

Table S1. Summary of characteristics for registered randomized controlled trials.

RD	Country	Masking	Purpose	Primary Outcome	Secondary Outcome	Inclusion Criteria	TN	Treatment	Multicenter	Multicountry	Sponsor
26 March 2020	Israel	Blind	SC	SP	C	All COVID-19	30	Anti-inflammatory & Antioxidant oral nutrition vs. iso-caloric nutrition	No	No	Researcher
27 March 2020	China	Blind	Treatment	C	None	Pneumonia, CR	90	NK cells vs. IL15-NK cells vs. NKG2D CAR-NK cells vs. ACE2 CAR-NK cells vs. NKG2D-ACE2 CAR-NK cells	No	No	Researcher
19 March 2020	USA	Blind	Treatment	C	C	Pneumonia, CR	400	Sarilumab vs. Placebo	No	No	Industry
11 March 2020	Spain	OL	Prevention	Diagnosis	Mortality	All COVID-19	3040	Hydroxychloroquine	No	No	Researcher
26 March 2020	Israel	OL	Treatment	C	None	Non severe COVID-19	1116	Hydroxychloroquine	No	No	Researcher
26 March 2020	USA	OL	Treatment	C	Adverse effects	ARDS, CR	6000	Remdesivir	Yes	Yes	Industry
18 March 2020	USA	Blind	Treatment	C	Mortality	Healthy COVID-19 positive Pts	100	PUL-042 Inhalation solution	No	No	Industry
03 March 2020	USA	OL	Treatment	Hospital day	Adverse effects	Pneumonia, CR	1600	Remdesivir	Yes	Yes	Industry
12 March 2020	China	Blind	Treatment	C	None	ARDS, CR	140	Bevacizumab	Yes	No	Researcher
18 February 2020	China	Blind	Treatment	C	C	ARDS, CR	40	Thalidomide, α -interferon, Arbidol, Steroid	Yes	No	Researcher
25 March 2020	USA	Blind	Treatment	C	C	Hospitalization with COVID-19	330	Tocilizumab	Yes	No	Industry
18 February 2020	China	Blind	Treatment	C	Mortality	Pneumonia, CR	100	Thalidomide	Yes	No	Researcher
20 March 2020	Mexico	Blind	Treatment	Mortality	Discharge	Severe COVID-19	500	Hydroxychloroquine	No	No	Industry
27 March 2020	Spain	OL	Treatment	Mortality	C	ARDS, CR	200	Steroid	Yes	No	Researcher
18 February 2020	China	OL	Treatment	C	C	Pneumonia, CR	400	Steroid	Yes	No	Researcher
24 March 2020	USA	Blind	Prevention	Diagnosis	None	Contact with COVID-19	1600	Hydroxychloroquine	No	No	Researcher
23 March 2020	Mexico	Blind	Prevention	Diagnosis	Discharge	Contact with COVID-19	400	Hydroxychloroquine	No	No	Industry

11 March 2020	Thailand	OL	Treatment	SP	Mortality	Healthy COVID-19 positive Pts	80	Oseltamivir, Hydroxychloroquine vs. Lopipinavir, Ritonavir, Oseltamivir vs. Favipiravir, Lopipinavir, Ritonavir vs. Darunavir, Ritonavir, Oseltamivir, Hydroxychloroquine vs. Favipiravir, Darunavir, Ritonavir, Hydroxychloroquine	No	No	Researcher
27 March 2020	Germany	Blind	Treatment	Mental health	Mental health	All	600	Guided online support program	No	No	Researcher
27 March 2020	Italy	OL	Treatment	C	C	ARDS, CR	54	Emapalumab vs. Anakinra	No	No	Industry
13 February 2020	China	Blind	Treatment	C	CR RNA	ICU admission with COVID-19	120	Anti PD-1 antibody vs. Thymosin	No	No	Researcher
11 March 2020	UK	Blind	Prevention	C	C	Healthy COVID-19 positive Pts	40000	Chloroquine or Hydroxychloroquine	No	No	Researcher
18 February 2020	China	OL	Treatment	C	C	Pneumonia, CR	60	Bromhexine Hydrochloride, Arbidol, Interferon a 2β vs. Arbidol, interferon a 2β	No	No	Researcher
07 February 2020	China	OL	Treatment	C	Mortality	Severe COVID-19	80	IVIg	No	No	Researcher
05 February 2020	China	Blind	Treatment	C	C	Pneumonia, CR	400	Arbidol vs. Oseltamivir vs. Lopinavir/ritonavir	No	No	Researcher
05 February 2020	China	Blind	Treatment	C	C	Pneumonia, CR	100	Arbidol vs. Arbidol, Interferon atomization	No	No	Researcher
07 February 2020	China	Blind	Treatment	Adverse effect	C	Hospitalization with COVID-19	60	Ritonavir, Oseltamivir, ASC9F	No	No	Researcher
10 February 2020	China	Blind	Treatment	C	C	Pneumonia, CR	100	Steroid	No	No	Researcher
25 March 2020	Hungary	Blind	Prevention	C	C	All	7576	Personalized health education	No	No	Researcher
17 March 2020	China	OL	Treatment	C	C	All COVID-19	150	Favipiravir, Tocilizumab vs. Favipiravir vs. Tocilizumab	Yes	No	Researcher
25 March 2020	Norway	OL	Treatment	Mortality	C	ICU admission with COVID-19	700	Remdesivir vs. Hydroxychloroquine	Yes	No	Researcher
27 March 2020	Germany	OL	Treatment	SP	Mortality	COVID-19 with ECMO	30	vvECMO	No	No	Researcher
27 March 2020	UK	Blind	Treatment	Vaccination	Adverse effects	Healthy adults	510	ChAdOx1 nCoV-19	No	No	Researcher
25 March 2020	Denmark	Blind	Treatment	C	Adverse effects	Hospitalization with COVID-19	180	Camostat Mesilate	Yes	No	Researcher

27 March 2020	USA	Blind	Treatment	C	SP	Contact with COVID-19	150	Anti-SARS-CoV-2 Plasma vs. SARS-Cov-2 non immune plasma	No	No	Researcher
17 March 2020	USA	Blind	Treatment	C	Mortality	Pneumonia, CR	200	Losartan	No	No	Researcher
20 March 2020	France	OL	Treatment	C	C	Pneumonia, CR	3100	Remdesivir vs Lopinavir/Ritonavir vs. Interferon β 1a	Yes	No	Researcher
17 March 2020	USA	Blind	Treatment	Hospital day	C	Suspected	516	Losartan	No	No	Researcher
17 February 2020	Italy	OL	Treatment	SP	C	Pneumonia, CR	380	Arbidol	Yes	No	Researcher
17 March 2020	USA	Blind	Treatment	Mortality	SP	ARDS, CR	120	Aviptadil	Yes	Yes	Industry
12 March 2020	USA	OL	Treatment	C	Death	Hospitalization with COVID-19	240	NO gas	Yes	No	Researcher
27 March 2020	Canada	Blind	Treatment	C	None	All COVID-19	1500	Azithromycin, Chloroquine	No	No	Researcher
21 February 2020	USA	OL	Treatment	C	SP	Suspected	440	Remdesivir	Yes	No	Industry
25 March 2020	Brazil	OL	Treatment	C	Death	Suspected	440	Hydroxychloroquine + Azithromycin	No	No	Researcher
25 March 2020	Canada	Blind	Prevention	SP	Death	Contact with COVID-19	1220	Lopinavir/Ritonavir	No	No	Researcher
26 March 2020	Italy	OL	Treatment	C	Death	Pneumonia, CR	100	Colchicine	No	No	Researcher
18 March 2020	USA	OL	Prevention	Diagnosis	SP	Medical staff	470	NO gas	No	No	Researcher
05 March 2020	Canada	Blind	Prevention	Diagnosis	C	Medical staff	576	N95 Mask	No	No	Researcher
26 March 2020	Denmark	Blind	Treatment	Hospital day	C	Hospitalization with COVID-19	226	Azithroomyacin vs. Hydroxychloroquine	No	No	Researcher
27 March 2020	France	OL	Treatment	Mortality	C	Pneumonia, CR	180	Sarilumab	No	No	Researcher
03 March 2020	China	OL	Treatment	Adverse effect	C	Pneumonia, CR	328	Recombinant human interferon α 1 β	Yes	No	Researcher
10 February 2020	China	OL	Treatment	Adverse effect	C	Pneumonia, CR	160	ASC09/Ritonavir vs. Lopinavir/Ritonavir	Yes	No	Researcher
12 March 2020	USA	Blind	Treatment	SP	C	ICU admission with COVID-19	200	NO gas	Yes	No	Researcher

26 March 2020	Denmark	OL	Treatment	Mortality	C	Severe COVID-19	200	Tocilizumab vs. Sarilumab	Yes	No	Researcher
26 March 2020	Brazil	OL	Treatment	C	C	Suspected	630	Hydroxychloroquine, Azithromycin	Yes	No	Researcher
11 February 2020	China	Blind	Treatment	C	Mortality	ICU admission with COVID-19	140	Vitamin C	No	No	Researcher
26 March 2020	Brazil	Blind	Treatment	Mortality	Mortality	ARDS, CR	440	Chloroquine	Yes	No	Researcher
26 March 2020	Canada	Blind	Treatment	Mortality	C	High risk of COVID-19	6000	Colchicine	Yes	No	Researcher
20 March 2020	China	Blind	Treatment	Number of pts who unable to SCE Tx	SP	All COVID-19	20	Stem Cell Educator-Treated Mononuclear Cells Apheresis	No	No	Industry
21 February 2020	China	OL	Treatment	C	CoV-2 RNA	Pneumonia, CR	30	NK Cells	No	No	Researcher
20 March 2020	Norway	OL	Treatment	CoV-2 RNA	C	Hospitalization with COVID-19	202	Hydroxychloroquine	No	No	Researcher
19 February 2020	Hong Kong	OL	Treatment	C	C	All COVID-19	70	Lopinavir/ritonavir, Ribavirin, Interferon 1 β vs. Lopinavir/Ritonavir	No	No	Researcher
16 March 2020	USA	Blind	Treatment	Diagnosis	C	Contact with COVID-19	3000	Hydroxychloroquine	No	No	Researcher

Abbreviations; ARDS, acute respiratory distress syndrome; C, clinical course; CR, COVID-19 related; ECMO, extra corporeal membrane oxygenation; ICU, intensive care unit; IL, interleukin; IVIG, intra venous immune globulin; NK, natural killer; OL, open label; Pts, patients; RD, registration day; SC, supportive care; SP, serum parameter; TN, total number; Tx, treatment; VV, venovenous.

Table S2. Summary of characteristics for non-randomized intentional trials.

RD	Country	Study Method	Allocation	Direction	Purpose	Primary Outcome	Secondary Outcome	TN	Treatment	Multicenter	Multicountry	Sponsor
25 March 2020	Italy	Single Group	Single Arm	Prospective	Treatment	Mortality	Clinical course	49	Hyperimmune plasma	No	No	Researcher
27 March 2020	China	Single Group	Single Arm	Prospective	Treatment	Clinical course	CoV-2 RNA	4	DAS181	No	No	Researcher
27 March 2020	France	Parallel study	Single Arm	Prospective	Treatment	Mortality	Clinical course	584	Naproxen	No	No	Researcher
20 March 2020	Italy	Single Group	Single Arm	Prospective	Treatment	Mortality	Laboratory findings	330	Tocilizumab	Yes	No	Researcher
11 March 2020	China	Single Group	Single Arm	Prospective	Treatment	Clinical course	Clinical course	10	Sildenafil	No	No	Researcher
09 March 2020	China	Single Group	Single Arm	Prospective	Treatment	Adverse event	Mortality	100	Covid-19/aAPC vaccine	Yes	No	Researcher
26 March 2020	Italy	Single Group	Single Arm	Prospective	Treatment	Mortality	Laboratory findings	500	Vitamin C	No	No	Researcher
24 March 2020	France	Single Group	Single Arm	Prospective	Diagnosis	Clinical course	Laboratory findings	600		Yes	No	Researcher
19 February 2020	China	Single Group	Single Arm	Prospective	Treatment	Clinical course	Mortality	100	Lentiviral Minigene vaccine	Yes	No	Researcher
24 March 2020	U.S.A.	Single Group	Single Arm	Prospective	Treatment	Clinical course	Mortality	10	Human amniotic fluid	No	No	Researcher
10 March 2020	China	Single Group	Single Arm	Prospective	Treatment	Pulmonary image	Pulmonary image	24	Mesenchymal stem cells	No	No	Industry
19 February 2020	China	Single Group	Single Arm	Prospective	Treatment	Laboratory findings	Clinical course	20	Bevacizumab	No	No	Researcher
20 March 2020	Italy	Single Group	Single Arm	Prospective	Diagnosis	Diagnosis	Laboratory findings	200	VivaDiag™ COVID-19 IgM/IgG Rapid Test	No	No	Researcher
17 February 2020	China	Single Group	Single Arm	Prospective	Prevention	Laboratory findings	Mortality	10	Mesenchymal stem cells	No	No	Researcher
19 March 2020	Italy	Single Group	Single Arm	Prospective	Treatment	Clinical course	Mortality	30	Tocilizumab	No	No	Researcher
24 February 2020	China	Single Group	Single Arm	Prospective	Diagnosis	Diagnosis	Cost effectiveness	230		Yes	No	Researcher
19 February 2020	China	Single Group	Single Arm	Prospective	Treatment	CoV-2 RNA	Clinical course	20	Meplazumab	No	No	Researcher

27 March 2020	U.S.A.	Single Group	Single Arm	Prospective	Diagnosis	CoV-2 RNA	Clinical course	20	Plasma obtained from patients COVID-19 recovered	No	No	Researcher
19 February 2020	China	Single Group	Single Arm	Prospective	Treatment	Adverse event	Clinical course	30	Mesenchymal stem cells	No	No	Researcher
26 March 2020	Canada	Parallel study	Non randomized	Prospective	Treatment	Clinical course	Clinical course	1000	Lopinavir/ritonavir vs Hydroxychloroquine vs Baricitinib	Yes	No	Industry
20 March 2020	Brazil	Single Group	Non randomized	Prospective	Treatment	Pulmonary image	Mortality	66	Mesenchymal stem cell	No	No	Industry
21 February 2020	China	Parallel study	Non randomized	Prospective	Treatment	Pulmonary image	None	30	Fingolimod	No	No	Researcher
18 March 2020	China	Parallel study	Non randomized	Prospective	Prevention	Adverse event	Adverse event	108	Vaccine (Adenovirus Type 5 Vector)	No	No	Industry
11 February 2020	China	Parallel study	Non randomized	Prospective	Treatment	Clinical course	Clinical course	10	Immunoglobulin of cured patients vs gamma globulin	No	No	Researcher
24 March 2020	China	Parallel study	Non randomized	Prospective	Prevention	Diagnosis	Adverse event	2944	Recombinant human interferon α -1b vs. Thymosin α 1	No	No	Researcher
24 March 2020	Italy	Parallel study	Non randomized	Prospective	Treatment	Clinical course	Laboratory findings	60	Baricitinib	No	No	Researcher
26 March 2020	Italy	Single Group	Non randomized	Prospective	Treatment	Clinical course	Laboratory findings	104	Steroid	No	No	Researcher
26 March 2020	Italy	Parallel study	Non randomized	Prospective	Supportive care	Mortality	Clinical course	120	Escinate sodium	Yes	No	Researcher
20 March 2020	U.S.A.	Parallel study	Non randomized	Prospective	Prevention	Adverse event	Laboratory findings	45	m-RNA 1273 (vaccine)	No	No	Researcher

Abbreviations; RD, registration day.

Table S3. Summary of characteristics for observational studies.

RD	Country	Study Design	Purpose	Primary Outcome	Secondary Outcome	Inclusion Criteria	TN	Multicenter	Multicountry	Sponsor
19 February 2020	China	Prospective	Diagnosis	Diagnosis	None	High risk of COVID-19	450	No	No	Researcher
24 March 2020	Italy	Retrospective	Diagnosis	Clinical course	Mortality	Hospitalization with COVID-19	5000	No	No	Researcher
26 February 2020	Hong Kong	Retrospective	Supportive care	Mortality	Clinical course	ICU admission with COVID-19	8	Yes	No	Researcher
23 March 2020	China	Retrospective	Supportive care	Mortality	Image	Medical staff	275	No	No	Researcher
06 March 2020	China	Prospective	Supportive care	Clinical course	Clinical course	Severe COVID-19	120	No	No	Industry
26 March 2020	Italy	Retrospective	Treatment	Mortality	Clinical course	Pneumonia, CR	50	No	No	Researcher
26 March 2020	Italy	Prospective	Treatment	Mortality	Mortality	COVID-19 who undergo surgery	1000	No	No	Researcher
17 February 2020	China	Prospective	Supportive care	Clinical course	Clinical course	All COVID-19	500	No	No	Researcher
03 March 2020	China	Retrospective	Treatment	Mortality	Mortality	All COVID-19	201	No	No	Researcher
27 March 2020	France	Prospective	Epidemiology	Diagnosis	Clinical course	Who were in China	1000	No	No	Researcher
25 March 2020	Germany	Prospective	Treatment	Mortality	Clinical course	ICU admission with COVID-19	4000	No	No	Researcher
20 March 2020	Italy	Retrospective	Treatment	Clinical course	Clinical course	Hospitalization with COVID-19	350	No	No	Researcher
25 March 2020	USA	Prospective	Treatment	Clinical course	None	None-severe COVID-19	25	No	No	Researcher
25 February 2020	China	Retrospective	Treatment	Mortality	None	Suspected	39	No	No	Researcher
25 March 2020	France	Prospective	Supportive care	Clinical course	Clinical course	ICU admission with COVID-19	250	No	No	Researcher
17 March 2020	China	Retrospective	Diagnosis	Diagnosis	None	Suspected	100	No	No	Researcher

13 March 2020	China	Retrospective	Treatment	Clinical course	Clinical course	Pneumonia, CR	120	No	No	Researcher
27 March 2020	Israel	Prospective	Diagnosis	Voice analysis	None	Pneumonia, CR	5000	No	No	Researcher
20 March 2020	Sweden	Prospective	Supportive care	Kidney function	Clinical course	Suspected	100	No	No	Researcher
18 March 2020	China	Prospective	Treatment	Clinical course	Mortality	All COVID-19	30	No	No	Researcher
27 March 2020	Italy	Prospective	Treatment	Mortality	Mortality	Suspected	3000	No	No	Researcher
18 March 2020	Romania	Prospective	Diagnosis	Image	None	Pneumonia, CR	200	No	No	Researcher
19 March 2020	Norway	Prospective	Treatment	Serum parameter	None	Hospitalization with COVID-19	200	No	No	Researcher
25 March 2020	USA	Prospective	Treatment	Clinical course	Discharge	ALL	100000	No	No	Researcher
27 March 2020	Italy	Prospective	Diagnosis	Prevalence of COVID-19	Prevalence	Continuous immunosuppressive Tx	300	No	No	Industry
27 March 2020	Israel	Prospective	Treatment	Clinical course	None	Suspected	1000	No	No	Researcher
23 March 2020	UK	Prospective	Diagnosis	Diagnosis	None	Medical staff	400	No	No	Researcher
05 February 2020	China	Prospective	Diagnosis	Diagnosis	Mental health	Who were in China	300000	No	No	Researcher
26 March 2020	Italy	Prospective	Diagnosis	Image	None	Suspected	100	Yes	No	Researcher
13 March 2020	France	Prospective	Epidemiology	Mental health	Mental health	ALL	50000	Yes	No	Researcher
27 March 2020	Italy	Prospective	Treatment	Clinical course	Clinical course	Pneumonia, CR	198	No	No	Researcher
25 March 2020	Norway	Prospective	Diagnosis	Diagnosis	None	ALL	50000	No	No	Researcher
24 March 2020	Italy	Prospective	Diagnosis	Clinical course	None	Pregnant woman with COVID-19	20	No	No	Researcher
10 March 2020	China	Retrospective	Diagnosis	Mortality	None	Pneumonia, CR	669	No	No	Researcher
21 February 2020	China	Prospective	Diagnosis	Mortality	Clinical course	Neonates with or born by infected mothers	100	Yes	No	Researcher
27 March 2020	France	Prospective	Treatment	Mortality	None	Pneumonia, CR	1000	No	No	Researcher

20 March 2020	Italy	Prospective	Treatment	Clinical course	None	Pregnant woman with COVID-19	20	No	No	Researcher
18 February 2020	China	Prospective	Treatment	Mortality	Clinical course	ICU admission with COVID-19	100	Yes	No	Researcher
21 February 2020	China	Prospective	Diagnosis	Diagnosis	Mortality	Suspected	20	No	No	Researcher
21 February 2020	China	Prospective	Supportive care	Mortality	Image	Suspected	100	No	No	Researcher
03 March 2020	China	Retrospective	Treatment	Mortality	None	All COVID-19	400	No	No	Researcher
24 March 2020	Italy	Prospective	Treatment	Clinical course	None	All COVID-19	1000	No	No	Researcher
29 January 2020	China	Prospective	Diagnosis	Diagnosis	Prevalence	Suspected	50	No	No	Researcher
27 March 2020	France	Prospective	Diagnosis	Diagnosis	Clinical course	COVID-19 with DM	300	No	No	Researcher
05 February 2020	China	Prospective	Supportive care	Death	Clinical course	Patient who visit ER	12000	No	No	Researcher
26 March 2020	Italy	Prospective	Diagnosis	Serum parameter	Serum parameter	Suspected	110	Yes	No	Researcher
02 March 2020	France	Prospective	Diagnosis	Diagnosis	None	Suspected	300	Yes	No	Researcher
07 February 2020	France	Prospective	Diagnosis	Diagnosis	Serum parameter	High risk of COVID-19	300	No	No	Researcher
07 February 2020	China	Prospective	Supportive care	Mental health	Mental health	ALL	30000	Yes	No	Researcher
13 March 2020	Italy	Prospective	Treatment	Real-life data	Mortality	All COVID-19	50	No	No	Researcher
26 March 2020	France	Prospective	Diagnosis	Diagnosis	Clinical course	High risk of COVID-19	300	No	No	Researcher
27 March 2020	USA	Prospective	Treatment	Clinical course	None	Pregnant woman with COVID-19	1000	No	No	Researcher
24 March 2020	Turkey	Prospective	Treatment	Clinical course	None	Healthy adults	200	No	No	Researcher
24 March 2020	Spain	Prospective	Diagnosis	Clinical course	Clinical course	Solid organ transplant diagnosed of COVID-19	50	No	No	Researcher
10 February 2020	France	Prospective	Treatment	Clinical course	None	Suspected	500	No	No	Researcher

Abbreviations: CR, COVID-19 related; DM, diabetes mellitus; ER, emergency room; ICU, intensive care unit RD, registration day; TN, total number; Tx, treatment.