

antiviral and associated therapy - all results

Treatment	Number of studies	clinical deterioration	clinical improvement	deaths	viral clearance
chloroquine and derivatives	45 studies ¹	1.04 [0.80 ; 1.35], 6 RCTs, I2=0% inconclusive result	1.07 [0.83 ; 1.39], 3 RCTs, I2=0% inconclusive result	1.07 [0.97 ; 1.18], 30 RCTs, I2=0% inconclusive result	0.97 [0.73 ; 1.29], 3 RCTs, I2=0% inconclusive result
ivermectin	21 studies ²	0.66 [0.32 ; 1.34], 4 RCTs, I2=69% inconclusive result	1.67 [1.05 ; 2.66], 3 RCTs, I2=0% moderate degree of certainty	0.66 [0.44 ; 1.00], 10 RCTs, I2=0% inconclusive result	0.93 [0.78 ; 1.10], 2 RCTs, I2=0% inconclusive result
favipiravir	19 studies ³	-	1.65 [1.28 ; 2.13], 5 RCTs, I2=0% moderate degree of certainty	1.13 [0.76 ; 1.70], 7 RCTs, I2=0% inconclusive result	1.45 [0.98 ; 2.13], 8 RCTs, I2=64% inconclusive result
remdesivir	10 studies ⁴	0.95 [0.55 ; 1.64], 1 RCT, I2=0% inconclusive result	1.17 [0.92 ; 1.49], 5 RCTs, I2=71% demonstrated inconclusive result	0.83 [0.67 ; 1.03], 7 RCTs, I2=15% inconclusive result	-
hydroxychloroquine plus macrolides	9 studies ⁵	0.99 [0.57 ; 1.72], 1 RCT, I2=0% inconclusive result	0.81 [0.54 ; 1.22], 1 RCT, I2=0% inconclusive result	0.63 [0.20 ; 2.03], 3 RCTs, I2=0% inconclusive result	-
azithromycin	8 studies ⁶	1.07 [0.63 ; 1.82], 1 RCT, I2=0% inconclusive result	0.76 [0.56 ; 1.04], 2 RCTs, I2=0% inconclusive result	0.99 [0.79 ; 1.26], 5 RCTs, I2=28% inconclusive result	715.00 [12.94 ; 39513.71], 1 study, I2=0% certainty unassessable
lopinavir/ritonavir	8 studies ⁷	3.69 [0.37 ; 36.57], 1 RCT, I2=0% inconclusive result	1.72 [0.98 ; 3.01], 3 RCTs, I2=64% inconclusive result	0.99 [0.89 ; 1.09], 8 RCTs, I2=0% inconclusive result	1.95 [0.73 ; 5.23], 3 RCTs, I2=72% demonstrated inconclusive result
sofosbuvir and daclatasvir	5 studies ⁸	-	-	1.11 [0.87 ; 1.40], 4 RCTs, I2=0% inconclusive result	-
umifenovir (arbidol)	5 studies ⁹	0.86 [0.06 ; 11.36], 1 RCT, I2=0% inconclusive result	-	1.00 [0.18 ; 5.59], 2 RCTs, I2=0% inconclusive result	2.80 [0.31 ; 25.53], 1 RCT, I2=0% inconclusive result
bromhexine	3 studies ¹⁰	0.48 [0.01 ; 27.44], 1 RCT, I2=0% inconclusive result	-	0.09 [0.00 ; 1.68], 1 RCT, I2=0% inconclusive result	-

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nitazoxanide	3 studies ¹¹	1.02 [0.29 ; 3.58], 1 RCT, I2=0% inconclusive result	0.81 [0.52 ; 1.27], 1 RCT, I2=0% inconclusive result	1.02 [0.02 ; 51.70], 1 RCT, I2=0% inconclusive result	-
doxycycline	2 studies ¹²	0.44 [0.24 ; 0.78], 2 RCTs, I2=0% moderate degree of certainty	1.89 [1.06 ; 3.38], 1 RCT, I2=0% certainty unassessable	0.39 [0.11 ; 1.42], 2 RCTs, I2=0% inconclusive result	-
sofosbuvir	2 studies ¹³	-	-	-	-
sofosbuvir and ledipasvir	2 studies ¹⁴	-	-	-	-
azvudine	1 study ¹⁵	-	-	1.00 [0.02 ; 55.80], 1 RCT, I2=0% inconclusive result	28.50 [1.27 ; 640.66], 1 RCT, I2=0% certainty unassessable
baloxavir marboxil	1 study ¹⁶	-	-	1.00 [0.02 ; 55.80], 1 RCT, I2=0% inconclusive result	-
darunavir cobicistat	1 study ¹⁷	2.07 [0.06 ; 66.79], 1 RCT, I2=0% inconclusive result	-	1.00 [0.02 ; 53.89], 1 RCT, I2=0% inconclusive result	0.82 [0.36 ; 1.87], 1 RCT, I2=0% inconclusive result
Emtricitabine/tenofovir plus colchicine plus rosuvastatin	1 study ¹⁸	-	-	0.62 [0.33 ; 1.17], 1 RCT, I2=0% inconclusive result	-
Ensitrelvir (XOCOVA)	1 study ¹⁹	-	-	-	-
favipiravir plus interferon	1 study ²⁰	-	-	0.83 [0.23 ; 2.96], 1 RCT, I2=0% inconclusive result	-
Lopinavir/ritonavir plus hydroxychloroquine	1 study ²¹	-	0.63 [0.37 ; 1.06], 1 RCT, I2=0% inconclusive result	0.58 [0.36 ; 0.93], 1 RCT, I2=0% certainty unassessable	-
lopinavir/ritonavir plus interferon β -1a	1 study ²²	-	-	-	-

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lopinavir/ritonavir, ribavirin and interferon beta-1b	1 study ²³	-	3.92 [1.66; 9.24], 1 RCT, I2=0% certainty unassessable	0.47 [0.01; 24.30], 1 RCT, I2=0% inconclusive result	4.37 [1.86; 10.25], 1 RCT, I2=0% demonstrated certainty unassessable
niclosamide	1 study ²⁴	-	-	1.00 [0.20; 5.12], 1 RCT, I2=0% inconclusive result	-
nirmatrelvir / ritonavir (Paxlovid)	1 study ²⁵	-	-	-	-
oseltamivir	1 study ²⁶	-	-	-	-
tenofovir/emtricitabine	1 study ²⁷	-	-	-	-
zinc	1 study ²⁸	-	-	0.77 [0.11; 5.34], 1 RCT, I2=0% inconclusive result	-

Notes

¹FACCT Trial, 2021 (NCT04392973); HYDRA (Hernandez-Cardenas, 2021 (NCT04315896); Abd-El Salam, 2020 (NCT04353336); ARCHAIC -hydroxychloroquine, 2020 (NL8490); CCAP-1, 2020 (NCT04345289); Chen, 2020 (NCT04384380); Chen, ChiCTR2000030054 - Chloroquine, 2020 (ChiCTR2000030054); ChiCTR2000030054-HCQ (Chen), 2020 (ChiCTR2000030054); Coalition Covid-19 Brazil I (Cavalcanti)-Hydroxychloroquine, 2020 (NCT04322123); Duke university HCQ, 2020 (NCT04335552); Duke University hydroxychloroquine/azithromycin, 2020 (NCT04335552); Gonzalez (HCQ), 2020 (NCT04391127); HAHPS, 2020 (NCT04329832); HC-nCoV (Shanghai), 2020 (NCT04261517); Huang, 2020 (ChiCTR2000029542); HYCOVID, 2020 (NCT04325893); Kamran, 2020 (NCT04491994); NCT04333654, 2020 (NCT04333654); NCT04342650, 2020 (NCT04342650); NO COVID-19 (Lyngbakken), 2020 (NCT04316377); OAHU-COVID19, 2020 (NCT04345692); ORCHID, 2020 (NCT04332991); PROTECT A, 2020 (NCT04338698); PROTECT B, 2020 (NCT04338698); RECOVERY, 2020 (NCT04381936); REMAP-CAP-HCQ, 2020 (NCT02735707); SOLIDARITY (WHO study) HCQ, 2020 (NCT04315948); Tang, 2020 (ChiCTR2000029868); TEACH, 2020 (NCT04369742); Zhaowei Chen, 2020 (ChiCTR2000029559); Arshad (HCQ), 2020 (); Belgian Collaborative Group on COVID-19, 2020 (); Chen *chloroquine*, 2020(); *Geleris*, 2020(); *Hu*

²I-TECH (Lim), 2022 (NCT04920942); Abd-El Salam, 2021 (NCT04403555); Babalola, 2021 (); Bukhari, 2021 (NCT04392713); Galan, 2021 (RBR-8h7q82); Kirti, 2021 (CTRI/2020/08/027225); RIVET-COV (Mohan) (12mg and 24mg), 2021 (CTRI/2020/06/026001); Ahmed, 2020 (); Chaccour, 2020 (NCT04390022); Chachar, 2020 (NCT04739410); Gonzalez (IVER), 2020 (NCT04391127); Hashim A, 2020 (NCT04591600); Krolewiecki, 2020 (NCT004381884); NCT04523831 (Mahmud), 2020 (NCT04523831); Okumuş, 2020 (NCT04646109); Shahbaznejad, 2020 (IRCT20111224008507N3); Glorial F, 2020 (NCT04343092); Camprubi, 2020 (); Espitia-Hernandez, 2020 (); Spoorthi, 2020 ()

³FACCT Trial, 2021 (NCT04392973); Holubar M, 2021 (NCT04346628); Shenoy S, 2021 (NCT04529499); Shinkai, 2021 (JapicCTI-205238); Solaymani-Dodaran, 2021 (IRCT20200318046812N1); AVIFA-VIR, 2020 (NCT04434248); Chang Chen et al., 2020 (ChiCTR2000030254); Dabbous HM, 2020 (NCT04349241); jRCTs041190120, 2020 (jRCTs041190120); Lou (FAVIPIRAVIR), 2020 (ChiCTR2000029544); NCT04310228-FAVI (Zhao), 2020 (ChiCTR2000030894); NCT04542694, 2020 (NCT04542694); Ruzhentsova T, 2020 (NCT04501783); Udwadia, 2020 (CTRI/2020/05/025114); Calik, 2020 (); Kocayigit H, 2020 (); Cai -FAVIPIRAVIR, 2020 (ChiCTR2000029600)

⁴Andreas (NOR-Solidarity), 2021 (NCT04321616); DisCoVeRy (remdesivir), 2021 (NCT04315948); Mahajan, 2021 (); Norwegian NOR study (remdesivir), 2021 (NCT04321616); CAP-China (Wang et al.), 2020 (NCT04257656); GS-US-540-5773 (Goldman), 2020 (NCT04292899); GS-US-540-5774, 10 days, 2020 (NCT04292730); GS-US-540-5774, 5 days, 2020 (NCT04292730); NIH NIAID ACTT-1, 2020

(NCT04280705); SOLIDARITY (remdesivir), 2020 (NCT04315948)

⁵ProPAC-COVID, 2021 (NCT04322396); Coalition Covid-19 Brazil I (Cavalcanti) - HCQ AZI, 2020 (NCT04322123); Duke university HCQ-AZI, 2020 (NCT04335552); Arshad (HCQ AZ), 2020 (); Davido, 2020 (NCT04453501); Lagier, 2020 (); Magagnoli (HC AZ), 2020 (); Rosenberg, 2020 (); Sbidian (HCQ plus AZI), 2020 ()

⁶Rashad A (AZI vs SoC), 2021 (); COALITION I Covid-19 Brazil (AZI, Cavalcanti), 2020 (NCT04322123); COALITION II Covid-19 Brazil (Furtado), 2020 (NCT04321278); RECOVERY (AZI, Horby), 2020 (NCT04381936); Sekhavati, 2020 (IRCT20200415047092N1); Rodriguez-Molinero, 2020 (); Rosenberg, 2020 (); Espitia-Hernandez, 2020 ()

⁷Ader (lopinavir/ritonavir), 2021 (NCT04315948); Cao, 2020 (ChiCTR2000029308); ELACOI (lopinavir/ritonavir), 2020 (NCT04252885); Nojomi, 2020 (IRCT20180725040596N2); RECOVERY, 2020 (NCT04381936); REMAP-CAP (lopinavir/ritonavir only), 2020 (NCT02735707); SOLIDARITY (lopi/rito), 2020 (NCT04315948); Chen_i*opi, ito*, 2020()

⁸Mobarak (DISCOVER), 2021 (IRCT20200624047908N1); Mobarak S (DISCOVER), 2021 (IRCT20200624047908N); Sadeghi, 2020 (IRCT20200128046294N2); Yakoot, 2020 (DRKS00022203); Eslami, 2020 (IRCT20200324046850N2)

⁹ELACOI (Lopinavir/ritonavir), 2020 (NCT04252885); ELACOI (Standard of care), 2020 (NCT04252885); Nojomi, 2020 (IRCT20180725040596N2); Yethindra, 2020 (None); Chen_a*rbidol*, 2020()

¹⁰Tolouian, 2021 (); Ansarin, 2020 (IRCT202003117046797N); Li T, 2020 (NCT04273763)

¹¹Fontanesi, 2021 (NCT04348409); Silva, 2021 (NCT04463264); Rocco, 2020 (NCT04552483)

¹²Spoorthi, 2020 ()

¹³Alavi-moghaddam, 2021 (IRCT20200328046882N1); Sali, 2021 ()

¹⁴Elgohary, 2021 (NCT04530422); Nourian A, 2020 (IRCT20100228003449)

¹⁵Ren, 2020 (ChiCTR2000029853)

¹⁶Lou Y, 2020 (ChiCTR2000029544)

¹⁷Jun C, 2020 (NCT04252274)

¹⁸Gaitan-Duarte (Rosuvastatin plus colchicine plus emtricitabine/tenofovir), 2021 (NCT04359095)

¹⁹Mukae - Phase 2a, 2022 (jRCT2031210350)

²⁰Khamis, 2020 ()

²¹REMAP-CAP (lopinavir/ritonavir plus hydroxychloroquine), 2020 (NCT02735707)

²²Ader (lopinavir/ritonavir plus interferon), 2021 (NCT04315948)

²³Hung et al., 2020 (NCT04276688)

²⁴Abdulmir, 2021 (NCT04753619)

²⁵EPIC-SR, 0 (NCT05011513)

²⁶Chen_o*seltamivir*, 2020()

²⁷Gaitan-Duarte (Emtricitabine/Tenofovir), 2021 (NCT04359095)

²⁸Patel, 2021 (ACTRN12620000454976)