

THE LANCET

Rheumatology

Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

Supplement to: Zhong J, Tang J, Ye C, Dong L. The immunology of COVID-19: is immune modulation an option for treatment? *Lancet Rheumatol* 2020; published online May 20. [https://doi.org/10.1016/S2665-9913\(20\)30120-X](https://doi.org/10.1016/S2665-9913(20)30120-X).

Supplementary appendix

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Supplementary Table S1 Ongoing registered trials of immunomodulation therapy for COVID-19

Strategy	Intervention	Trial registration #	Sponsor	Registration date	Study design
IL-6 antagonism	Tocilizumab	ChiCTR2000029765	The First Affiliated Hospital of University of science and technology of China (Anhui Provincial Hospital)	2020-02-13	multicenter, randomized controlled trial
	Favipiravir + Tocilizumab	ChiCTR2000030894	Peking University First Hospital	2020-03-16	Multicenter, Randomized, Controlled
	Favipiravir Tocilizumab tozumab and adamumab	ChiCTR2000030580	Shanghai General Hospital	2020-03-08	randomized controlled
	Tocilizumab: 8 mg/kg injection	NCT04317092	National Cancer Institute, Naples	2020-03-20	open-label, single-group
	Tocilizumab: 400mg	NCT04310228	Peking University First Hospital	2020-03-17	open-label, randomized
	Tocilizumab	NCT04332094	Fundació Institut de Recerca de l'Hospital de la Santa Creu i Sant Pau	2020-04-02	Randomized, Multicenter, Open-label
	Anakinra: 100 mg/d, sc, 28 d Siltuximab: 11 mg/kg, single IV Tocilizumab: 100 mg/d, sc, 28 d Tocilizumab: 8 mg/kg	NCT04330638	University Hospital, Ghent	2020-04-01	randomized, open-label
	Tocilizumab: 200mg, single dose	NCT04331795	Università Politecnica delle Marche	2020-03-19	Open-label, single arm
	Tocilizumab: 80mg, single dose Tocilizumab 8mg/kg	NCT04331808	University of Chicago	2020-04-02	open-label, non-randomized
	Tocilizumab 8mg/kg	NCT04331808	Assistance Publique - Hôpitaux de Paris	2020-04-02	randomized, open-label, controlled
	Tocilizumab: 8 mg/kg, one dose	NCT04320615	Hoffmann-La Roche	2020-03-25	randomized, multicenter, double-blind, controlled trial
IL-1 blockade	Sarilumab: low dose Sarilumab high dose	NCT04315298	Regeneron Pharmaceuticals	2020-03-19	Randomized, Double-Blind, Controlled
	Anakinra Emapalumab	NCT04324021	Swedish Orphan Biovitrum	2020-03-27	multicenter, randomized, open-label
	Anakinra: 100 mg/d, sc, 28 d	NCT04330638	University Hospital, Ghent	2020-04-01	randomized, open-

	Siltuximab: 11 mg/kg, single IV Tocilizumab: 100 mg/d, sc, 28 d				label
Pyrimidine synthesis inhibitor	leflunomide	ChiCTR2000030058	Renmin Hospital of Wuhan University	2020-02-22	multicenter, randomized, double-blind, controlled trial
JAK inhibitor	Ruxolitinib combined with mesenchymal stem cell	ChiCTR2000029580	Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology	2020-02-05	prospective, single-blind, randomized controlled trial
	Ruxolitinib 10 mg twice a day	NCT04334044	Grupo Cooperativo de Hemopatías Malignas	2020-04-03	Open-label, single group
	Ruxolitinib	NCT04331665	University Health Network, Toronto	2020-04-02	Single Arm Open-label
	Baricitinib 4 mg/day x 14 days	NCT04320277	Hospital of Prato	2020-03-24	open label, non-randomized
	Tofacitinib 10mg bid x 14 days	NCT04332042	Università Politecnica delle Marche	2020-04-02	Single Arm Open-label
Thalidomide	Thalidomide: 100mg, po, qn, for 14 days	NCT04273529	First Affiliated Hospital of Wenzhou Medical University	2020-02-20	Randomized
	Thalidomide: 100mg, po, qn, for 14 days	NCT04273581	First Affiliated Hospital of Wenzhou Medical University	2020-02-18	Randomized
Cloroquine/ Hydroxychloroquine	Chloroquine phosphate, Hydroxychloroquine sulfate	ChiCTR2000030054	Zhongshan Hospital Affiliated to Xiamen University	2020-02-22	prospective, open label, randomized, controlled trial
	hydroxychloroquine	NCT04333225	Baylor Research Institute	2020-04-03	open label, non-randomized
	Hydroxychloroquine 200mg, q12h, 7-10 days	NCT04307693	Asan Medical Center	2020-03-13	Multicenter, open labelled, randomized
	Hydroxychloroquine: 400mg/day for 5 day	NCT04261517	Shanghai Public Health Clinical Center	2020-02-07	randomized, open-label
	Hydroxychloroquine	NCT04328467	University of Minnesota	2020-03-31	randomized
	hydroxychloroquine 400 mg bid for 1 day, 200 mg bid for 4 days	NCT04329832	Intermountain Health Care, Inc.	2020-04-01	randomized, open-label
	azithromycin 500 mg on day 1 plus 250 mg daily on days 2-5	NCT04329611	University of Calgary	2020-04-01	Randomized, Double-blind, controlled
	hydroxychloroquine 400 mg bid for 1 day, 200 mg bid for 4 days	NCT04325893	University Hospital, Angers	2020-03-30	Randomized, Double-blind
	Hydroxychloroquine	NCT04329572	Azidus Brasil	2020-04-01	open-label, single

	for 1 day, 200 mg bid for 4 days				group
	hydroxychloroquine 400 mg bid for 1 day, 200 mg bid for 9 days	NCT04323631	Rambam Health Care Campus	2020-03-26	randomized, open-label
	Hydroxychloroquine + azithromycin	NCT04321278	Hospital Israelita Albert Einstein	2020-03-25	randomized, open-label
	Hydroxychloroquine 400mg day for 10 days	NCT04315896	National Institute of Respiratory Diseases, Mexico	2020-03-20	Double blinded, randomized controlled trial
	hydroxychloroquine: 300mg weekly	NCT04333732	Washington University School of Medicine	2020-04-03	multi-site, randomized, double-blinded, controlled trial
	hydroxychloroquine: 300mg twice weekly				
	hydroxychloroquine: 150 mg daily				
	hydroxychloroquine or chloroquine: 10 mg / kg followed by 155 mg daily	NCT04303507	University of Oxford	2020-03-11	randomised, controlled
	hydroxychloroquine 400 mg bid for 1 day, 200 mg bid for 4 days	NCT04329832	Intermountain Health Care, Inc.	2020-04-01	randomized, open-label
	Azithromycin 500 mg for 1day, 250 mg for 4 days				
	Hydroxychloroquine	NCT04328272	Prof. Dr. Umar Farooq	2020-03-31	Single randomized blinded
	Hydrochloroquine 400 mg x 3 days, then 200 mg x 11 days	NCT04328961	University of Washington	2020-04-01	Single randomized blinded
	Chloroquine	NCT04328493	Oxford University Clinical Research Unit, Vietnam	2020-03-31	open label, randomized, controlled trial
	hydroxychloroquine 400 mg bid for 1 day, 200 mg bid for 4 days	NCT04332991	Massachusetts General Hospital	2020-04-03	Randomized
	chloroquine 500 mg bid for 7 days	NCT04333628	HaEmek Medical Center, Israel	2020-04-03	open label, randomized
	Hydroxychloroquine	NCT04308668	University of Minnesota	2020-03-16	Randomized
	Hydroxychloroquine	NCT04333654	Sanofi	2020-04-03	Randomized, double-blinded, controlled
	Hydroxychloroquine	NCT04322396	Chronic Obstructive Pulmonary Disease Trial Network, Denmark	2020-03-26	Randomized, double-blinded, controlled

Chloroquine 1.0gx2 days, 0.5gx12 day from the third day, Hydroxychloroquine 0.2g bid x 14 days	ChiCTR2000029992	Zhongshan Hospital Affiliated to Xiamen University	2020-02-18	prospective, randomized, open label, controlled trial
Hydroxychloroquine: Day1-3: 500mg BID, Day4-10: 250mg BID	ChiCTR2000029899	Peking University Third Hospital	2020-02-16	Randomized, Open-label, Parallel, Controlled Trial
Hydroxychloroquine: Day1-3: 500mg BID, Day4-10: 250mg BID	ChiCTR2000029898	Peking University Third Hospital	2020-02-16	Randomized, Open-label, Parallel, Controlled Trial
Hydroxychloroquine	ChiCTR2000029868	Ruijin Hospital, Shanghai Jiaotong University School of Medicine	2020-02-15	multicenter, randomized controlled trial
Hydroxychloroquine	ChiCTR2000029803	Renmin Hospital of Wuhan University	2020-02-14	prospective, randomized, open-label, controlled
Hydroxychloroquine	ChiCTR2000029762	The First Affiliated Hospital of Chongqing Medical University	2020-02-12	randomized, open-label, controlled trial
Hydroxychloroquine: low-, medium-, high-dose	ChiCTR2000029761	The First Affiliated Hospital of Chongqing Medical University	2020-02-12	Multicenter, randomized, open-label
Hydroxychloroquin	ChiCTR2000029760	The Second Affiliated Hospital of Chongqing Medical University	2020-02-12	randomized controlled study
Hydroxychloroquine: 0.2g twice a day	ChiCTR2000029740	The First Hospital of Peking University	2020-02-11	randomized open-label controlled
Hydroxychloroquine: 0.2g oral 2/ day	ChiCTR2000029559	Renmin Hospital of Wuhan University	2020-02-04	Randomized, double blind, Parallel
Hydroxychloroquine 0.1g oral 2/ day				
phosphoric chloroquine: 2 tablets BID	ChiCTR2000030031	The Sixth Affiliated Hospital of Guangzhou Medical University (Qingyuan People's Hospital)	2020-02-21	randomized, double-blind, parallel, controlled trial
phosphoric chloroquine: 2 tablets BID	ChiCTR2000029837	Jingzhou Central Hospital	2020-02-15	randomized, double-blind, parallel, controlled trial
chloroquine	ChiCTR2000031204	Beijing you'an Hospital, Capital Medical University	2020-03-24	randomized
chloroquine	ChiCTR2000030718	Zhongnan Hospital of Wuhan University	2020-03-11	open label randomized
favipiravir plus chloroquine	ChiCTR2000030987	Beijing Chao-yang Hospital, Capital Medical	2020-03-20	randomized

	favipiravir			University		controlled
	phosphoric chloroquine: 2 tablets BID	ChiCTR2000029826	Jingzhou Central Hospital	2020-02-14	randomized, double-blind, parallel, controlled trial	
	Chloroquine Phosphate	ChiCTR2000029988	Zhongnan Hospital of Wuhan University	2020-02-18	Open label, Parallel	
	chloroquine phosphate aerosol inhalation	ChiCTR2000029975	The First Hospital of Jilin University	2020-02-18	Single arm	
	Chloroquine Phosphate	ChiCTR2000029939	HwaMei Hospital, University of Chinese Academy of Sciences	2020-02-16	Single-blind, Randomized, Controlled	
	Chloroquine Phosphate	ChiCTR2000029935	HwaMei Hospital, University of Chinese Academy of Sciences	2020-02-16	Single arm	
	Chloroquine Phosphate vs. Lopinavir / Ritonavir	ChiCTR2000029741	The Fifth Affiliated Hospital Sun Yat-Sen University	2020-02-11	prospective, open-label, multicenter randomized controlled	
	chloroquine	ChiCTR2000029609	The Fifth Affiliated Hospital of Sun Yat-Sen University	2020-02-06	prospective, open-label, multiple-center study	
	chloroquine	ChiCTR2000029542	Sun Yat sen Memorial Hospital of Sun Yat sen University	2020-02-03	prospective	
Stem cell therapy	Iv injection of Wharton's Jelly mesenchymal stem cells (1×10 ⁶ /kg)	ChiCTR2000030088	The Sixth Medical Center of PLA General Hospital	2020-02-22	Parallel	
	Mesenchymal stem cell therapy	ChiCTR2000030020	Second Hospital of University of South China, Hengyang	2020-02-20	Sequential	
	mesenchymal stem cell therapy	ChiCTR2000029990	Institute of Basic Medical Sciences, Chinese Academy of Medical Sciences	2020-02-18	Parallel	
	Human Menstrual Blood-Derived Stem Cells	ChiCTR2000029606	The First Affiliated Hospital, College of Medicine, Zhejiang University	2020-02-07	open label, Parallel	
	Ruxolitinib combined with mesenchymal stem cell	ChiCTR2000029580	Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology	2020-02-05	prospective, single-blind, randomized controlled trial	
	Cord Blood Mesenchymal Stem Cell	ChiCTR2000029816	Guangzhou reborn health management consultation co., LTD	2020-02-14	open label, Parallel	
	umbilical cord mesenchymal stem cell conditioned medium	ChiCTR2000029569	Xiangyang First People's Hospital	2020-02-04	randomized controlled	

	mesenchymal stem cells	ChiCTR2000030835	the First Affiliated Hospital of Xinxiang Medical University	2020-03-15	Non-randomized
	mesenchymal stem cells	ChiCTR2000031430	The Fifth Medical Center of PLA General Hospital	2020-03-31	non-randomized controlled
	Dental pulp mesenchymal stem cells	ChiCTR2000031319	Renmin Hospital of Wuhan University	2020-03-27	randomized controlled
	mesenchymal stem cells	ChiCTR2000031494	Huangshi Hospital of Traditional Chinese Medicine	2020-04-02	randomized controlled
	mesenchymal stem cell	NCT04252118	Beijing 302 Hospital, China	2020-02-05	open label, non-randomized
	Cord Blood Mesenchymal Stem Cell	NCT04269525	ZhiYong Peng, Zhongnan Hospital	2020-02-13	Open-label, single arm
	Umbilical cord mesenchymal stem cells	NCT04273646	Wuhan Union Hospital, China	2020-02-18	open label, randomized
Convalescent plasma treatment	Convalescent Plasma	NCT04333355	Hospital San Jose Tec de Monterrey	2020-04-03	Open-label, single group
	Convalescent Plasma	NCT04327349	Mazandaran University of Medical Sciences	2020-03-31	Open-label, single arm
	Immunoglobulin of cured patients	ChiCTR2000030841	Union hospital of Tongji Medical College, Huazhong University of Science and Technology	2020-03-16	randomized control
	Convalescent Plasma	ChiCTR2000030627	The First Affiliated Hospital of Zhengzhou University	2020-03-08	randomized controlled
	infusing convalescent plasma: 200-500ml, two infusions	ChiCTR2000030039	Affiliated Hospital of Xuzhou Medical University	2020-02-13	Multi-center, non randomized control
	anti-2019-nCoV inactivated convalescent plasma	ChiCTR2000030046	First People's Hospital of Jiangxia District, Wuhan (Union Jiangnan Hospital)	2020-02-21	Multi-center, single arm trial
	anti-SARS-CoV-2 virus inactivated plasma	ChiCTR2000030010	Wuhan Jinyintan Hospital (Wuhan Infectious Diseases Hospital)	2020-02-19	randomized, double-blind, parallel-controlled
	convalescent plasma treatment	ChiCTR2000029850	The First Affiliated Hospital of Zhejiang University School of Medicine	2020-02-15	Single center, Non randomized control
	Convalescent plasma	ChiCTR2000029757	Institute of Blood Transfusion, Chinese Academy of Medical Sciences	2020-02-12	prospective randomized controlled trial
Glucocorticoid	Methylprednisolone 250mg/24h	NCT04329650	Judit Pich Martinez	2020-04-01	Randomized, open-label
	Dexamethasone	NCT04325061	Dr. Negrin University Hospital	2020-03-27	randomized, controlled, open-label trial

Methylprednisolone: 80 mg/d	NCT04323592	University of Trieste	2020-03-26	single arm, non randomized
dexamethasone 20mg/d x 5 days + 10mg/d x 5 days	NCT04327401	Luiz F. L. Reis, Ph.D., Hospital Sirio-Libanes	2020-03-31	randomized, open-label
Early corticosteroid	ChiCTR2000030481	Zhongnan Hospital of Wuhan University	2020-03-03	randomized control
Middle-late corticosteroid				
low-dose methylprednisolone	ChiCTR2000029656	Wuhan Pulmonary Hospital	2020-02-09	randomized, open-label

Trials listed are from ChiCtr.org.cn/ and ClinicalTrials.gov/, as of 2020-04-03.