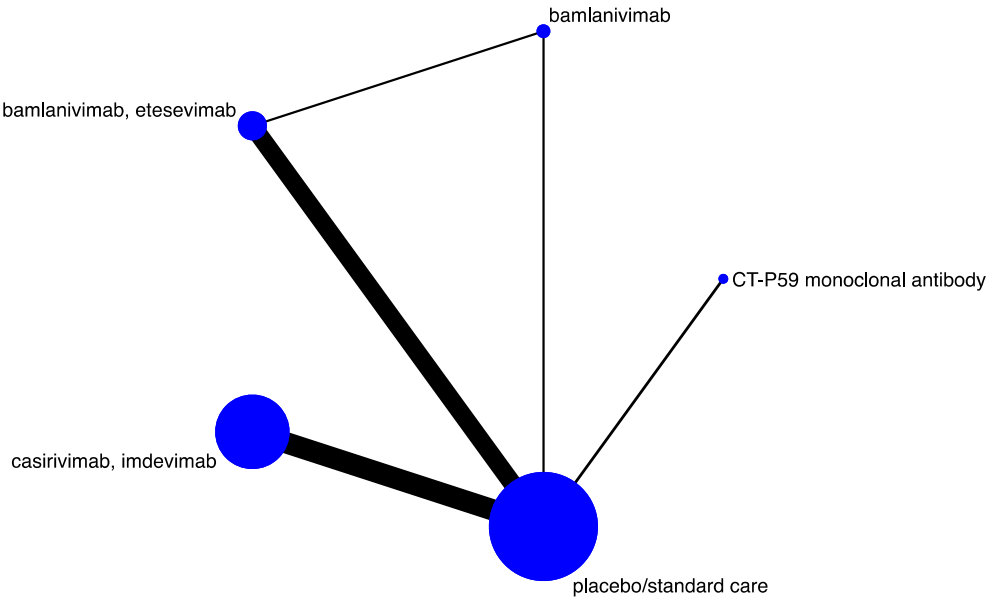
Hospitalization



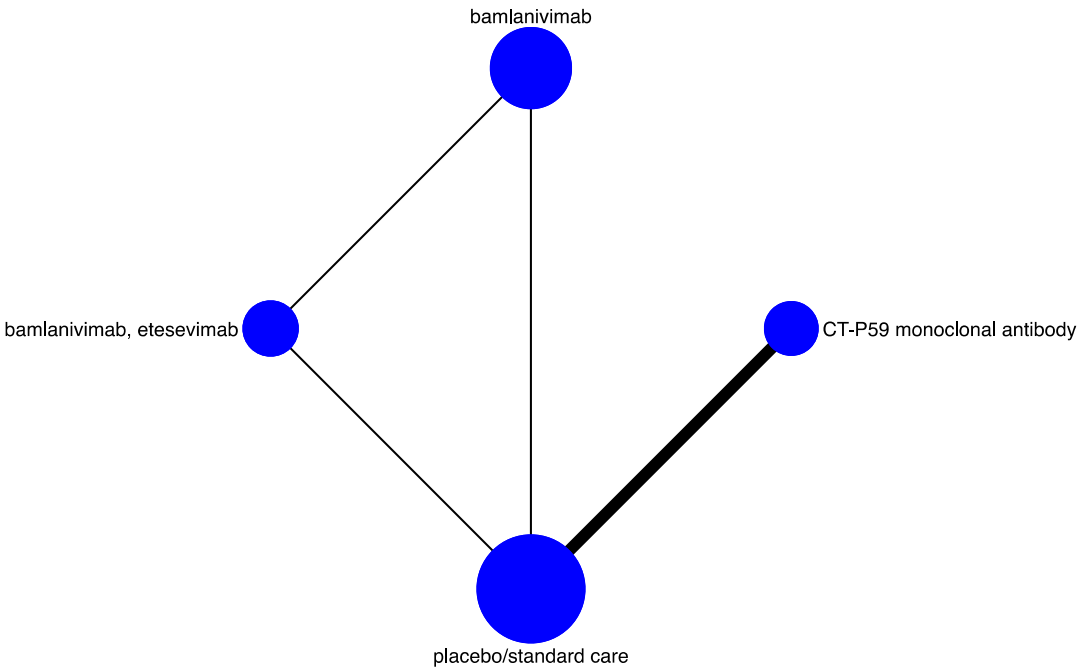
Viral clearance at 7 days



Time to symptom resolution

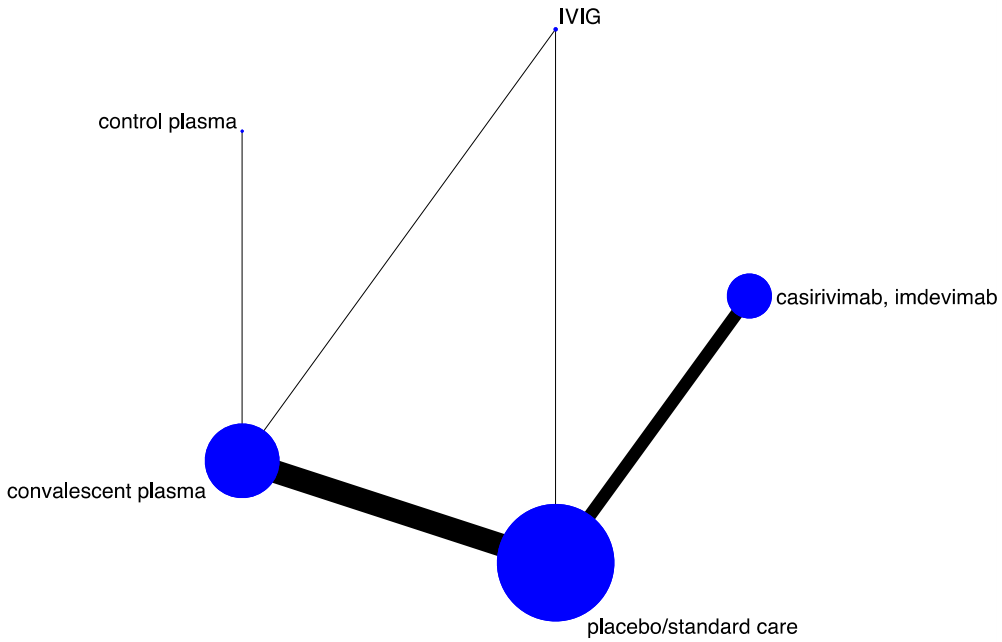


Time to viral clearance

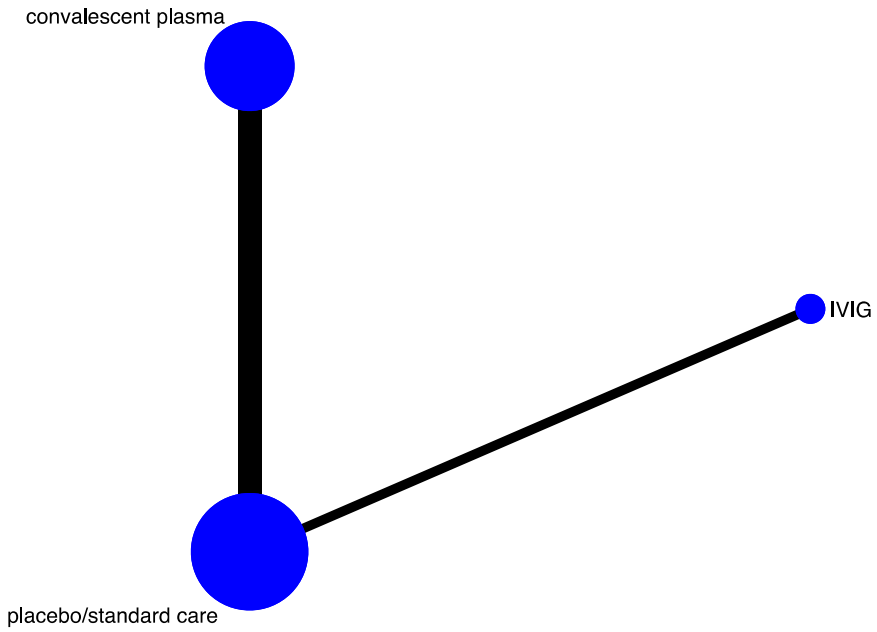


SEVERE OR CRITICAL COVID-19

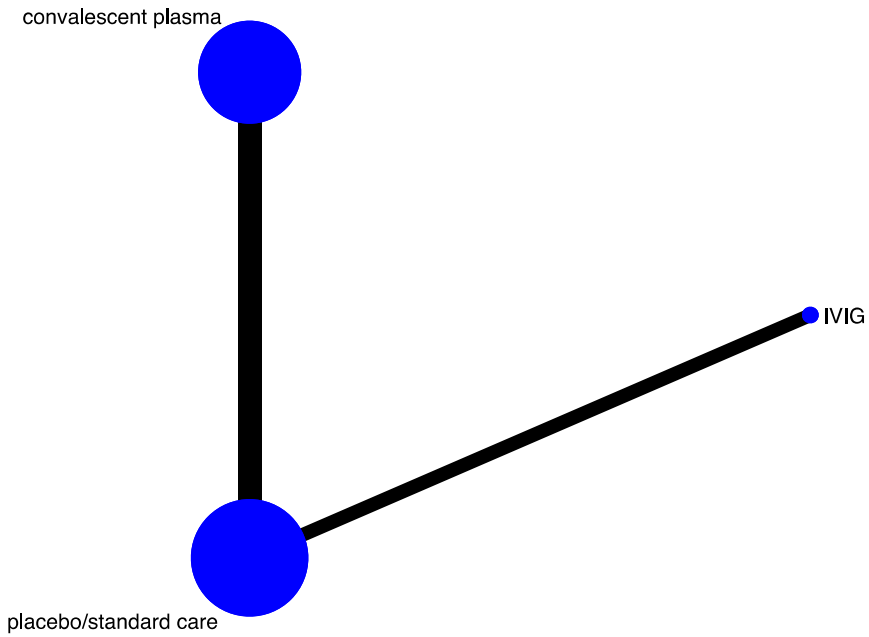
Mortality



Mechanical ventilation

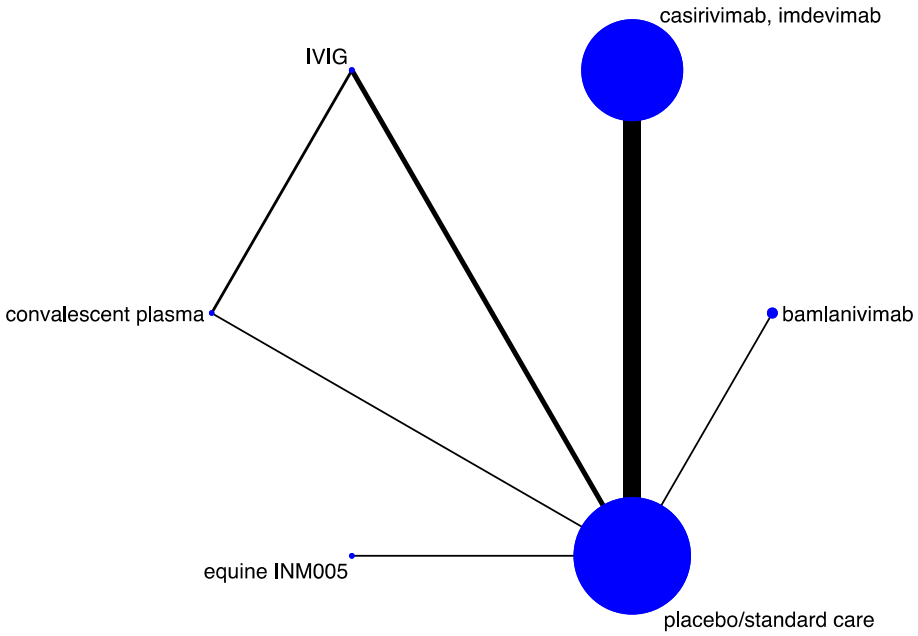


Hospital length of stay

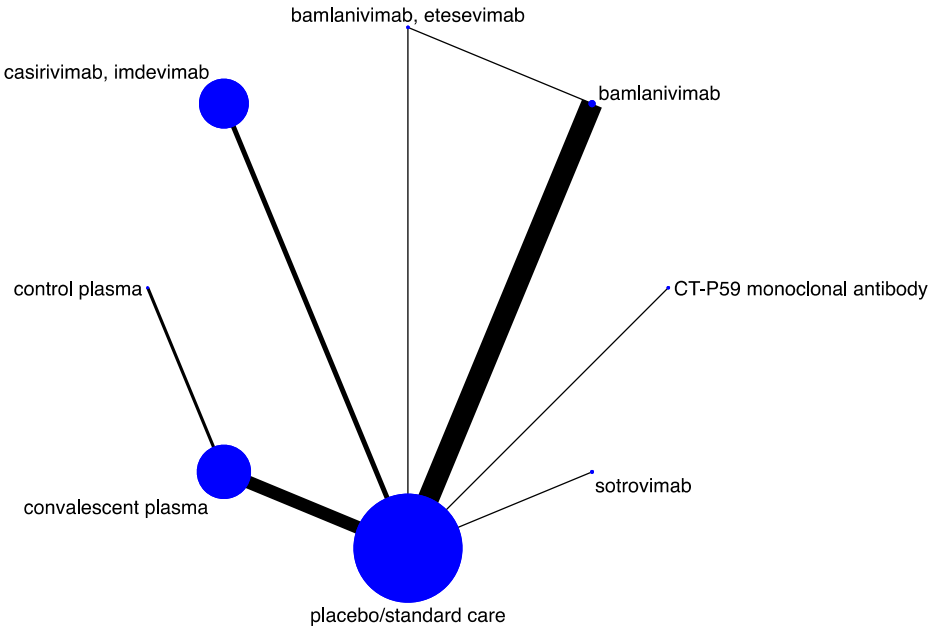


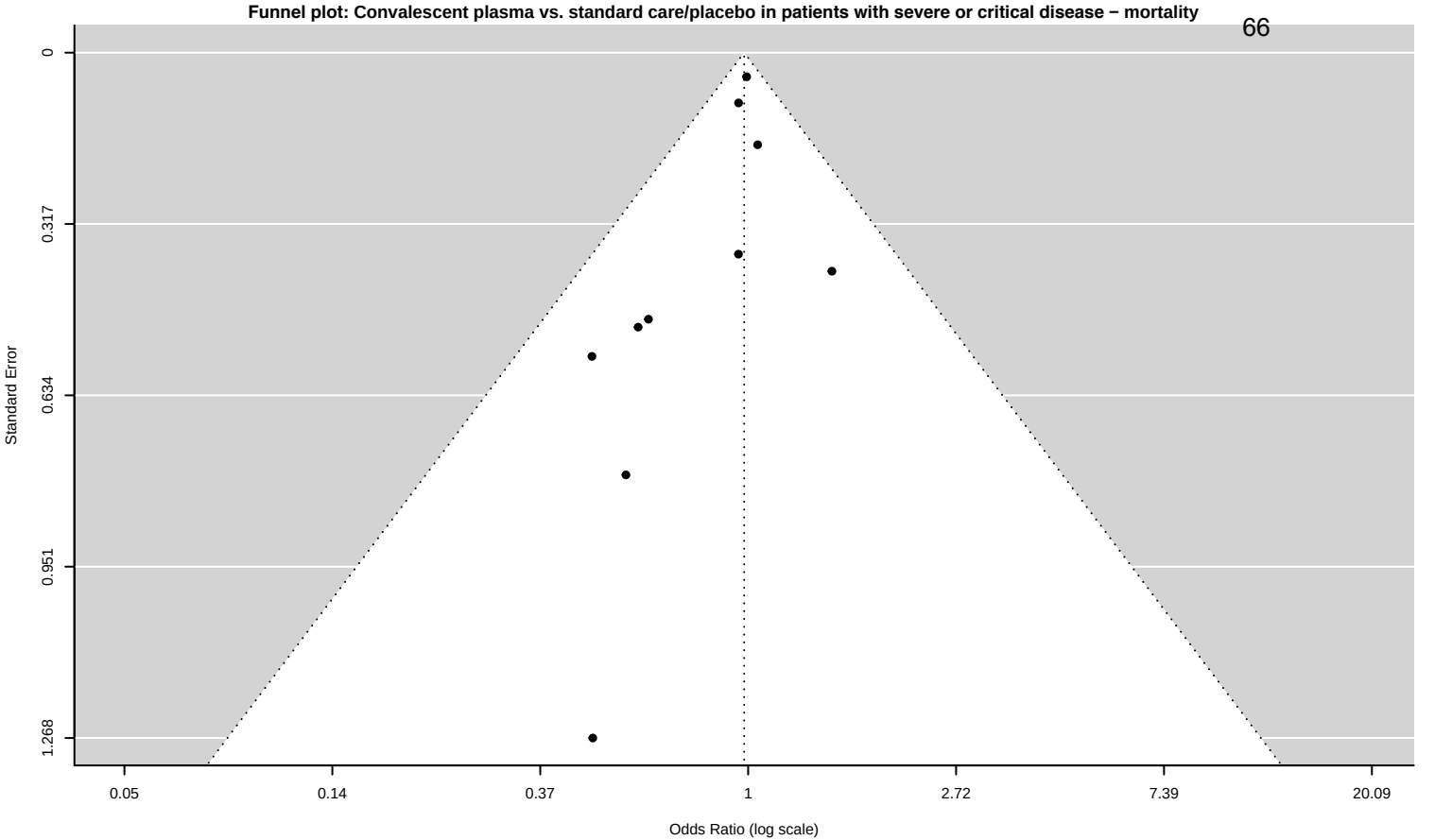
ANY SEVERITY – ADVERSE EFFECTS

Adverse effects leading to drug discontinuation



Allergic reactions




Funnel plot: Convalescent plasma vs. standard care/placebo in patients with severe or critical disease − mortality
Standard Error
0
0.317
0.634
0.951
1.268
0.05
0.14
0.37
1
2.72
7.39
20.09
Odds Ratio (log scale)

Complete network meta-analysis results and GRADE

#	Intervention 1	Intervention 2	DIRECT ESTIMATES							INDIRECT ESTIMATES							NETWORK ESTIMATES							Reasons
			Relative effect			Absolute effect per 1,000			GRADE rating	Relative effect			Absolute effect per 1,000			GRADE rating	Relative effect			Absolute effect per 1,000			GRADE rating	
			Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		
Admission to hospital (non-severe)																								
1	bamlanivimab	placebo/standard care	0.24	0.05	1.25	-45.13	-57.61	13.97	LOW	NA	NA	NA	NA	NA	NA	NA	0.24	0.06	0.86	-41.49	-57.05	-5.92	LOW	Imprecisionx2
2	bamlanivimab, etesevimab	placebo/standard care	0.32	0.08	1.29	-40.56	-55.65	16.15	LOW	NA	NA	NA	NA	NA	NA	NA	0.31	0.11	0.80	-37.95	-53.59	-9.40	LOW	Imprecisionx2
3	casirivimab, imdevimab	placebo/standard care	0.29	0.17	0.47	-42.50	-49.54	-31.26	MODERATE	NA	NA	NA	NA	NA	NA	NA	0.29	0.17	0.47	-41.76	-50.12	-30.28	MODERATE	Imprecision
4	CT-P59 monoclonal antibody	placebo/standard care	0.48	0.10	2.23	-30.49	-54.01	65.17	LOW	NA	NA	NA	NA	NA	NA	NA	0.48	0.14	1.60	-23.96	-51.71	37.12	LOW	Imprecisionx2
5	sotrovimab	placebo/standard care	0.18	0.04	0.90	-49.22	-58.39	-5.79	LOW	NA	NA	NA	NA	NA	NA	NA	0.17	0.04	0.57	-47.59	-58.35	-24.77	LOW	Imprecisionx2
6	bamlanivimab	bamlanivimab, etesevimab	NA	NA	NA	NA	NA	NA	NA	0.76	0.14	3.94	-3.54	-37.18	35.49	LOW	0.76	0.14	3.94	-3.54	-37.18	35.49	LOW	Imprecisionx2
7	bamlanivimab	casirivimab, imdevimab	NA	NA	NA	NA	NA	NA	NA	0.83	0.19	3.35	0.28	-19.99	36.81	LOW	0.83	0.19	3.35	0.28	-19.99	36.81	LOW	Imprecisionx2
8	bamlanivimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	0.49	0.08	2.86	-17.53	-81.66	28.72	LOW	0.49	0.08	2.86	-17.53	-81.66	28.72	LOW	Imprecisionx2
9	bamlanivimab	sotrovimab	NA	NA	NA	NA	NA	NA	NA	1.45	0.22	9.78	6.10	-22.34	43.77	LOW	1.45	0.22	9.78	6.10	-22.34	43.77	LOW	Imprecisionx2
10	bamlanivimab, etesevimab	casirivimab, imdevimab	NA	NA	NA	NA	NA	NA	NA	1.08	0.35	3.22	3.81	-16.07	33.60	LOW	1.08	0.35	3.22	3.81	-16.07	33.60	LOW	Imprecisionx2
11	bamlanivimab, etesevimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	0.64	0.14	3.00	-13.99	-77.16	26.75	LOW	0.64	0.14	3.00	-13.99	-77.16	26.75	LOW	Imprecisionx2
12	bamlanivimab, etesevimab	sotrovimab	NA	NA	NA	NA	NA	NA	NA	1.90	0.38	10.59	9.64	-18.25	40.76	LOW	1.90	0.38	10.59	9.64	-18.25	40.76	LOW	Imprecisionx2
13	casirivimab, imdevimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	0.59	0.16	2.23	-17.81	-79.43	12.87	LOW	0.59	0.16	2.23	-17.81	-79.43	12.87	LOW	Imprecisionx2
14	casirivimab, imdevimab	sotrovimab	NA	NA	NA	NA	NA	NA	NA	1.73	0.45	8.08	5.83	-18.51	22.50	LOW	1.73	0.45	8.08	5.83	-18.51	22.50	LOW	Imprecisionx2
Admission to hospital (non-severe)																								
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#	Intervention 1	Intervention 2	DIRECT ESTIMATES							INDIRECT ESTIMATES							NETWORK ESTIMATES							Reasons
			Relative effect			Absolute effect per 1,000			GRADE rating	Relative effect			Absolute effect per 1,000			GRADE rating	Relative effect			Absolute effect per 1,000			GRADE rating	
			Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		
Adverse events (all-severities)																								
1	bamlanivimab	placebo/standard care	NA	NA	NA	-1.86	-12.45	8.74	MODERATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-1.86	-12.49	8.76	VERY LOW	Imprecision
2	casirivimab, imdevimab	placebo/standard care	NA	NA	NA	-1.62	-3.60	0.36	LOW	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-1.62	-3.61	0.35	LOW	Imprecisionx2
3	convalescent plasma	placebo/standard care	NA	NA	NA	-0.17	-36.64	36.29	VERY LOW	NA	NA	NA	8.67	-60.42	77.72	VERY LOW	NA	NA	NA	1.69	-30.64	33.97	VERY LOW	RoB, Imprecisionx3
4	intravenous immunoglobulin	placebo/standard care	NA	NA	NA	29.53	-26.59	85.64	VERY LOW	NA	NA	NA	20.56	-33.72	74.72	VERY LOW	NA	NA	NA	24.91	-14.32	63.94	VERY LOW	RoB, Imprecisionx2
5	puried equine anti-RBD F(ab´)2 fragments (INM005)	placebo/standard care	NA	NA	NA	0.17	-15.81	16.14	VERY LOW	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.18	-15.76	16.18	VERY LOW	RoB, Imprecisionx3
6	bamlanivimab	casirivimab, imdevimab	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-0.24	-11.06	10.58	VERY LOW	NA	NA	NA	-0.24	-11.06	10.58	VERY LOW	Imprecisionx3
7	bamlanivimab	convalescent plasma	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-3.60	-37.56	30.50	VERY LOW	NA	NA	NA	-3.60	-37.56	30.50	VERY LOW	RoB, Imprecisionx3
8	bamlanivimab	intravenous immunoglobulin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-26.76	-67.19	13.86	VERY LOW	NA	NA	NA	-26.76	-67.19	13.86	VERY LOW	RoB, Imprecisionx3
9	bamlanivimab	puried equine anti-RBD F(ab´)2 fragments (INM005)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-2.05	-21.30	17.11	VERY LOW	NA	NA	NA	-2.05	-21.30	17.11	VERY LOW	RoB, Imprecisionx3
10	casirivimab, imdevimab	convalescent plasma	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-3.33	-35.60	29.07	VERY LOW	NA	NA	NA	-3.33	-35.60	29.07	VERY LOW	RoB, Imprecisionx3
11	casirivimab, imdevimab	intravenous immunoglobulin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-26.50	-65.59	12.78	VERY LOW	NA	NA	NA	-26.50	-65.59	12.78	VERY LOW	RoB, Imprecisionx2

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12	casirivimab, imdevimab	puried equine anti-RBD F(ab´)2 fragments (INM005)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-1.81	-17.92	14.25	VERY LOW	NA	NA	NA	-1.81	-17.92	14.25	VERY LOW	RoB, Imprecisionx3
13	intravenous immunoglobulin	convalescent plasma	NA	NA	NA	20.77	-19.50	61.05	VERY LOW	NA	NA	NA	29.58	-37.64	96.29	VERY LOW	NA	NA	NA	23.20	-11.52	57.67	VERY LOW	RoB, Imprecisionx3
14	convalescent plasma	puried equine anti-RBD F(ab´)2 fragments (INM005)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.55	-34.73	37.51	VERY LOW	NA	NA	NA	1.55	-34.73	37.51	VERY LOW	RoB, Imprecisionx3
15	intravenous immunoglobulin	puried equine anti-RBD F(ab´)2 fragments (INM005)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.75	-17.53	66.92	VERY LOW	NA	NA	NA	24.75	-17.53	66.92	VERY LOW	RoB, Imprecisionx3
Infusion reactions (all severities)																								
1	bamlanivimab	placebo/standard care	1.75	0.74	4.19	1.67	-0.58	7.10	LOW	NA	NA	NA	NA	NA	NA	NA	1.84	0.74	5.26	2.57	-0.62	9.80	MODERATE	Imprecision
2	bamlanivimab, etesevimab	placebo/standard care	2.82	0.19	41.65	4.06	-1.82	83.52	VERY LOW	NA	NA	NA	NA	NA	NA	NA	1.68	0.17	12.94	4.53	-1.89	27.13	LOW	Imprecisionx2
3	casirivimab, imdevimab	placebo/standard care	1.93	0.48	7.66	2.09	-1.16	14.72	LOW	NA	NA	NA	NA	NA	NA	NA	2.41	0.57	13.07	5.87	-1.00	28.77	LOW	Imprecisionx2
4	convalescent plasma	placebo/standard care	2.07	0.82	5.22	2.40	-0.40	9.36	LOW	NA	NA	NA	NA	NA	NA	NA	3.25	1.27	9.30	6.22	0.61	18.41	MODERATE	Imprecision
5	CT-P59 monoclonal antibody	placebo/standard care	0.25	0.02	3.73	-1.68	-2.21	6.07	LOW	NA	NA	NA	NA	NA	NA	NA	0.20	0.00	3.67	-0.70	-2.23	6.53	LOW	Imprecisionx2
6	sotrovimab	placebo/standard care	0.50	0.03	7.34	-1.12	-2.17	14.02	LOW	NA	NA	NA	NA	NA	NA	NA	0.39	0.01	6.49	0.38	-2.22	13.61	LOW	Imprecisionx2
7	placebo/standard care	control plasma	NA	NA	NA	NA	NA	NA	NA	0.42	0.05	4.76	-7.66	-44.61	1.82	LOW	0.42	0.05	4.76	-7.66	-44.61	1.82	LOW	Imprecisionx2
8	bamlanivimab, etesevimab	bamlanivimab	0.92	0.13	6.51	NA	NA	NA	LOW	NA						NA	0.91	0.10	6.05	1.96	-6.69	22.65	LOW	Imprecisionx2
9	bamlanivimab	casirivimab, imdevimab	NA	NA	NA	NA	NA	NA	NA	0.76	0.12	4.57	-3.30	-26.48	7.36	LOW	0.76	0.12	4.57	-3.30	-26.48	7.36	LOW	Imprecisionx2

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			Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		
10	bamlanivimab	control plasma	NA	NA	NA	NA	NA	NA	NA	0.78	0.07	11.25	-5.08	-42.07	7.93	LOW	0.78	0.07	11.25	-5.08	-42.07	7.93	LOW	Imprecisionx2
11	bamlanivimab	convalescent plasma	NA	NA	NA	NA	NA	NA	NA	0.57	0.14	2.32	-3.64	-16.11	5.54	LOW	0.57	0.14	2.32	-3.64	-16.11	5.54	LOW	Imprecisionx2
12	bamlanivimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	9.39	0.44	445.86	3.27	-4.52	11.13	VERY LOW	9.39	0.44	445.86	3.27	-4.52	11.13	VERY LOW	Imprecisionx3
13	bamlanivimab	sotrovimab	NA	NA	NA	NA	NA	NA	NA	4.76	0.25	200.34	2.19	-11.28	10.63	VERY LOW	4.76	0.25	200.34	2.19	-11.28	10.63	VERY LOW	Imprecisionx3
14	bamlanivimab, etesevimab	casirivimab, imdevimab	NA	NA	NA	NA	NA	NA	NA	0.68	0.04	8.67	-1.34	-26.00	23.19	LOW	0.68	0.04	8.67	-1.34	-26.00	23.19	LOW	Imprecisionx2
15	bamlanivimab, etesevimab	control plasma	NA	NA	NA	NA	NA	NA	NA	0.70	0.03	17.99	-3.13	-41.47	22.77	LOW	0.70	0.03	17.99	-3.13	-41.47	22.77	LOW	Imprecisionx2
16	bamlanivimab, etesevimab	convalescent plasma	NA	NA	NA	NA	NA	NA	NA	0.51	0.04	4.95	-1.68	-16.37	21.48	LOW	0.51	0.04	4.95	-1.68	-16.37	21.48	LOW	Imprecisionx2
17	bamlanivimab, etesevimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	8.33	0.22	578.25	5.23	-4.94	28.20	VERY LOW	8.33	0.22	578.25	5.23	-4.94	28.20	VERY LOW	Imprecisionx3
18	bamlanivimab, etesevimab	sotrovimab	NA	NA	NA	NA	NA	NA	NA	4.26	0.12	254.68	4.15	-11.07	27.51	VERY LOW	4.26	0.12	254.68	4.15	-11.07	27.51	VERY LOW	Imprecisionx3
19	casirivimab, imdevimab	control plasma	NA	NA	NA	NA	NA	NA	NA	1.04	0.08	18.73	-1.79	-39.81	24.43	LOW	1.04	0.08	18.73	-1.79	-39.81	24.43	LOW	Imprecisionx2
20	casirivimab, imdevimab	convalescent plasma	NA	NA	NA	NA	NA	NA	NA	0.74	0.12	5.05	-0.34	-15.28	23.32	LOW	0.74	0.12	5.05	-0.34	-15.28	23.32	LOW	Imprecisionx2
21	casirivimab, imdevimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	12.55	0.46	742.48	6.57	-3.67	29.71	VERY LOW	12.55	0.46	742.48	6.57	-3.67	29.71	VERY LOW	Imprecisionx3
22	casirivimab, imdevimab	sotrovimab	NA	NA	NA	NA	NA	NA	NA	6.36	0.26	307.97	5.49	-9.78	28.92	VERY LOW	6.36	0.26	307.97	5.49	-9.78	28.92	VERY LOW	Imprecisionx3
23	convalescent plasma	control plasma	0.94	0.17	5.16	NA	NA	NA	LOW	NA	NA	NA	NA	NA	NA	NA	1.36	0.21	12.81	-1.44	-34.56	12.10	LOW	Imprecisionx2
24	control plasma	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	11.94	0.27	897.85	8.36	-4.19	45.39	VERY LOW	11.94	0.27	897.85	8.36	-4.19	45.39	VERY LOW	Imprecisionx3
25	control plasma	sotrovimab	NA	NA	NA	NA	NA	NA	NA	6.17	0.15	411.58	7.27	-10.22	44.65	VERY LOW	6.17	0.15	411.58	7.27	-10.22	44.65	VERY LOW	Imprecisionx3

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			Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		
26	convalescent plasma	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	16.61	0.75	804.32	6.92	-2.06	19.68	VERY LOW	16.61	0.75	804.32	6.92	-2.06	19.68	VERY LOW	Imprecisionx3
27	convalescent plasma	sotrovimab	NA	NA	NA	NA	NA	NA	NA	8.41E+00	0.44	343.78	5.83	-8.54	19.13	VERY LOW	8.41	0.44	343.78	5.83	-8.54	19.13	VERY LOW	Imprecisionx3
28	CT-P59 monoclonal antibody	sotrovimab	NA	NA	NA	NA	NA	NA	NA	5.07E-01	0.00	50.91	-1.08	-14.67	7.35	VERY LOW	0.51	0.00	50.91	-1.08	-14.67	7.35	VERY LOW	Imprecisionx3
Duration of hospitalization (non-severe)																								
1	convalescent plasma	placebo/standard care	-4.06	-9.62	1.33	NA	NA	NA	VERY LOW	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	RoB, Imprecisionx2
Duration of hospitalization (severe)																								
1	convalescent plasma	placebo/standard care	-0.71	-2.26	0.97	NA	NA	NA	LOW	NA	NA	NA	NA	NA	NA	NA	-0.42	-3.30	2.51	NA	NA	NA	VERY LOW	RoB, Imprecision
2	intravenous immunoglobulin	placebo/standard care	-2.07	-6.63	2.45	NA	NA	NA	VERY LOW	NA	NA	NA	NA	NA	NA	NA	-2.06	-5.78	1.61	NA	NA	NA	VERY LOW	RoB, Inconsistency, Imprecisionx2
3	convalescent plasma	intravenous immunoglobulin	NA	NA	NA	NA	NA	NA	NA	1.65	-3.03	6.40	NA	NA	NA	VERY LOW	1.65	-3.03	6.40	NA	NA	NA	VERY LOW	RoB, Inconsistency, Imprecisionx2
Mechanical ventilation (non-severe)																								
1	casirivimab, imdevimab	placebo/standard care	0.27	0.05	1.55	-4.98	-6.52	3.76	LOW	NA	NA	NA	NA	NA	NA	NA	0.21	0.02	1.20	-4.01	-5.86	1.63	LOW	Imprecisionx2
2	convalescent plasma	placebo/standard care	0.82	0.29	2.02	-1.24	-4.82	6.88	VERY LOW	NA	NA	NA	NA	NA	NA	NA	0.71	0.18	1.77	-1.33	-4.96	4.43	VERY LOW	RoB, Imprecisionx2
3	CT-P59 monoclonal antibody	placebo/standard care	1.53	0.05	45.43	3.56	-6.50	231.72	VERY LOW	NA	NA	NA	NA	NA	NA	NA	814,231.50	0.31	25433149 4377	736.17	-3.62	994.00	VERY LOW	Imprecision

#	Intervention 1	Intervention 2	DIRECT ESTIMATES							INDIRECT ESTIMATES							NETWORK ESTIMATES							Reasons
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																			4547456					
4	sotrovimab	placebo/standard care	0.20	0.01	5.07	-5.48	-6.80	26.92	LOW	NA	NA	NA	NA	NA	NA	NA	0.00	0.00	0.27	-5.75	-6.00	-4.25	VERY LOW	Imprecisionx2
5	casirivimab, imdevimab	convalescent plasma	NA	NA	NA	NA	NA	NA	NA	0.30	0.03	2.83	-2.68	-9.04	4.06	VERY LOW	0.30	0.03	2.83	-2.68	-9.04	4.06	VERY LOW	RoB, Imprecisionx2
6	casirivimab, imdevimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	0.00	0.00	0.85	-740.19	-999.73	-0.77	VERY LOW	0.00	0.00	0.85	-740.19	-999.73	-0.77	VERY LOW	Imprecisionx3
7	casirivimab, imdevimab	sotrovimab	NA	NA	NA	NA	NA	NA	NA	39824784.40	0.62	19896480586439000000000.00	1.73	-0.45	7.49	VERY LOW	39,824,784.40	0.62	1,989,648,058,643,900,000,000,000.00	1.73	-0.45	7.49	VERY LOW	Imprecisionx3
8	convalescent plasma	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	0.00	0.00	2.44	-737.51	-998.44	1.77	VERY LOW	0.00	0.00	2.44	-737.51	-998.44	1.77	VERY LOW	RoB, Imprecisionx2
9	convalescent plasma	sotrovimab	NA	NA	NA	NA	NA	NA	NA	130907300.38	2.23	5977233097389689600000000000.00	4.41	0.58	10.36	VERY LOW	130,907,300.38	2.23	5,977,233,097,388,960,000,000,000.00	4.41	0.58	10.36	VERY LOW	RoB, Imprecisionx3
10	CT-P59 monoclonal antibody	sotrovimab	NA	NA	NA	NA	NA	NA	NA	241385150111533	1,002.25	1,867,670,497,780,590,000,000,000,000.00	741.92	2.21	1000.00	VERY LOW	241385150111533	1,002.25	1,867,670,497,780,590,000,000,000,000.00	741.92	2.21	1000.00	VERY LOW	Imprecisionx3

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			Relative effect			Absolute effect per 1,000			GRADE rating	Relative effect			Absolute effect per 1,000			GRADE rating	Relative effect			Absolute effect per 1,000			GRADE rating	
			Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		
												0,000.00							0,000.00					
Mechanical ventilation (severe)																								
1	convalescent plasma	placebo/standard care	0.95	0.54	1.62	-11.26	-114.54	110.64	VERY LOW	NA	NA	NA	NA	NA	NA	NA	0.92	0.46	1.68	-13.94	-135.43	115.36	VERY LOW	RoB, Imprecisionx2
2	intravenous immunoglobulin	placebo/standard care	0.68	0.27	1.64	-74.32	-199.28	113.59	VERY LOW	NA	NA	NA	NA	NA	NA	NA	0.67	0.29	1.45	-70.25	-189.39	79.48	VERY LOW	RoB, Imprecisionx2
3	convalescent plasma	intravenous immunoglobulin	NA	NA	NA	NA	NA	NA	NA	1.38	0.50	3.78	56.31	-135.95	233.93	VERY LOW	1.38	0.50	3.78	56.31	-135.95	233.93	VERY LOW	RoB, Imprecisionx2
Mortality (non-severe)																								
1	bamlanivimab	placebo/standard care	0.46	0.01	27.79	-1.82	-3.37	83.17	LOW	NA	NA	NA	NA	NA	NA	NA	8.19E-05	6.59E-41	3.98E+23	220.97	-3.40	996.60	VERY LOW	Imprecisionx2
2	bamlanivimab, etesevimab	placebo/standard care	0.05	0.00	1.01	-3.24	-3.39	0.05	LOW	NA	NA	NA	NA	NA	NA	NA	1.56E-24	1.10E-57	6.74E-07	-3.39	-3.40	-3.37	VERY LOW	Imprecisionx2
3	casirivimab, imdevimab	placebo/standard care	0.58	0.26	1.22	-1.43	-2.50	0.75	MODERATE	NA	NA	NA	NA	NA	NA	NA	0.54	0.20	1.13	-1.45	-2.70	0.46	LOW	Imprecision
4	convalescent plasma	placebo/standard care	0.83	0.43	1.46	-0.58	-1.93	1.56	MODERATE	NA	NA	NA	NA	NA	NA	NA	0.79	0.35	1.32	-0.70	-2.22	1.08	VERY LOW	RoB
5	CT-P59 monoclonal antibody	placebo/standard care	0.51	0.01	30.40	-1.68	-3.37	90.52	LOW	NA	NA	NA	NA	NA	NA	NA	0.14	4.59E-21	3.12E+36	174.83	-3.40	996.60	VERY LOW	Imprecisionx2
6	sotrovimab	placebo/standard care	0.33	0.01	10.16	-2.26	-3.36	30.08	LOW	NA	NA	NA	NA	NA	NA	NA	9.15E-17	3.69E-45	0.03	-3.28	-3.40	-2.97	VERY LOW	Imprecisionx2
7	bamlanivimab	bamlanivimab, etesevimab	NA	NA	NA	NA	NA	NA	NA	7.545E+19	6.90E-16	2.83E+50	224.37	-0.01	1000.00	VERY LOW	7.545E+19	6.90E-16	2.83E+50	224.37	-0.01	1000.00	VERY LOW	Imprecisionx3
8	bamlanivimab	casirivimab, imdevimab	NA	NA	NA	NA	NA	NA	NA	0.00	1.07E-40	7.54E+23	222.42	-3.60	998.74	VERY LOW	0.00	1.07E-40	7.54E+23	222.42	-3.60	998.74	VERY LOW	Imprecisionx3
9	bamlanivimab	convalescent plasma	NA	NA	NA	NA	NA	NA	NA	0.00	8.47E-41	5.11E+23	221.67	-4.27	998.04	VERY LOW	0.00	8.47E-41	5.11E+23	221.67	-4.27	998.04	VERY LOW	RoB, Imprecisionx3
10	bamlanivimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	2.49E-05	2.31E-41	1.38E+26	46.14	-1000.00	1000.00	VERY LOW	2.49E-05	2.31E-41	1.38E+26	46.14	-1000.00	1000.00	VERY LOW	Imprecisionx3

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			Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		
11	bamlanivimab	sotrovimab	NA	NA	NA	NA	NA	NA	NA	4.6598E+12	4.10E-27	4.13E+66	224.25	-0.06	1000.00	VERY LOW	4.6598E+12	4.10E-27	4.13E+66	224.25	-0.06	1000.00	VERY LOW	Imprecisionx3
12	bamlanivimab, etesevimab	casirivimab, imdevimab	NA	NA	NA	NA	NA	NA	NA	2.92E-24	2.74E-57	1.34E-06	-1.95	-3.85	-0.69	VERY LOW	2.92E-24	2.74E-57	1.34E-06	-1.95	-3.85	-0.69	VERY LOW	Imprecisionx3
13	bamlanivimab, etesevimab	convalescent plasma	NA	NA	NA	NA	NA	NA	NA	2.04E-24	1.37E-57	8.92E-07	-2.70	-4.47	-1.17	VERY LOW	2.04E-24	1.37E-57	8.92E-07	-2.70	-4.47	-1.17	VERY LOW	RoB, Imprecisionx3
14	bamlanivimab, etesevimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	2.53E-23	4.86E-62	0.11	-178.22	-1000.00	0.01	VERY LOW	2.53E-23	4.86E-62	0.11	-178.22	-1000.00	0.01	VERY LOW	Imprecisionx3
15	bamlanivimab, etesevimab	sotrovimab	NA	NA	NA	NA	NA	NA	NA	1.57E-07	3.52E-46	5.74E+28	-0.12	-0.43	0.03	VERY LOW	1.57E-07	3.52E-46	5.74E+28	-0.12	-0.43	0.03	VERY LOW	Imprecisionx3
16	casirivimab, imdevimab	convalescent plasma	NA	NA	NA	NA	NA	NA	NA	0.68	0.24	2.01	-0.75	-2.92	1.64	VERY LOW	0.68	0.24	2.01	-0.75	-2.92	1.64	VERY LOW	RoB, Imprecisionx2
17	casirivimab, imdevimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	3.67	1.71E-37	1.14E+20	-176.28	-998.65	3.63	VERY LOW	3.67	1.71E-37	1.14E+20	-176.28	-998.65	3.63	VERY LOW	Imprecisionx3
18	casirivimab, imdevimab	sotrovimab	NA	NA	NA	NA	NA	NA	NA	5.6476E+15	18.36	1.40E+44	1.83	0.53	3.84	VERY LOW	5.6476E+15	18.36	1.40E+44	1.83	0.53	3.84	VERY LOW	Imprecisionx3
19	convalescent plasma	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	5.26	2.42E-37	1.63E+20	-175.53	-997.88	4.28	VERY LOW	5.26	2.42E-37	1.63E+20	-175.53	-997.88	4.28	VERY LOW	RoB, Imprecisionx3
20	convalescent plasma	sotrovimab	NA	NA	NA	NA	NA	NA	NA	8.3413E+15	27.66	1.99E+44	2.58	0.97	4.46	VERY LOW	8.3413E+15	27.66	1.99E+44	2.58	0.97	4.46	VERY LOW	RoB, Imprecisionx3
21	CT-P59 monoclonal antibody	sotrovimab	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	VERY LOW	1.6139E+16	7.30E-11	9.02E+62	178.11	-0.20	1000.00	VERY LOW	Imprecisionx3
Mortality (severe)																								
1	casirivimab, imdevimab	placebo/standard care	0.95	0.29	3.07	-9.47	-144.10	243.97	VERY LOW	NA	NA	NA	NA	NA	NA	NA	0.94	0.58	1.52	-6.90	-78.55	82.22	VERY LOW	RoB, Imprecisionx2
2	convalescent plasma	placebo/standard care	0.95	0.76	1.15	-8.25	-43.19	24.81	VERY LOW	0.57	0.19	1.61	-82.21	-168.78	92.40	#N/A	0.92	0.70	1.12	-14.38	-56.04	20.30	VERY LOW	RoB

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			Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		Point estimate	CI lower limit	CI upper limit	Point estimate	CI lower limit	CI upper limit		
3	intravenous immunoglobulin	placebo/standard care	0.55	0.22	1.34	-85.09	-162.45	54.50	VERY LOW	0.92	0.39	2.03	-14.31	-119.94	143.93	VERY LOW	0.70	0.39	1.16	-52.55	-119.13	29.22	VERY LOW	RoB, Imprecisionx2
4	placebo/standard care	control plasma	NA	NA	NA	NA	NA	NA	NA	0.57	0.25	1.30	-118.44	-306.60	41.32	VERY LOW	0.57	0.25	1.30	-118.44	-306.60	41.32	VERY LOW	RoB, Imprecisionx2
5	casirivimab, imdevimab	control plasma	NA	NA	NA	NA	NA	NA	NA	0.53	0.21	1.40	-125.34	-324.43	58.37	VERY LOW	0.53	0.21	1.40	-125.34	-324.43	58.37	VERY LOW	RoB, Imprecisionx2
6	casirivimab, imdevimab	convalescent plasma	NA	NA	NA	NA	NA	NA	NA	1.02	0.63	1.84	7.48	-67.69	110.10	VERY LOW	1.02	0.63	1.84	7.48	-67.69	110.10	VERY LOW	RoB, Imprecisionx2
7	casirivimab, imdevimab	intravenous immunoglobulin	NA	NA	NA	NA	NA	NA	NA	1.35	0.70	2.89	45.65	-58.52	160.60	VERY LOW	1.35	0.70	2.89	45.65	-58.52	160.60	VERY LOW	RoB, Imprecisionx2
8	convalescent plasma	control plasma	0.55	0.19	1.65	--	--	--	LOW	NA	NA	NA	NA	NA	NA	NA	0.52	0.24	1.13	-132.82	-314.58	17.74	LOW	Imprecisionx2
9	control plasma	intravenous immunoglobulin	NA	NA	NA	NA	NA	NA	NA	2.53	1.00	6.49	171.00	-0.12	368.41	LOW	2.53	1.00	6.49	171.00	-0.12	368.41	LOW	RoB, Imprecision
10	intravenous immunoglobulin	convalescent plasma	0.98	0.27	3.55	--	--	--	VERY LOW	0.59	0.27	1.25	--	--	--	VERY LOW	0.76	0.44	1.28	-38.17	-105.33	44.03	VERY LOW	RoB, Imprecisionx2
Transfusion-associated circulatory overload [TACO] (all severities)																								
	convalescent plasma	placebo/standard care	NA	NA	NA	5.00	-3.00	12.00	VERY LOW	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	RoB, Imprecisionx2
Time to symptom resolution (non-severe)																								
1	bamlanivimab	placebo/standard care	0.93	0.26	3.31	-0.67	-6.67	20.78	LOW	NA	NA	NA	NA	NA	NA	NA	0.92	0.64	1.32	-0.53	-3.18	2.95	LOW	Imprecisionx2
2	bamlanivimab, etesevimab	placebo/standard care	0.89	0.51	1.55	-1.00	-4.41	4.95	LOW	NA	NA	NA	NA	NA	NA	NA	0.89	0.68	1.16	-0.93	-2.88	1.45	LOW	Imprecisionx2
3	casirivimab, imdevimab	placebo/standard care	0.72	0.51	1.05	-2.49	-4.43	0.44	LOW	NA	NA	NA	NA	NA	NA	NA	0.72	0.58	0.92	-2.46	-3.81	-0.76	MODERATE	RoB

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4	CT-P59 monoclonal antibody	placebo/standard care	0.66	0.18	2.40	-3.06	-7.37	12.61	LOW	NA	NA	NA	NA	NA	NA	NA	0.66	0.42	1.05	-2.89	-5.22	0.38	MODERATE	Imprecision
5	bamlanivimab, etesevimab	bamlanivimab	0.96	0.29	3.15	NA	NA	NA	LOW	NA	NA	NA	NA	NA	NA	NA	0.96	0.66	1.38	-0.40	-3.66	2.45	LOW	Imprecisionx2
6	bamlanivimab	casirivimab, imdevimab	NA	NA	NA	NA	NA	NA	NA	1.28	0.83	1.95	1.94	-1.24	5.63	VERY LOW	1.28	0.83	1.95	1.94	-1.24	5.63	VERY LOW	RoB, Imprecisionx2
7	bamlanivimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	1.39	0.78	2.51	2.37	-1.80	6.57	LOW	1.39	0.78	2.51	2.37	-1.80	6.57	LOW	Imprecisionx2
8	bamlanivimab, etesevimab	casirivimab, imdevimab	NA	NA	NA	NA	NA	NA	NA	1.23	0.85	1.75	1.53	-1.09	4.26	VERY LOW	1.23	0.85	1.75	1.53	-1.09	4.26	VERY LOW	RoB, Imprecisionx2
9	bamlanivimab, etesevimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	1.34	0.79	2.27	1.96	-1.80	5.31	LOW	1.34	0.79	2.27	1.96	-1.80	5.31	LOW	Imprecisionx2
10	casirivimab, imdevimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	1.08	0.65	1.84	0.43	-3.05	3.31	VERY LOW	1.08	0.65	1.84	0.43	-3.05	3.31	VERY LOW	RoB, Imprecisionx2
Time to symptom resolution (severe)																								
1	convalescent plasma	placebo/standard care	1.00	0.31	3.24	0.00	-10.37	33.61	LOW	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Imprecisionx2
Time to viral clearance (non-severe)																								
1	bamlanivimab	placebo/standard care	1.01	0.29	3.59	0.31	-17.13	62.07	LOW	NA	NA	NA	NA	NA	NA	NA	1.01	0.39	2.69	4.32	-15.16	43.19	LOW	Imprecisionx2
2	bamlanivimab, etesevimab	placebo/standard care	0.88	0.25	3.10	-3.00	-18.08	50.44	LOW	NA	NA	NA	NA	NA	NA	NA	0.88	0.34	2.36	0.71	-16.24	34.54	LOW	Imprecisionx2
3	CT-P59 monoclonal antibody	placebo/standard care	0.95	0.27	3.38	-1.15	-17.56	57.04	LOW	NA	NA	NA	NA	NA	NA	NA	0.95	0.35	2.56	2.83	-15.80	39.55	LOW	Imprecisionx2
4	bamlanivimab, etesevimab	bamlanivimab	0.86	0.27	2.81	NA	NA	NA	LOW	NA	NA	NA	NA	NA	NA	NA	0.87	0.32	2.41	-3.61	-35.91	24.94	LOW	Imprecisionx2
5	bamlanivimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	1.06	0.27	4.26	1.50	-39.58	43.72	LOW	1.06	0.27	4.26	1.50	-39.58	43.72	LOW	Imprecisionx2

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6	bamlanivimab, etesevimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	0.92	0.24	3.74	-2.12	-41.92	35.78	LOW	0.92	0.24	3.74	-2.12	-41.92	35.78	LOW	Imprecisionx2
Time to viral clearance (severe)																								
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Transfusion-related acute lung injury [TRALI] (all severities)																								
	convalescent plasma	placebo/standard care	NA	NA	NA	5.00	-3.00	12.00	VERY LOW	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	RoB, Imprecisionx2
Ventilator-free days (non-severe)																								
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ventilator-free days (severe)																								
、	convalescent plasma	placebo/standard care	-0.68	-1.77	0.41	NA	NA	NA	LOW	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	RoB, Imprecision
Viral clearance (non-severe)																								
1	bamlanivimab	placebo/standard care	0.90	0.25	3.29	-13.97	-117.23	227.59	LOW	NA	NA	NA	NA	NA	NA	NA	0.90	0.28	3.06	2.25	-112.51	215.56	LOW	Imprecisionx2
2	bamlanivimab, etesevimab	placebo/standard care	1.31	0.34	5.09	40.53	-101.05	334.66	LOW	NA	NA	NA	NA	NA	NA	NA	1.31	0.37	4.71	56.90	-97.43	319.25	LOW	Imprecisionx2
3	convalescent plasma	placebo/standard care	2.01	0.94	4.66	118.36	-8.27	312.38	VERY LOW	NA	NA	NA	NA	NA	NA	NA	2.05	0.92	5.31	131.58	-15.37	347.87	VERY LOW	RoB, Imprecisionx2
4	CT-P59 monoclonal antibody	placebo/standard care	1.66	0.48	5.78	81.66	-77.53	366.19	LOW	NA	NA	NA	NA	NA	NA	NA	1.67	0.53	5.21	94.45	-71.59	352.46	LOW	Imprecisionx2
5	bamlanivimab, etesevimab	bamlanivimab	1.46	0.39	5.43	NA	NA	NA	LOW	NA	NA	NA	NA	NA	NA	NA	1.45	0.41	4.85	54.66	-123.06	261.93	LOW	Imprecisionx2
6	bamlanivimab	convalescent plasma	NA	NA	NA	NA	NA	NA	NA	0.44	0.09	1.84	-129.33	-377.89	119.28	VERY LOW	0.44	0.09	1.84	-129.33	-377.89	119.28	VERY LOW	RoB, Imprecisionx2
7	bamlanivimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	0.55	0.10	2.92	-92.20	-368.71	171.87	LOW	0.55	0.10	2.92	-92.20	-368.71	171.87	LOW	Imprecisionx2

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8	bamlanivimab, etesevimab	convalescent plasma	NA	NA	NA	NA	NA	NA	NA	0.64	0.13	2.80	-74.67	-345.29	218.35	VERY LOW	0.64	0.13	2.80	-74.67	-345.29	218.35	VERY LOW	RoB, Imprecisionx2
9	bamlanivimab, etesevimab	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	0.79	0.14	4.44	-37.55	-333.32	268.29	LOW	0.79	0.14	4.44	-37.55	-333.32	268.29	LOW	Imprecisionx2
10	convalescent plasma	CT-P59 monoclonal antibody	NA	NA	NA	NA	NA	NA	NA	1.23	0.32	5.58	37.13	-247.56	310.34	VERY LOW	1.23	0.32	5.58	37.13	-247.56	310.34	VERY LOW	RoB, Imprecisionx2
Viral clearance (severe)																								
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Living network meta-analysis protocol and extended methods

Therapies for treatment and prophylaxis of COVID-19: introduction and methods for a living systematic review and network meta-analyses

An international collaborative project

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Abstract
Objectives: To compare the effects of therapies for prophylaxis and treatment of COVID-19
Design: Living systematic review and network meta-analysis (NMA).
Data sources: U.S. Centers for Disease Control and Prevention (CDC) COVID-19 Research Articles Downloadable Database, which includes 25 electronic databases.
Study selection: We will include randomized clinical trials (RCT) in which persons exposed to COVID-19 or with suspected, probable or confirmed COVID-19 were treated with pharmaceuticals or blood products aimed at prophylaxis or treatment. Pairs of independent reviewers will screen in duplicate title and abstract and full text of potentially eligible articles.
Methods: After duplicate data abstraction, we will conduct a Bayesian-random effects network meta-analysis for each of the outcomes of interest. We will assess the risk of bias of the included studies using a modification of the Cochrane Risk of Bias 2.0 tool, and the certainty of the evidence using the GRADE approach for NMA. We will classify the interventions in groups from the most to the least effective/ harmful following GRADE guidance using a minimally contextualized approach.
Publication and Updating of Results: We will publish and update the results in *The BMJ* and magicapp.org. We will update the living NMA when the question is no longer of clinical importance, or new evidence that might impact on the conclusions is unlikely to be forthcoming.

Background
COVID-19 is a rapidly evolving global health emergency. As of 27 May 2020, over 5.6 million people have been infected and of these, 335,000 have died,[1] resulting in an enormous perceived need to implement a possibly effective intervention. Public figures,[2] guideline bodies,[3] and government agencies [4] have suggested using interventions without established benefit. Clinicians have responded to these suggestions by administering such interventions to large numbers of patients.[5]

With many teams conducting randomized clinical trials (RCTs) of drug interventions—over 1,000 intervention trials registered as of 10 May 2020 [6]—evidence on the comparative effectiveness of drug interventions will emerge rapidly. The new environment will amplify the need for evidence based medicine: distinguishing trustworthy from untrustworthy evidence, interpreting the results, and judging net benefits of interventions against standard treatment and one another.[7]

Reliable guidance for COVID-19 will require adherence to standards of trustworthy clinical practice guidelines,[8] including methodically rigorous and rapidly updated evidence summaries. Such summaries will identify interventions with sufficient evidence of net benefit to warrant use. Establishing absence of net benefit in

previously highly touted interventions may be equally important. Further, if studies suggest that more than one intervention provides net benefit, clinicians and patients will face the challenge of deciding which intervention to use.

Our living systematic review and network meta-analysis (NMA), updated in real time, will answer this urgent demand for trustworthy evidence on the available therapeutic options. This systematic review is part of the *BMJ Rapid Recommendations* project, a collaborative effort from the MAGIC Evidence Ecosystem Foundation (www.magicproject.org) and *The BMJ*. Our living NMA will thus directly inform *BMJ Rapid Recommendations*,[9] providing trustworthy, actionable, and living guidance to clinicians and patients soon after new and potentially practice-changing evidence is made available. The living NMA will be freely available in user-friendly formats, through *The BMJ* and MAGICapp (www.magicapp.orsg), and ready for re-use and adaptation at national and local levels.

Methods

Structure and organization

The team working in the development of this living systematic review and NMA is composed of the following groups:

a. Oversight group composed of experts in the clinical area and systematic review methodology (RAC, TA, GHG, BR, FL, SM, PV). The role of this team is to ensure that the process follows the highest methodological standards, and that the decisions made are clinically sensible and keep consistency with the needs of the *BMJ Rapid Recommendations*.
b. Core systematic review team leaders. This group is composed of methodologists leading teams in charge of study identification (JB), data abstraction (DZ), data analysis (LG), and assessment of certainty of the evidence and presentation (RBP).
c. Reviewers. This team is composed of clinicians, graduate students, methodologists, and biostatisticians conducting or providing advice for screening, data abstraction, and assessments of certainty of the evidence.

In addition, decisions in this protocol have been made considering the requirements from the *Rapid Recommendations* guideline panel, which includes patients.

Eligibility criteria

We will include RCTs in which persons exposed to COVID-19 or with suspected, probable, or confirmed COVID-19 are treated with pharmacologic or blood products aimed at prophylaxis or treatment. We will include trials in which researchers compare any intervention against another or against no intervention, placebo, or standard of care, and report any outcome. We will include trials that report results regardless of publication status (peer-reviewed, in press, or pre-print, but not news reports alone) or language. There will be no restrictions on acuity of disease, nor setting.

We will include trials of pharmaceuticals, blood products, vitamins, minerals and, if the drug is one specific molecule, Chinese medicines. We will exclude quasi-randomized studies and randomized trials evaluating external organ support, plasma exchange, oxygen delivery, ventilation strategies, vaccination, nutrition, traditional Chinese herbal medicines (that typically include more than one molecule or a molecule without specific molecular weighted dosing), exercise/rehabilitation, psychological and educational interventions, personal protective equipment, or any other non-drug supportive care interventions.

Data sources and searches

We will search the U.S. Centers for Disease Control and Prevention (CDC) COVID-19 Research Articles Downloadable Database for eligible studies—the most comprehensive database of COVID-19 research articles from December 2019 and which is maintained by the Stephen B. Thacker CDC library [10]. We will update our search daily Monday to Friday to match the update schedule of the database. The database includes 25 bibliographic and grey literature sources: Medline (Ovid and PubMed), PubMed Central, Embase, CAB Abstracts, Global Health, PsycInfo, Cochrane Library, Scopus, Academic Search Complete, Africa Wide Information, CINAHL, ProQuest Central, SciFinder, the Virtual Health Library, LitCovid, WHO COVID-19 website, CDC COVID-19 website, Eurosurveillance, China CDC Weekly, Homeland Security Digital Library, ClinicalTrials.gov, bioRxiv (preprints), medRxiv (preprints), chemRxiv (preprints), and SSRN (preprints).

We will filter the results from the CDC's database through a validated and highly sensitive machine learning model to identify RCTs.[11] We will track preprints of RCTs until publication and data updated to match that in the peer-reviewed publication when discrepant. In addition, we will search six Chinese databases on a biweekly basis: Wanfang, CBM, CNKI, VIP, Chinese Medical Journal Net (preprints), and ChinaXiv (preprints). The search terms for COVID-19 developed by the CDC have been adapted to the Chinese language. For the search of the Chinese literature, we will also include search terms for randomized trials. The search strategy is available in the Supplementary Material.

We will also monitor living evidence retrieval services on an ongoing basis. Two such services are the Systematic and Living Map on COVID-19 Evidence by the Norwegian Institute of Public Health, in collaboration with the Cochrane Canada Centre at McMaster University,[12] and the Living Overview of Evidence (L·OVE) by Epistemonikos Foundation.[13] Our publication will be accompanied with a public call for information sharing, with hopes that investigators will initiate contact and share information when available. RCTs may also be identified organically through informal networks.

Study selection

Pairs of reviewers will independently and in duplicate screen titles and abstracts followed by full texts. A third reviewer will adjudicate conflicts.

Data extraction

For each eligible trial, two reviewers, who have undergone training and have completed calibration exercises, will extract data independently and in duplicate using a standardised, pilot-tested data extraction form. Discrepancies will be resolved by discussion, and when necessary adjudicated by a third person. The study characteristics and baseline participant information that will be extracted is presented in Box 1.

Box 1. Study characteristics and baseline participant information that will be extracted

- Geographic location
- Physical location (outpatient, inpatient, intensive care)
- Patient and public involvement in the study design or interpretation
- Funder (public, private)
- Number randomized
- Number randomized to each intervention
- Dose, frequency, route of administration, and duration for each intervention
- Number who received each intervention
- Mean age
- Percent male
- Severity of illness (non-severe, severe, critically ill)
- Mean oxygen saturation on room air, or mean baseline amount of supplemental oxygen
- Percent receiving mechanical ventilation at baseline
- Percent current and former smokers
- Percent with hypertension
- Percent with underlying chronic respiratory condition including chronic obstructive pulmonary disease (COPD), asthma, and others
- Percent with diabetes
- Percent taking angiotension-converting-enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs)
- Mean alanine aminotransferase (ALT)
- Mean C-reactive protein (CRP)
- Mean d-dimer
- Mean lactate dehydrogenase (LDH)
- Mean lymphocyte count, and percent with lymphopaenia

Outcomes

We will begin by focusing on the patient-important outcomes listed below, based on the WHO's candidate core outcome set.[14] The list of outcomes may be modified at the discretion of the BMJ *Rapid Recommendations* standing panel of experts, which includes frontline healthcare workers and patient-partners. As harms are typically specific to individual pharmacologic therapies, these outcomes will be selected at the time they are needed to support specific linked Rapid Recommendations. We will extract the outcome data closest to the prespecified outcome time point.

The initial outcomes examined for the studies of treatment will include:

- Mortality (time frame: closest to 90 days)
- Mechanical ventilation in patients not initially mechanically ventilated (time frame: closest to 90 days)
- Duration of hospitalization
- Admission to hospital (time frame: closest to 28 days)
- Adverse effects leading to discontinuation of the intervention (time frame: closest to 28 days)
- Time to symptom resolution
- Time until the amount of SARS-CoV2 viral particles is below the threshold set by the RCT authors for being likely no longer infectious (as a surrogate for transmissibility)
- Undetectable nCoV-19 by PCR (time frame: closest to 7 days and not less than 4 days or more than 10 days)

The initial outcomes examined for the studies of prophylaxis will include:

- Symptomatic SARS-CoV2 infection (time frame: closest to 28 days)
- Mortality (time frame: closest to 90 days)
- Admission to hospital (time frame: closest to 28 days)
- Adverse effects leading to discontinuation of the intervention (time frame: closest to 28 days)
- Time to symptom resolution (those not infected will be considered 0)

Other outcomes that will be extracted and reported from the trials, but not initially reviewed will include:

- Ventilator-free days (time frame: 28 days)
- Venous thromboembolism (time frame: closest to 90 days)
- Clinically important bleeding (time frame: closest to 90 days)

Risk of bias assessments

Following calibration exercises, two reviewers, working independently and in duplicate, will use the Clinical Advances Through Research and Information Translation (CLARITY) revisions of the Cochrane tool for assessing risk of bias in randomized trials (RoB 2.0) to rate trials as either 'low risk of bias', 'some concerns – probably low risk of bias', 'some concerns – probably high risk of bias' and 'high risk of bias', across the following domains: bias arising from the randomization process, bias due to departures from the intended intervention, bias due to missing outcome data, bias in measurement of the outcome, bias in selection of the reported results.[15 16] The response choice 'some concerns' was modified to include a judgement about whether the concerns probably do or do not result in high risk of bias.[16] We will not consider judgements about applicability when considering risk of bias because applicability is judged separately within indirectness domain of the GRADE framework.[17] In addition, the modified tool includes an additional domain to assess risk of bias related to RCTs stopping early for benefit.[18] Reviewers will resolve discrepancies by discussion, and when not possible, adjudication by a third-party research methodologist. A detailed guide for our risk of bias assessments is available in the Supplementary Material. If the body of evidence is rated as high risk of bias for missing data only (i.e., no serious concerns with any other of the risk of bias domains), we may perform sensitivity analyses with worst plausible assumptions to see if results remain robust to missing data.

Treatment nodes

We will perform three separate network meta-analyses: i) pharmacologic treatments for patients with suspected or confirmed COVID-19, ii) blood products for treatment of patients with suspected or confirmed COVID-19, and iii) pharmacologic prophylactic therapy for people exposed to COVID-19.

Treatments will be grouped into common nodes based on molecule but not dose or duration: we will include all doses and durations of the same medication in a single treatment node. When an intervention includes more than one medication, it will be included as a separate node. We will include drugs from the same class within the same node. Chloroquine and hydroxychloroquine will be included in the same node for COVID-19 specific effects and separated for disease-independent adverse effects. Prespecified nodes include angiotensin-converting enzyme inhibitors and angiotensin receptor blockers, anti-interleukin-6 agents (i.e., tocilizumab, sarilumab), glucocorticoids, interferons, JAK inhibitors, statins, antiplatelet agents, and anticoagulants. Antibiotics will be grouped into nodes by class (e.g., macrolides, beta-lactams). The NMA oversight group and the linked Rapid Recommendation panels will make final decisions on how to group treatment nodes.

Data synthesis

We will perform random-effects pairwise meta-analysis for each comparison for each outcome using the Bayesian framework. We will use a plausible prior for variance parameter,[19] and uniform prior for the effect parameter. We will calculate Ratio of Means (RoM) and corresponding 95% credible intervals (CrIs) for continuous outcomes in which we expect variationa cross populations (time to symptoms resolution and time to viral clearance) and

mean differences (MDs) and corresponding 95% credible intervals (CrIs) for other continuous outcomes. For dichotomous outcomes, we will calculate odds ratios (ORs) with corresponding CrIs. Absolute effects will be calculated based on the ORs and baseline risk of standard of care.[20] We will create a funnel plot to assess the publication bias when 10 or more studies are available for a specific direct comparison.[21]

We will conduct a random-effects network meta-analysis using the Bayesian framework with same priors for the variance and effect parameters.[19] We will use three Markov-chains with 100,000 iterations after an initial burn-in of 10,000 and a thinning of 10. We will assess the convergence based on trace plots and the Brooks-Gelman-Rubin statistic, with an acceptable threshold of <1.05 for all nodes. If convergence is not achieved, then we will use 500,000 iterations and a burn-in of 50,000 iterations and a thinning of 10. We will use automated generation of node-splitting models to assess local incoherence and to obtain indirect estimates.[22] We will estimate ranking probabilities and calculate surface under the cumulative ranking curves (SUCRA). For all dichotomous outcomes, we will calculate the absolute treatment effects of the network estimates based-on the odds ratios and the baseline risk using the transitive risks model.[23] To obtain the baseline risk, we will use the highest quality prognostic evidence available at the time of publication, typically based on a systematic review of prognostic studies.[24]

When networks are sparse, between-study heterogeneity variances are often imprecisely estimated. That may generate implausibly wide credible intervals from network estimates, even when the direct and indirect estimates are coherent.[25] When this occurs, we will conduct sensitivity analyses by using empirically informative priors,[26] and fixed effects models.[25] Another situation in which implausibly wide confidence intervals occur is with random effects when the number of studies is small and the heterogeneity is considerable, particularly when study size varies markedly. This is a second situation in which we may opt for fixed effect models.

Pairwise meta-analysis will be conducted using the bayesmeta package of R version 4.0.0 (RStudio, Boston, MA).[27] All network meta-analyses will be performed using the *gemtc* package of R version 4.0.0 (RStudio, Boston, MA),[28] absolute effects in networks will be calculated using *R2jags* package of R version 4.0.0 (RStudio, Boston, MA)[29]. *networkplot* command of Stata version 15.1 (StataCorp, College Station, Texas, USA) will be used to draw the network plots with thickness of edges of the nodes based on inverse variance.[30] The foundational R code that we will use is available in the Supplementary Material.

Subgroups and sensitivity analyses

We will conduct sensitivity analyses and network meta-regression to explore factors that may modify the comparative effect estimates. Specific analyses will be guided by the linked *Rapid Recommendation* guideline panels with the directive to explore a limited number of pre-defined subgroup effects with a specified rationale and anticipated direction of the effect. When sufficient heterogeneity in risk of bias exists, we will perform subgroup analyses comparing studies at low versus high risk of bias. We will classify all studies with at least 1 domain judged at high risk of bias or probably high risk of bias as a high risk of bias study. Ultimately, we will base decisions regarding the credibility of subgroup analyses on the ICEMAN instrument,[31] and follow GRADE guidance on how to deal with low, intermediate, and high credibility subgroup effects.[32]

For all outcomes, we will first include both peer-reviewed and non-peer reviewed data, and then perform a sensitivity analysis by restricting to peer-reviewed publications. When the guideline panel makes a recommendation about a drug class with more than one drug, we will consider performing a sensitivity analysis with individual molecules rather than drug class as the nodes.

Certainty assessment

We will evaluate the certainty of evidence using the GRADE approach for network meta-analysis.[33-35] We will rate the certainty for each comparison and outcome as high, moderate, low, or very low, based on considerations of risk of bias, inconsistency, indirectness, publication bias, intransitivity, incoherence, and imprecision. If and when sufficient effective treatments are available we will, for each outcome, use the GRADE framework to make

conclusions by classifying the interventions in groups from the most to the least effective using a minimally contextualized approach.[36]

Updating
Full results will be updated at minimum every two weeks on webpages hosted by BMJ.com and magicapp.org. A summary of the interim results, risk of bias assessments, individual study data summaries, and the date of the search will be posted in a table within the online publication. Results will be updated more frequently if the project steering committee or the linked BMJ Rapid Recommendations guidelines panel judges that there is sufficient new information to possibly change practice and requests an earlier update. Updates will be submitted to international indexes through the mechanism for corrections but labelled as updates. Old versions and details of any changes will be dated and documented in the Supplementary Material. It may be necessary to adjust some of the processes, outcomes, and analytic methods based on the data. The systematic review team will decide together whether changes to the pre-specified protocol are needed and these changes will be documented in the methods section of the updated review.

External review
A standing peer-review committee editorial staff at The BMJ, clinical experts, patients, and statistician(s) will be tasked with providing feedback on the protocol and initial publication, and a subcommittee will peer review updates. The systematic review team will respond to these comments on an urgent basis. Comments from peer reviewers and responses will be made public. The study webpage will include functionality for comments to be made by any member of the public. The systematic review team will endeavor to respond to all public comments in a timely manner.

Publication
The papers will be published in a traditional format for systematic reviews and network meta-analyses. In addition, results will be published in interactive evidence summary and decision aid formats for multiple comparisons and pairwise comparisons on MAGICapp (www.magicapp.org). The publication will include infographics that highlight the key messages from the current state of the evidence.

Determining the end of project
The project will terminate at the discretion of the project oversight group, which includes representation from the MAGIC Evidence Ecosystem Foundation, The BMJ, the WHO, and international collaborators with clinical and research expertise. We anticipate that the project will end when the question is no longer of clinical importance, or new evidence that might impact on the conclusions is unlikely to be forthcoming. If the influx of new RCT results slows, then the project oversight committee may choose to decrease the frequency of updates.

Data access
All extracted data will be made available publicly at the time of the updates to be shared and used freely.

Changes to the protocol
All changes to the protocol are reported in Table 1 and will be updated as necessary.

Discussion
Our living network meta-analysis will provide up to date information to interested users, including healthcare workers, patients, healthcare agencies, guideline bodies, and governments. It will directly inform joint clinical practice guidelines from BMJ Rapid Recommendations.

We anticipate several challenges. First, living systematic reviews require substantial dedication and human resources.[37] To address this, we will organize our large team into smaller groups with specific responsibilities, including i) a study identification team, ii) a data extraction and management team, iii), a data analysis team, iv)

a grading and publications team, and v) an oversight team. In addition, *The BMJ* will recruit a standing external review committee that will become familiar with the research methods and respond quickly to updates.

Second, the need for recurrent updates conflicts with traditional publication formats. Frequent updates resulting in new publications can have a devastating effect on a journal's impact factor. It may also be confusing for users who want to find the most recent update. To solve this problem, we plan to i) have a reference website with the links to the latest versions, ii) use headers on previous versions stating that they are outdated with a link to the current version, iii) use PubMed's corrections mechanism so that the updated publication keeps the same digital object identifier (DOI) and PubMed identification number.

Evidence summaries will also be published online with MAGICapp (www.magicapp.org) developed for the purpose of dynamic updating and with electronic publication formats not subject to the limitations of traditional publishing formats thus allowing presentation of evidence summaries in multilayered user-friendly formats.[38]

Third, the optimal methodological and statistical methods may change as the number of RCTs and participants increases. In particular, early NMAs are likely to be sparse, and we may have to use specific analytic methods to accommodate these situations.[25] Our oversight committee and semi-independent guideline panels will provide direction and guidance on whether and how the methods should be adopted to the current situation.

Another major concern with living systematic reviews is limitations in the evidence included, in particular bias. We will assess risk of bias of each study using a standardized tool,[15 16] and assess risk of bias for each comparison using the GRADE framework.[33 34] Publication bias is of particular concern with living reviews: studies with positive results are more likely to be published at all, and when published are likely to be published earlier.[39] We will use the GRADE approach, which considers publication bias, to rate certainty for the estimated effect for each comparison.[21] Clinical practice guideline panels of whom the majority will be independent of this review, will consider this issue when making recommendations for practice, and their scrutiny may bear on certainty of evidence judgements.[9]

There are at least two other groups planning a similar living systematic review and NMA.[40 41] More than one group performing similar analyses will allow controlled replication and the scientific community to assess reproducibility of the findings. Our review has advantages over the alternatives, including the use of and experience with GRADE for NMA, an established platform in the *BMJ Rapid Recommendations* project; an established collaboration with and early involvement of the publisher (*The BMJ*); and interpretation from a semi-independent *BMJ Rapid Recommendations* guideline panels; inclusion of a dedicated search of the Chinese literature; and co-publication in MAGICapp through its interactive multilayered evidence presentation format.

Conclusions

The COVID-19 pandemic necessitates rapid interpretation of new evidence addressing therapeutic and prophylactic options. Our living systematic review and NMA will provide a reference point for those interested in the most trustworthy evidence regarding these therapies. Our project will facilitate the movement of evidence into practice much sooner than traditional publication methods.

Table 1. Changes to the protocol

Date	Change	Rationale
15 Jul 2020	Network analyses will only include treatment nodes with at least 100 patients or at least 20 events.	Early analyses with sparse data resulted in implausible and uninformative effect estimates.
28 Aug 2020	Chinese databases searches will be completed monthly.	Balancing feasibility with search result yield.

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