

# Global HCQ/CQ studies

November 15, 2020

@CovidAnalysis

**Early treatment**

100% of studies report positive effects.  
64% is the median improvement.

↓ **64%**

**171 HCQ studies**  
**107 peer reviewed**

**Late treatment**

65% of studies report positive effects.

↓ **26%**

**Early treatment shows high efficacy**

11/14	<b>Meta</b>	Early,...	<i>Covid Analysis (Preprint) (met...</i>		HCQ is effective for COVID-19 wh... HCQ is effective for COVID-19. The probability that an ineffective treatment gen...
11/13	<b>Positive</b>	Late	<i>Sheshah et ...</i>	death, ↓ <b>80.0</b> ...	Prevalence of Diabetes, Manage... Retrospective 300 hospitalized patients in Saudi Arabia showing HCQ adjusted ...
11/12	<b>Positive</b>	Early	<i>Simova et al...</i>	hosp., ↓ <b>96.7</b> ...	Hydroxychloroquine for prophylax... 100% reduction in hospitalization and cases with early treatment using HCQ+AZ...
11/12	<b>Positive</b>	PEP	<i>Simova et al...</i>	cases, ↓ <b>95</b> ...	Hydroxychloroquine for prophylax... 100% reduction in cases with HCQ+zinc post-exposure prophylaxis. Brief report...
11/12	<b>Meta</b>	N/A	<i>Tchounga et al., Journal of Pha...</i>		Composition analysis of falsified ... Analysis of fake CQ tablets finding: - no CQ in six samples, substituted with met...
11/11	<b>Positive</b>	Late	<i>Águila-Gord...</i>	death, ↓ <b>67.0</b> ...	Mortality and associated prognos... 67% lower mortality with HCQ. Retrospective 416 elderly patients in Spain show...
11/9	<b>Negative</b>	Late	<i>Self et al., J...</i>	death, ↓ <b>7.0</b> ...	Effect of Hydroxychloroquine on ... Early terminated very late stage (65% on supplemental oxygen) RCT with 242 H...
11/9	<b>Inconc.</b>	Late	<i>Brown et al., Annals of the Am...</i>		Hydroxychloroquine vs. Azithrom... Small early terminated very late stage (86% on oxygen, 44% enrolled in the ICU) ...
11/9	<b>Positive</b>	Late	<i>Núñez-Gil et...</i>	death, ↓ <b>7.9</b> ...	Mortality risk assessment in Spai...

Retrospective database study of 1,021 patients in Ecuador, Germany, Italy, and ...

11/6	Positive	PrEP	<i>Mathai et al.,...</i>	cases, ↓89.0...	Hydroxychloroquine as pre-expos... 90% reduction in cases with HCQ pre-exposure prophylaxis. Retrospective 604 ...
11/6	Positive	PEP	<i>Dhibar et al.,...</i>	cases, ↓41.0...	Post Exposure Prophylaxis with H... 41% reduction in cases with HCQ PEP. Prospective open label trial with 132 HC...
11/4	Positive	Early	<i>Cadegiani et...</i>	death, ↓82.8...	Early COVID-19 Therapy with Azit... Comparison of HCQ, nitazoxanide, and ivermectin showing similar effectiveness...
11/3	Positive	PrEP	<i>Behera et al...</i>	cases, ↓27.0...	Role of ivermectin in the preventi... Retrospective prophylaxis study for HCQ, ivermectin, and vitamin C with 372 he...
11/2	Positive	Late	<i>López et al., Annals of Pediatr...</i>		Telemedicine follow-ups for COVI... Retrospective 72 pediatric patients showing HCQ associated with a shorter dur...
10/31	Positive	Early	<i>Fonseca et ...</i>	hosp., ↓64.0...	Risk of Hospitalization for Covid-1... 64% lower hospitalization with HCQ. Retrospective 717 patients in Brazil with ea...
10/30	Positive	Late	<i>Tehrani et al...</i>	death, ↓13.4...	Risk factors for mortality in adult ... Retrospective 255 hospitalized patients, 65 treated with HCQ, showing unadjust...
10/27	Positive	PrEP	<i>Arleo et al., ...</i>	death, ↓50.0...	Clinical Course and Outcomes of ... Retrospective hospitalized rheumatic disease patients showing 50% lower mort...
10/27	Negative	Late	<i>Choi et al., I...</i>	viral- time, ↑...	Comparison of antiviral effect for ... Health insurance database analysis failing to adjust for disease severity and not...
10/26	Positive	Late	<i>Frontera et a...</i>	death, ↓37.0...	Treatment with Zinc is Associate... Retrospective 3,473 hospitalized patients showing lower mortality with HCQ+zi...
10/26	Positive	Early	<i>Derwand et ...</i>	death, ↓79.4...	COVID-19 Outpatients – Early Ris... 79% lower mortality and 82% lower hospitalization with early HCQ+AZ+Z (~...
10/24	Negative	PEP	<i>Barnabas et al., IDWeek (Prepri...</i>		Hydroxychloroquine for Post-exp... Early terminated PEP RCT comparing HCQ and vitamin C with 781 patients (83...
10/24	Positive	PrEP	<i>Goenka et al...</i>	IgG+, ↓87.2...	Seroprevalence of COVID-19 Amo... Study of SARS-CoV-2-IgG antibodies in 1122 health care workers in India finding...
10/23	Positive	Late	<i>Coll et al., A...</i>	death, ↓45.6...	Covid-19 in transplant recipients: ... Retrospective 652 transplant recipient patients in Spain showing 46% lower mo...

10/21	<b>Inconc.</b>	Late <i>Lano et al., ...</i> death, ↓ <b>33.1</b> ... Risk factors for severity of COVID... 33% lower mortality with HCQ+AZ, $p=0.28$ . Retrospective 122 French dialysis p...
10/21	<b>Inconc.</b>	Late <i>Dubee et al., ...</i> death, ↓ <b>46.0</b> ... A placebo-controlled double blind... Small early terminated late stage (60% on oxygen) RCT in France showing 46% l...
10/21	<b>Positive</b>	Late <i>Ñamendys-S...</i> death, ↓ <b>32.3</b> ... Outcomes of patients with COVID... Retrospective 164 ICU patients in Mexico showing 32% lower mortality with HC...
10/20	<b>Meta</b>	Early,... <i>IHU Marseille (Preprint) (meta ...</i> Meta-analysis on chloroquine deri... Updated meta analysis of 41 studies showing CQ/HCQ OR 0.57, $p<0.0001$ fro...
10/20	<b>Negative</b>	Late <i>Solh et al., ...</i> death, ↑ <b>18.0</b> ... Clinical course and outcome of C... Retrospective database analysis of 7,816 Veterans Affairs hospitalized patients...
10/17	<b>Safety</b>	Early <i>Mohana et al., International Jo...</i> Hydroxychloroquine Safety Outco... Safety study of 2,733 patients in Saudi Arabia showing HCQ in mild to moderat...
10/15	<b>Positive</b>	Late <i>Guisado-Va...</i> death, ↓ <b>20.3</b> ... Clinical characteristics and outco... Retrospective 607 patients reporting results for early outpatient HCQ use with ...
10/15	<b>Negative</b>	Late <i>SOLIDARITY...</i> death, ↑ <b>19.0</b> ... Repurposed antiviral drugs for CO... WHO SOLIDARITY open-label trial with 954 very late stage (64% on oxygen/vent...
10/12	<b>Inconc.</b>	Late <i>Annie et al., ...</i> death, ↓ <b>4.3</b> ... Hydroxychloroquine in hospitalize... Retrospective database analysis with PSM not including COVID-19 severity, findi...
10/11	<b>Inconc.</b>	Late <i>Sili et al., medRxiv, doi:10.1101...</i> Factors associated with progress... Analysis of hospitalized patients in Turkey showing HCQ was given to 99.2% of ...
10/8	<b>Positive</b>	Late <i>Aparisi et al....</i> death, ↓ <b>63.0</b> ... Low-density lipoprotein cholester... Retrospective 654 hospitalized patients focused on low-density lipoprotein chol...
10/8	<b>Negative</b>	Late <i>Soto-Becerr...</i> death, ↑ <b>84.0</b> ... Real-World Effectiveness of hydro... Retrospective database study of 5683 patients, 692 received HCQ/CQ+AZ, 200...
10/6	<b>Inconc.</b>	Late <i>DISCOVERY ...</i> death, ↓ <b>31.1</b> ... DISCOVERY Trial Preliminary Res... Early terminated DISCOVERY trial shows improvements in mortality and day 29 ...
10/5	<b>Meta</b>	Early,... <i>Prodromos et al., New Microb...</i> Hydroxychloroquine is effective, a... Meta analysis of 43 studies: "HCQ was found consistently effective against COV...
10/2	<b>Positive</b>	Late <i>Nachega et ...</i> death, ↓ <b>27.6</b> ... Clinical Characteristics and Outco...

Retrospective 766 hospitalized patients in DRC showing mortality reduced from...

10/1	<b>Positive</b>	Late <i>Almazrou et ...</i>	ventilation, ...	Comparing the impact of Hydroxy... Retrospective 161 hospitalized patients in Saudi Arabia showing lower ventilatio...
10/1	<b>Meta</b>	PrEP,... <i>Garcia-Albe...</i>	cases, ↓22.0...	Brief communication: A meta-anal... Combination of the four underpowered prophylaxis RCTs to date showing statis...
9/30	<b>Positive</b>	PEP <i>Polat et al., ...</i>	cases, ↓57.0...	Hydroxychloroquine Use on Healt... Small prophylaxis study of 208 healthcare workers in Turkey, 138 with high risk ...
9/30	<b>Positive</b>	Late <i>Ayerbe et al.,...</i>	death, ↓52.2...	The association of treatment with... 2075 hospital patients in Spain showing HCQ reduces mortality 52%, odds ratio...
9/30	<b>Meta</b>	PrEP,... <i>Ladapo et al....</i>	cases/deat...	Randomized Controlled Trials of ... Meta analysis of prophylactic and early treatment RCTs, 24% reduction in cases...
9/30	<b>Inconc.</b>	PrEP <i>Abella et al., ...</i>	cases, ↓5.0...	Efficacy and Safety of Hydroxychl... Very small early-terminated underpowered PrEP RCT with 64/61 HCQ/control p...
9/29	<b>Positive</b>	Late <i>Lammers et ...</i>	death/ICU, ↓...	Observational study 1,064 hospitalized patients in the Netherlands, 53% reduce...
9/29	<b>Inconc.</b>	Late <i>Dabbous et al., Research Squa...</i>		A Randomized Controlled Study ... Small RCT comparing HCQ and favipiravir, with 50 patients in each arm, finding t...
9/28	<b>Meta</b>	PEP <i>Luco, J., ResearchGate, doi:10...</i>		Hydroxychloroquine as Post-Expo... Reanalysis of Boulware et al. PEP trial data showing statistically significant impr...
9/27	<b>Meta</b>	PEP <i>Wiseman et ...</i>	cases, ↓65.0...	Treatment and prevention of early... Analysis of Boulware et al. data showing 65% reduction in cases for treatment ...
9/24	<b>Safety</b>	Early,... <i>Gasperetti et al., EP Europace, ...</i>		Arrhythmic safety of hydroxychlor... Safety study of 649 patients finding that HCQ administration is safe for short-te...
9/24	<b>Positive</b>	Late <i>Shoabi et al...</i>	death, ↓15.4...	Comparative Effectiveness of Fa... Retrospective database analysis focused on Famotidine but also showing resul...
9/23	<b>Negative</b>	Late <i>Ulrich et al., ...</i>	death, ↑6.0...	Treating Covid-19 With Hydroxych... Small RCT on very late stage use of HCQ, with 48% on oxygen at baseline. 67 H...
9/22	<b>Positive</b>	Late <i>Serrano et al...</i>	death, ↓43.0...	COVID-19 and lung cancer: What ... Small retrospective study of 22 lung cancer patients, 14 treated with HCQ+AZ, s...

9/21	<b>Inconc.</b>	PrEP <i>Gentry et al.,...</i> death, ↓86.7... Long-term hydroxychloroquine us... Retrospective patients with rheumatologic conditions showing zero mortality wi...
9/21	<b>Inconc.</b>	PrEP <i>Rajasingha...</i> cases, ↓27.... Hydroxychloroquine as pre-expos... PrEP RCT showing HR 0.73, $p = 0.12$ . Trial halted after 47% enrollment, $p < 0.05$ ...
9/21	<b>Inconc.</b>	PrEP <i>Grau-Pujol e...</i> cases, ↓70.... Pre-exposure prophylaxis with hy... Small PrEP RCT showing that PrEP with HCQ is safe at the dosage used. No de...
9/21	<b>Safety</b>	Early <i>Lofgren et al., medRxiv, doi:10...</i> Safety of Hydroxychloroquine am... Analysis of 2,795 outpatients not showing significant safety concerns with HCQ...
9/18	<b>Meta</b>	Late <i>Axfors et al., medRxiv, doi:10.1...</i> Mortality outcomes with hydroxyc... Meta analysis assigning 87% weight to the RECOVERY trial, producing the same...
9/16	<b>Dosing</b>	N/A <i>Karatzas et al., Xenobiotica (Pee...</i> Optimization of hydroxychloroqui... Analysis of HCQ dosing, suggesting that high initial doses followed by low and ...
9/15	<b>Positive</b>	Late <i>Ashinyo et a...</i> hosp. time, ... Clinical characteristics, treatment ... Retrospective 307 hospital patients in Ghana showing 33% reduction in hospital...
9/14	<b>Positive</b>	Late <i>Lauriola et a...</i> death, ↓73.5... Effect of combination therapy of ... Retrospective 377 patients, 73% reduction in mortality with HCQ+AZ, adjusted h...
9/13	<b>Positive</b>	Early <i>Sulaiman et ...</i> death, ↓63.7... The Effect of Early Hydroxychloro... Observational prospective 5,541 patients, adjusted HCQ mortality odds ratio O...
9/12	<b>Positive</b>	Late <i>Heberto et a...</i> death, ↓53.6... Implications of myocardial injury i... Observational prospective 254 hospitalized patients, HCQ+AZ mortality odds ra...
9/9	<b>Positive</b>	Late <i>Alamdari et ...</i> death, ↓55.0... Mortality Risk Factors among Ho... Retrospective 459 patients in Iran 93% using HCQ, showing HCQ mortality RR 0...
9/9	<b>Inconc.</b>	Early,... <i>Kirenga et al...</i> recov. time, ... Characteristics and outcomes of ... Prospective 56 patients in Uganda, 29 HCQ and 27 control, showing 25.6% fast...
9/9	<b>Negative</b>	PrEP <i>Rentsch et a...</i> death, ↑3.0... Effect of pre-exposure use of hyd... Observational database study of RA/SLE patients in the UK, 194,637 RA/SLE p...
9/9	<b>Inconc.</b>	PrEP <i>Laplana et al...</i> cases, ↑56.... Lack of protective effect of chloro... Survey of 319 autoimmune disease patients taking CQ/HCQ with 5.3% COVID-1...
9/7	<b>Review</b>	Revie... <i>IHU, Expert Review of Clinical I...</i> Natural history and therapeutic op...

Review of the current state of knowledge regarding the natural history of and th...

9/5	<b>Positive</b>	Late <i>Synolaki et ...</i> death, ↓23.6... Retrospective 117 patients, 58 HCQ showing lower mortality for HCQ patients. ...	The Activin/Follistatin-axis is seve...
9/4	<b>Inconc.</b>	Late <i>Furtado et al., The Lancet, doi:...</i> Small RCT comparing the addition of AZ for very late stage patients on ventilati...	Azithromycin in addition to stand...
9/2	<b>In Vitro</b>	In Vit... <i>Wang et al., Phytomedicine, doi:...</i> <i>In Vitro</i> study providing novel insights into the molecular mechanism of CQ/HC...	Chloroquine and hydroxychloroqu...
9/2	<b>Positive</b>	Early <i>Heras et al., ...</i> death, ↓92.1... Retrospective 100 elderly nursing home patients, HCQ+AZ mortality 11.4% vs. ...	COVID-19 mortality risk factors in ...
9/2	<b>Inconc.</b>	PrEP <i>de la Iglesia ...</i> hosp., ↑50.0... Analysis of autoimmune disease patients on HCQ, compared to a control group...	Hydroxicloroquine for pre-exposur...
9/1	<b>Review</b>	Revie... <i>Hecel et al., Pharmaceuticals, ...</i> Review of zinc as an inhibitor of SARS-CoV-2's RNA-dependent RNA polymerase...	Zinc(II)–The Overlooked Éminenc...
9/1	<b>Positive</b>	Early <i>Elbazidi et al., New Microbes a...</i> Analysis of US states and countries. Country analysis shows a significant correl...	Pandemic and social changes, po...
8/29	<b>Inconc.</b>	Late <i>Castillo et al., Journal of Steroi...</i> RCT on calcifediol (25-hydroxyvitamin D) treatment for hospitalized COVID-19 p...	Effect of calcifediol treatment an...
8/28	<b>Inconc.</b>	Late <i>Fried et al., ...</i> death, ↑27.0... Database analysis of 11,721 hospitalized patients, 4,232 on HCQ. Strong evide...	Patient Characteristics and Outco...
8/27	<b>Positive</b>	PrEP <i>Ferri et al., C...</i> cases, ↓63... Analysis of 1641 systemic autoimmune disease patients showing csDMARD (H...	COVID-19 and rheumatic autoim...
8/26	<b>Meta</b>	Late <i>Fiolet et al., Clinical Microbiolo...</i> Meta analysis of late stage studies (and one early treatment study with only 2 d...	Effect of hydroxychloroquine with ...
8/25	<b>Positive</b>	Early <i>Ip et al., med...</i> hosp., ↓45.9... Retrospective 1,274 outpatients, 47% reduction in hospitalization with HCQ with...	Hydroxychloroquine in the treatm...
8/25	<b>Positive</b>	Late <i>Di Castelnu...</i> death, ↓30.0... Retrospective 3,451 hospitalized patients, 30% reduction in mortality with HCQ ...	Use of hydroxychloroquine in hos...
8/24	<b>Positive</b>	Late <i>Catteau et al...</i> death, ↓32.0... Retrospective 8,075 hospitalized patients, 4,542 low-dose HCQ, 3,533 control. ...	Low-dose Hydroxychloroquine Th...

8/21	<b>Positive</b>	Early	<i>Ly et al., Inte...</i>	death, ↓55.6...	Pattern of SARS-CoV-2 infection a... Retrospective analysis of retirement homes, HCQ+AZ >= 3 days mortality OR 0...
8/21	<b>Safety</b>	N/A	<i>Lane et al., The Lancet Rheum...</i>		Risk of hydroxychloroquine alone ... Retrospective study of RA patients using HCQ vs. sulfasalazine (another DMAR...
8/21	<b>Positive</b>	Late	<i>Gonzalez et ...</i>	death, ↓26.6...	The Prognostic Value of Eosinop... Retrospective study focused on eosinophil recovery with 9,644 hospitalized pat...
8/20	<b>Positive</b>	Late	<i>Dubernat et ...</i>	ICU, ↓87.6%,...	A comprehensive strategy for the... Retrospective analysis of 36 hospitalized patients showing HCQ/AZ associated...
8/20	<b>Safety</b>	Early	<i>Prodromos, C., New Microbes ...</i>		Hydroxychloroquine is protective ... Review concluding that HCQ/AZ does not cause Torsade de Pointes or related ...
8/18	<b>Positive</b>	Late	<i>Pinato et al.,...</i>	death, ↓59.0...	Clinical portrait of the SARS-CoV-... Restrospective 890 cancer patients with COVID-19, adjusted mortality HR for H...
8/15	<b>Negative</b>	Late	<i>Peters et al.,...</i>	death, ↑9.0...	Outcomes of Persons With COVI... Retrospective study of HCQ use in 9 hospitals in the Netherlands, showing no si...
8/14	<b>Inconc.</b>	Late	<i>Abd-El salam...</i>	death, ↑20.0...	Hydroxychloroquine in the Treatm... Small RCT in Egypt with 97/97 HCQ/control patients, showing 58% more recov...
8/13	<b>Negative</b>	Late	<i>Roomi et al.,...</i>	death, ↑37.7...	Efficacy of hydroxychloroquine an... Retrospective 176 hospitalized patients (144 HCQ, 32 control) showing no signi...
8/11	<b>Safety</b>	Early	<i>Bakhshaliyev et al., J. Electrocardiogr...</i>		The effect of 5-day course of hyd... Safety study of 109 patients showing 5 days of HCQ+AZ did not lead to clinicall...
8/11	<b>Negative</b>	Late	<i>Saleemi et a...</i>	viral- time, ↑...	Time to negative PCR from symp... Retrospective 65 HCQ+AZ, 20 control patients, showing median time to negativ...
8/8	<b>Inconc.</b>	Late	<i>Lopez et al., Int. J. Antimicrob. ...</i>		Effects of Hydroxychloroquine on ... Small retrospective study of 29 ICU patients comparing those with HCQ plasma...
8/6	<b>Review</b>	Revie...	<i>McCullough et al., The Americ...</i>		Pathophysiological Basis and Rat... Review of pathophysiological principles related to early outpatient treatment an...
8/6	<b>Meta</b>	PEP, ...	<i>Watanabe et al., Open Letter (L...</i>		Concerns regarding the misinterp... Open letter signed by 38 professors and doctors regarding misinterpretation of ...
8/5	<b>Negative</b>	PrEP	<i>Singer et al., ...</i>	cases, ↑9.0...	Hydroxychloroquine ineffective fo...

Comparison of the percentage of SLE/RA patients on immunosuppressants tha...

8/4	<b>Inconc.</b>	Late	<i>Kamran et al...</i>	progression...	Clearing the fog: Is HCQ effective ... Study of 349 low-risk hospitalized patients with 151 non-consenting or ineligible...
8/3	<b>Positive</b>	Late	<i>Berenguer et...</i>	death, ↓61.9...	Characteristics and predictors of ... Retrospective 4035 hospitalized patients in Spain showing reduced mortality wi...
8/3	<b>Positive</b>	Late	<i>Yu et al., Science China Life Sc...</i>		Beneficial effects exerted by hydr... Retrospective 2,882 patients in China, median age 62, 278 receiving HCQ, medi...
8/2	<b>Positive</b>	Late	<i>Davido et al.,...</i>	int./hosp., ↓...	Impact of medical care including ... Retrospective of 132 hospitalized patients. HCQ+AZ(52)/AZ(28) significantly re...
8/2	<b>In Vitro</b>	In Vit...	<i>Sheaff, R., bioRxiv, doi:10.1101...</i>		A New Model of SARS-CoV-2 Infe... <i>In vitro</i> study presenting a new theory on SARS-CoV-2 infection and why HCQ/C...
7/29	<b>Positive</b>	Late	<i>D'Arminio M...</i>	death, ↓34.0...	Effectiveness of Hydroxychloroqu... HCQ+AZ adjusted death HR 0.44, p=0.009. Propensity scores include baseline ...
7/28	<b>Inconc.</b>	Late	<i>Başaran et al., Turk. J. Med. Sc...</i>		Outcome of Non-Critical COVID-1... Observational study of 174 hospitalized patients in Turkey, median age 45.4, 23...
7/26	<b>Inconc.</b>	PEP	<i>Mitjà et al., ...</i>	death, ↓32.0...	A Cluster-Randomized Trial of Hy... Death rate reduced from 0.6% to 0.4%, RR 0.68, not statistically significant due ...
7/24	<b>Positive</b>	PrEP	<i>Khurana et a...</i>	cases, ↓51....	Prevalence and clinical correlates ... Study of hospital health care workers showing HCQ prophylaxis reduces COVID-...
7/23	<b>Negative</b>	Late	<i>Cavalcanti e...</i>	death, ↓16.0...	Hydroxychloroquine with or witho... Late stage RCT of 667 hospitalized patients with up to 14 days of symptoms at...
7/22	<b>In Vitro</b>	In Vit...	<i>Hoffmann et al., Nature, (2020...</i>		Chloroquine does not inhibit infec... The title of this paper does not appear to match the results. Fig. 1b @100uM s...
7/22	<b>Negative</b>	Late	<i>Rivera et al., ...</i>	death, ↑2.4...	Utilization of COVID-19 Treatment... Retrospective cancer patients, showing adjusted OR 1.03 [0.62-1.73] for HCQ. ...
7/22	<b>Negative</b>	Late	<i>Kelly et al., B...</i>	death, ↑143....	Clinical outcomes and adverse ev... Retrospective 82 hospitalized patients HCQ/AZ, 52 SOC, not finding statistically...
7/21	<b>Positive</b>	Late	<i>Bernaola et ...</i>	death, ↓17.0...	Observational Study of the Efficie... HCQ HR 0.83 [0.77-0.89] based on propensity score matched retrospective ana...



7/20	<b>Inconc.</b>	PrEP Retrospective 199 sarcoidosis patients showing RR 0.83, $p=1.0$ .	<i>Desbois et al., Research Squar...</i>	Prevalence and clinical features o...
7/20	<b>Meta</b>	Early Updated meta analysis including 7 new studies of high-risk outpatients, for a tot...	<i>Risch, H., American Journal of ...</i>	Response to: "Early Outpatient Tr...
7/18	<b>Meta</b>	PEP Secondary analysis of Boulware et al.'s PEP trial and treatment delay-response ...	<i>Watanabe, M., arXiv.org, arXiv:2...</i>	Efficacy of Hydroxychloroquine a...
7/19	<b>Inconc.</b>	Late HCQ+AZ early in the epidemic had a fairly good success rate with few complica...	<i>McGrail et al...</i>	death, <b>↑70.0...</b> COVID-19 Case Series at UnityPoi...
7/17	<b>Inconc.</b>	Late Small RCT of nasopharyngeal viral load not showing significant differences. The...	<i>Lyngbakken ...</i>	death, <b>↓3.7...</b> A pragmatic randomized controll...
7/16	<b>Positive</b>	Early HCQ 1-4 days from diagnosis was the only protective factor against prolonged ...	<i>Hong et al., l...</i>	viral+, <b>↓64.9...</b> Early Hydroxychloroquine Admini...
7/16	<b>Inconc.</b>	Early ~70 to 140 hour (inc. shipping) delayed outpatient treatment with HCQ reduced...	<i>Skipper et al...</i>	no recov., <b>↓...</b> Hydroxychloroquine in Nonhospit...
7/16	<b>Inconc.</b>	Early This paper has inconsistent data - some of the values reported in Table 2 and t...	<i>Mitjà et al., ...</i>	hosp., <b>↓25.0...</b> Hydroxychloroquine for Early Trea...
7/15	<b>Negative</b>	Late Analysis of 2215 intensive care unit patients showing no significant differences ...	<i>Gupta et al., ...</i>	death, <b>↑6.0...</b> Factors Associated With Death in...
7/14	<b>Inconc.</b>	Late Retrospective 100 hospitalized patients in Spain showing lower mortality with H...	<i>Trullàs et al.,...</i>	death, <b>↓35.6...</b> High in-hospital mortality due to ...
7/14	<b>Inconc.</b>	Early Small 116 patient RCT comparing Ivermectin-Doxycycline and HCQ+AZ, not sho...	<i>Chowdhury et al., Research Sq...</i>	A Randomized Trial of Ivermectin-...
7/11	<b>Negative</b>	Late Retrospective 80 ICU patients, 22 SOC, 20 lopinavir/ritonavir, 38 HCQ. 28 day m...	<i>Lecronier et ...</i>	death, <b>↓42.0...</b> Comparison of hydroxychloroquin...
7/10	<b>Negative</b>	Late Analysis of 144 hospitalized kidney transplant patients showing HCQ mortality ...	<i>Cravedi et al...</i>	death, <b>↑53.0...</b> COVID-19 and kidney transplanta...
7/10	<b>Inconc.</b>	Late 2 very small studies with hospitalized patients in Taiwan. RCT with 21 treatment...	<i>Chen et al., ...</i>	viral+, <b>↓24.0...</b> A Multicenter, randomized, open-l...
7/9	<b>Meta</b>	Early,...	<i>Raoult et al., Preprint (Preprint)...</i>	Hydroxychloroquine and Azithrom...

Updated meta analysis showing significant reductions in mortality and viral she...

7/8	<b>Review</b>	N/A	<i>Li et al., Cell Death &amp; Disease v...</i>	Is hydroxychloroquine beneficial f... Review of the anti-inflammatory, antiviral, and protective vascular effects of CQ ...
7/7	<b>Review</b>	Revie...	<i>Goldstein, L., Preprint, July 7, 2...</i>	Hydroxychloroquine-based COVID... 85% of globally surveyed physicians recognized HCQ as at least partially effecti...
7/7	<b>Negative</b>	Late	<i>An et al., me...</i>	viral+, ↓3.0... Treatment Response to Hydroxyc... Retrospective of hospitalized patients with 31 HCQ patients and 195 standard t...
7/3	<b>Positive</b>	PrEP	<i>Zhong et al., ...</i>	cases, ↓91... COVID-19 in patients with rheuma... Rheumatic disease patients on HCQ had a lower risk of COVID-19 than those on...
7/1	<b>Positive</b>	Late	<i>Arshad et al...</i>	death, ↓51.3... Treatment with Hydroxychloroqui... HCQ decreases mortality from 26.4% to 13.5% (HCQ) or 20.1% (HCQ+AZ). Prop...
7/1	<b>Safety</b>	N/A	<i>Samuel et al., Heart Rhythm, d...</i>	Incidence of arrhythmias and elec... In pediatric patients with PCR positive active COVID-19 infection, significant arrh...
6/30	<b>Positive</b>	Late	<i>Martinez-Lo...</i>	death, ↓33.0... Multiple Myeloma and SARS-CoV... Retrospective 167 multiple myeloma patients in Spain
6/30	<b>Positive</b>	Late	<i>Mikami et al...</i>	death, ↓47.0... Risk Factors for Mortality in Patie... HCQ decreases mortality, HR 0.53 (CI 0.41–0.67). IPTW adjustment does not s...
6/30	<b>Negative</b>	Late	<i>Komissarov ...</i>	viral load, ↑... Hydroxychloroquine has no effect... Small late stage (7-10 days post symptoms) study of nasal swab RNA with 12 ...
6/29	<b>Positive</b>	PrEP	<i>Ferreira et al...</i>	cases, ↓47... Chronic treatment with hydroxych... Chronic treatment with HCQ provides protection against COVID, odds ratio 0.51...
6/29	<b>Safety</b>	N/A	<i>Mfeukeu-Kuate et al. (Preprint)...</i>	Electrocardiographic safety of dai... No life-threatening modifications of the QT interval was observed in non-severe ...
6/25	<b>Inconc.</b>	PrEP	<i>Gendebien e...</i>	cases, ↓3.9... Systematic analysis of COVID-19 ... Small study of 152 SLE patients taking HCQ with a phone survey for COVID-19 ...
6/25	<b>Positive</b>	Early	<i>Lagier et al., ...</i>	death, ↓59.0... Outcomes of 3,737 COVID-19 pat... Early treatment leads to significantly better clinical outcome and faster viral loa...
6/23	<b>Positive</b>	Late	<i>Bousquet et...</i>	death, ↓42.8... ADL-dependency, D-Dimers, LDH ... Observational prospective 108 hospitalized patients 65 and older, showing HC...

6/22	<b>Positive</b>	Late	<i>Fontana et a...</i>	death, ↓50.0...	SARS-CoV-2 infection in dialysis p... Very small observational study of 15 dialysis patients showing HCQ mortality R...
6/22	<b>Positive</b>	Early	<i>Chen et al., ...</i>	viral- time, ↓...	Efficacy and safety of chloroquin... Significantly faster clinical recovery and shorter time to RNA negative (from 7.0 ...
6/21	<b>Inconc.</b>	Late	<i>Faíco-Filho ...</i>	viral rate, ↓8...	No benefit of hydroxychloroquine ... Viral load comparison for 34 HCQ and 32 control patients hospitalized with mo...
6/19	<b>Positive</b> (news)	PrEP	<i>SMSH Sawai Man Singh Hospi...</i>		HCQ beneficial as preventive drug... PrEP with 4,300 very high risk healthcare workers in a hospital with up to 500+ ...
6/19	<b>Negative</b> (news)	Late	<i>NIH, study not available yet (N...</i>		NIH halts clinical trial of hydroxyc... NIH halts late stage trial reporting no harm and no benefit. 470 patients.
6/19	<b>Positive</b>	Late	<i>Sbidian et al....</i>	death, ↑5.0...	Hydroxychloroquine with or witho... Retrospective of 4,642 hospitalized patients in France showing significantly fast...
6/19	<b>Animal</b>	N/A	<i>Kapstein et al., bioRxiv, doi:10...</i>		Favipiravir at high doses has pote... Animal study with Syrian hamsters, showing treatment of SARS-CoV-2-infected ...
6/18	<b>Inconc.</b>	Late	<i>Paccoud et ...</i>	death, ↓11.0...	Compassionate use of hydroxyc... Retrospective of 89 hospitalized patients, survival HR 0.89 [0.23-3.47], not stati...
6/17	<b>Positive</b>	Late	<i>Xue et al., J. Med. Virology, Jun...</i>		Hydroxychloroquine treatment in ... 30 hospitalized patients. Early use of HCQ is more effective, 43% reduction in pr...
6/17	<b>Inconc.</b>	Late	<i>Luo et al., A...</i>	death, ↑2.2...	COVID-19 in patients with lung ca... Analysis of hospitalized lung cancer patients with 35 of 48 taking HCQ, mortalit...
6/16	<b>Inconc.</b>	Late	<i>Kim et al., Korean J Intern Med...</i>		Lopinavir-ritonavir versus hydroxy... Small retrospective study of hospitalized patients with 31 lopinavir-ritonavir and ...
6/16	<b>Positive</b> (news)	PrEP	<i>WHIP COVID-19 (News) (not in...</i>		Henry Ford Health System still m... Ongoing WHIP COVID-19 HCQ PrEP study reports analyzing their data and seei...
6/16	<b>Positive</b>	PrEP	<i>Huang et al.,...</i>	hosp., ↓80.0...	Clinical characteristics of 17 patie... Analysis of 1255 COVID-19 patients in Wuhan Tongji Hospital finding 0.61% wit...
6/12	<b>Theory</b>	Theo...	<i>Scherrmann, AAPS J 22, 86 (2...</i>		Intracellular ABCB1 as a Possible ... Theory paper, not included in the study count or percentages. Proposes a new ...
6/12	<b>Negative</b>	Late	<i>Giacomelli et al., Journal of M...</i>		Early administration of lopinavir/ri...

Late stage study of hospitalized patients comparing treatment starting within 5 ...

6/10	<b>Inconc.</b>	Late	<i>Wang et al., ...</i>	death, ↓5.8...	Comorbidity and Sociodemograp... Database analysis of 7,592 patients in NYC, showing adjusted HCQ mortality od...
6/10	<b>Positive</b>	Early	<i>Otea et al., medRxiv, doi:10.110...</i>		A short therapeutic regimen base... 80 moderate cases, HCQ+AZ appears to reduce serious complications and dea...
6/9	<b>Positive</b>	Early	<i>Pirnay et al., Hosp. Pharm. and...</i>		Beneficial effect of Hydroxychloro... 68 very high risk nursing home residents, median age 86, HCQ+AZ early treatm...
6/9	<b>Positive</b>	PrEP	<i>Bhattachary...</i>	cases, ↓80....	Pre exposure Hydroxychloroquine... HCQ reduced cases from 38% to 7%. 106 people. No serious adverse effects.
6/6	<b>Review</b>	Revie...	<i>Roussel et al., New Microbes a...</i>		Influence of conflicts of interest o... Shows a correlation (Spearman test, $p = 0.017$ ) between the amount received fr...
6/6	<b>Meta</b>	Early,...	<i>Million et al., New Microbes an...</i>		Clinical Efficacy of Chloroquine de... [H]CQ effective and reduces mortality by a factor 3. Meta analysis of 20 studies.
6/5	<b>Negative</b>	Late	<i>RECOVERY ...</i>	death, ↑9.0...	Effect of Hydroxychloroquine in H... RECOVERY trial finds no significant benefit for very late stage very sick patients....
6/3	<b>Positive</b> (see notes)	PEP	<i>Boulware et ...</i>	cases, ↓17....	A Randomized Trial of Hydroxychl... COVID-19 cases are reduced by [49%, 29%, 16%] respectively when taken within...
6/1	<b>Dosing</b>	N/A	<i>Al-Kofahi et al., Clin. Pharmaco...</i>		Finding the Dose for Hydroxychlo... Analysis of HCQ dosing regimens, recommending: PrEP: 800mg loading dose f...
5/31	<b>Positive</b>	Early	<i>Guérin et al.,...</i>	death, ↓43.0...	Azithromycin and Hydroxychloroq... Mean clinical recovery time reduced from 26 days (SOC) to 9 days, $p < 0.0001$ (...
5/28	<b>Positive</b>	Late	<i>Chamieh et al., medRxiv 2020...</i>		Viral Dynamics Matter in COVID-1... HCQ+AZ potentially explains 94.7% success in treating a fairly complex cohort.
5/28	<b>Positive</b>	PrEP	<i>Chatterjee et...</i>	cases, ↓66....	Healthcare workers & SARS-CoV-... 4+ doses of HCQ associated with a significant decline in the odds of getting inf...
5/28	<b>Positive</b>	Late	<i>Huang et al.,...</i>	viral- time, ↓...	Preliminary evidence from a multi... 197 CQ patients, 176 control. Mean time to undetectable viral RNA and duration...
5/27	<b>Inconc.</b>	Late	<i>Goldman et ...</i>	death, ↓22.3...	Remdesivir for 5 or 10 Days in Pa... Study focused on remdesivir but with results for HCQ in the supplementary app...

5/28	<b>Negative</b>	Late	<i>Kuderer et al...</i>	death, ↑134....	Clinical impact of COVID-19 on pa... Retrospective 928 cancer patients, showing HCQ OR 1.06 [0.51-2.20]. HCQ+AZ...
5/28	<b>Inconc.</b>	PrEP	<i>Gianfrances...</i>	hosp., ↓3.3...	Characteristics associated with h... Analysis of rheumatic disease patients showing no significant association betw...
5/27	<b>Meta</b>	Early	<i>Risch, American Journal of Epi...</i>		Early Outpatient Treatment of Sy... Five studies, including two controlled clinical trials, have demonstrated signifi...
5/25	<b>Negative</b>	Late	<i>Ip et al., med...</i>	death, ↓1.0...	Hydroxychloroquine and Tocilizu... Retrospective study of late stage use on 2,512 hospitalized patients showing n...
5/22	<b>Positive</b> (advisory)	PEP, ...	<i>ICMR, Indian Council of Medic...</i>		Revised advisory on the use of H... Healthcare workers on HCQ prophylaxis less likely to get COVID. Significant dos...
5/22	<b>Retracted</b>	Late	<i>Mehra et al., The Lancet, May ...</i>		Hydroxychloroquine or chloroquin... Incorrect at first read (implausible death, ventilation, and population numbers). ...
5/19	<b>Negative</b>	Late	<i>Singh et al., ...</i>	death, ↓5.0...	Outcomes of Hydroxychloroquine... EHR analysis of 3,372 hospitalized COVID-19 patients not showing a significant...
5/18	<b>Positive</b>	Late	<i>Kim et al., m...</i>	hosp. time, ...	Treatment Response to Hydroxyc... Retrospective of 97 moderate cases. Time to viral clearance significantly shorte...
5/18	<b>Positive</b>	Early	<i>Ahmad et al., doi:10.1101/2020...</i>		Doxycycline and Hydroxychloroqu... 54 patients in long term care facilities. 6% death with HCQ+AZ compared to 22...
5/16	<b>Inconc.</b>	PrEP	<i>Macias et al...</i>	hosp., ↓25.5...	Similar incidence of Coronavirus ... Very small retrospective study of rheumatic disease patients, sample size is to...
5/15	<b>Positive</b>	Late	<i>Yu et al., Sci...</i>	death, ↓60.5...	Low Dose of Hydroxychloroquine ... Retrospective, 550 critically ill patients. 19% fatality for HCQ versus 47% for non...
5/14	<b>Negative</b>	Late	<i>Mahévas et ...</i>	death, ↑20.0...	Clinical efficacy of hydroxychloro... Observational study of 181 patients with advanced disease requiring oxygen sh...
5/13	<b>Positive</b>	Late	<i>Okour et al., Journal of Pharma...</i>		Hydroxychloroquine and azithrom... Odds of PCR-positive decrease by 53% for each unit increase in HCQ log-conce...
5/12	<b>Inconc.</b>	PrEP	<i>Cassione et ...</i>	cases, ↑49....	COVID-19 infection in a northern-It... Survey of 165 SLE patients, 127 on HCQ. 8 patients with suspected COVID-19 a...
5/11	<b>Inconc.</b>	Late	<i>Shabrawishi...</i>	viral+, ↓14.7...	Negative nasopharyngeal SARS-C...

Retrospective 93 hospitalized patients in Saudi Arabia showing a non-statistical...

5/11	<b>Negative</b>	Late	<i>Rosenberg et al.</i>	death, ↑ <b>35.0</b> ...	Association of Treatment With Hy... Restrospective observational late stage study showing no significant difference...
5/10	<b>Positive</b>	Late	<i>Alberici et al.</i>	death, ↓ <b>42.9</b> ...	A report from the Brescia Renal C... Analysis of 94 hemodialysis COVID-19 positive patients. Reduction in death see...
5/8	<b>Ex Vivo</b>	Ex Vi...	<i>Grassin-Delyle et al., Clinical In...</i>		Chloroquine Inhibits the Release ... On human lung parenchymal explants, CQ concentration clinically achievable in t...
5/8	<b>Positive</b>	Late	<i>Carlucci et al., J. Med. Microbi...</i>		Zinc sulfate in combination with a... Retrospective 932 patients. Addition of Zinc to HCQ+AZ reduces mortality / tra...
5/7	<b>Inconc.</b>	PrEP	<i>Konig et al., ...</i>	hosp., ↓ <b>3.0</b> ...	Baseline use of hydroxychloroqui... Analysis of 80 SLE patients diagnosed with COVID-19, showing the frequency o...
5/7	<b>Theory</b>	Theo...	<i>Derendorf, H., Int. J. Antimicro...</i>		Excessive lysosomal ion-trapping... Discusses pharmacokinetic properties of HCQ+AZ as a potential underlying me...
5/7	<b>Inconc.</b>	Late	<i>Geleris et al....</i>	int./death, ↑...	Observational Study of Hydroxych... There appears to be a major error in this paper. Before propensity matching, 38 ...
5/7	<b>Positive (news)</b>	N/A	<i>Sermo (News) (not included in ...</i>		Sermo reports: COVID-19 treatme... HCQ used by 55% of physicians worldwide for COVID. Survey of 6,150 physicia...
5/6	<b>Animal</b>	N/A	<i>Maisonasse et al., Nature, 20...</i>		Hydroxychloroquine use against ... Monkey study which reports no effect of HCQ or HCQ+AZ. However, there are s...
5/5	<b>Positive</b>	Late	<i>Membrillo d...</i>	death, ↓ <b>55.1</b> ...	Early Hydroxychloroquine Is Asso... 166 patients hospitalised with COVID-19, HCQ increased survival 1.4 - 1.8 times...
5/5	<b>Positive</b>	Early,...	<i>Million et al., Travel Med Infect...</i>		Early Treatment of COVID-19 Pati... Retrospective 1061 patients. HCQ+AZ safe and results in a low fatality rate.
5/5	<b>Inconc.</b>	PrEP	<i>Gendelman ...</i>	cases, ↓ <b>8.1</b> ...	Continuous Hydroxychloroquine o... Very small study of rheumatic disease/autoimmune disorder patients showing ...
5/5	<b>Positive</b>	PrEP	<i>Mitchell et a...</i>	death, ↓ <b>99.0</b> ...	Markedly Lower Rates of Coronav... Analysis of COVID-19 amongst 2.4B people shows a wide counterintuitive disp...
5/4	<b>Inconc.</b>	PrEP	<i>Huh et al., m...</i>	cases, ↑ <b>47</b> ...	Association of previous medicati... Database analysis of many drugs and COVID-19 cases, with 23 cases taking H...

5/1	<b>Safety</b>	N/A	<i>Mercurio et al., JAMA Cardiol., ...</i>	Risk of QT Interval Prolongation A... Study of 90 hospitalized patients given HCQ, 53 also receiving AZ, 53% hyperten...
5/1	<b>Safety</b>	N/A	<i>Bessière et al., JAMA Cardiol., ...</i>	Assessment of QT Intervals in a ... Study of 40 very serious condition ICU patients, 75% required invasive mechani...
5/2	<b>Positive</b> (news)	Late	<i>Seydi (News) (not included in t...</i>	Coronavirus: a study in Senegal c... Preliminary results of Senegal trial with 181 patients showing faster recovery wit...
4/30	<b>Positive</b>	Early	<i>Meo et al., Eur. Rev. Med. Phar...</i>	Efficacy of chloroquine and hydro... Analysis of COVID-19 and malaria, finding that COVID-19 is highly pandemic in c...
4/27	<b>Positive</b>	Late	<i>Sánchez-Álv...</i>	death, ↓45.9... Status of SARS-CoV-2 infection in... Analysis of 868 patients on renal replacement therapy. Statistically significant re...
4/29	<b>Safety</b>	N/A	<i>Saleh et al., Circulation: Arrhyt...</i>	The Effect of Chloroquine, Hydrox... 201 hospitalized patients. No serious side effects of HCQ. No instances of Tors...
4/25	<b>In Vitro</b>	In Vit...	<i>Andreani et al., Microbial Patho...</i>	In vitro testing of combined hydro... HCQ and AZ has a synergistic effect <i>in vitro</i> on SARS-CoV-2 at concentrations c...
4/24	<b>Inconc.</b>	Early	<i>Ashraf et al.,...</i>	death, ↓67.5... COVID-19 in Iran, a comprehensiv... Small limited trial with 100 patients concluding that HCQ improved clinical outc...
4/21	<b>Positive</b>	Early	<i>Izoulet M., S...</i>	death, ↓85.0... Countries which Primarily Use Ant... Compares the dynamics of daily deaths in the 10 days following the 3rd death i...
4/21	<b>Negative</b>	Late	<i>Magagnoli e...</i>	death, ↑31.0... Outcomes of hydroxychloroquine ... Retrospective 368 hospitalized patients, no statistically significant reduction in ...
4/17	<b>Positive</b>	PEP	<i>Lee at al., Int. J. Antimicrob. Ag...</i>	Can Post-Exposure Prophylaxis f... Post exposure prophylaxis of 211 high-risk people after major exposure event i...
4/16	<b>Negative</b>	Late	<i>Borba et al., JAMA Network O...</i>	Chloroquine diphosphate in two d... Comparison of typical CQ dosage with high dosage CQ (600mg CQ twice daily ...
4/15	<b>Positive</b>	Early,...	<i>Esper et al., ...</i>	hosp., ↓64.0... Empirical treatment with hydroxy... 636 patients. HCQ+AZ reduced hospitalization 79% when used within 7 days (6...
4/15	<b>Theory</b>	Theo...	<i>Brufsky, A., J. Medical Virology,...</i>	Hyperglycemia, hydroxychloroqui... Theory on the effectiveness of HCQ. HCQ has been shown to block the polariza...
4/14	<b>Negative</b>	Late	<i>Tang et al., B...</i>	viral+, ↓21.5... Hydroxychloroquine in patients wi...

150 patients very late stage RCT showing no significant difference. Treatment v...

4/13	<b>Review</b>	Late	<i>Gao et al., Biosci Trends, May ...</i>	Update on Use of Chloroquine/Hy... Increasing evidence from completed clinical studies shows CQ and HCQ effecti...
4/12	<b>Negative</b>	Late	<i>Barbosa et a...</i>	<b>death, ↑147....</b> Clinical outcomes of hydroxychlor... Small retrospective study with 63 patients (32 treated with HCQ), showing no ef...
4/11	<b>Positive</b>	Early	<i>Gautret et al., Travel Medicine ...</i>	Clinical and microbiological effect... Pilot study suggesting improvement with HCQ+AZ and recommending further s...
4/10	<b>Meta</b>	Late	<i>Lover, medRxiv, doi:10.1101/20...</i>	Quantifying treatment effects of h... Secondary analysis of Gautret et al. showing "modest to no impact of HCQ treat...
4/3	<b>Theory</b>	Theo...	<i>Fantini et al., Int J Antimicrob ...</i>	Structural and molecular modellin... In-silico analysis confirming the antiviral properties of CQ, showing a new mech...
4/1	<b>Positive</b>	Early	<i>Huang et al.,...</i>	<b>no recov., ↓...</b> Treating COVID-19 with Chloroqui... 22 patients. All CQ patients discharged by day 14 versus 50% of Lopinavir/Roti...
3/31	<b>Positive</b>	Late	<i>Chen et al., ...</i>	<b>pneumonia, ...</b> Efficacy of hydroxychloroquine in ... 62 patients. RCT showing significantly faster recovery with HCQ. 13% progress...
3/31	<b>In Vitro</b>	In Vit...	<i>Clementi et al., Front. Microbiol...</i>	Combined Prophylactic and Ther... <i>In vitro</i> study, not included in the study count or percentages, showing greater in...
3/28	<b>Negative</b>	Late	<i>Molina et al., Médecine et Mal...</i>	No evidence of rapid antiviral clea... 11 patients with severe, ... cases. No evidence of benefit for HCQ. Binary PCR eval...
3/26	<b>Positive</b>	Late	<i>Zhong Nans...</i>	<b>viral+, ↓80.0...</b> Efficacy and safety of chloroquin... 197 patients. CQ effective. Day 10 viral RNA negative 91.4% HCQ versus 57.4% ...
3/24	<b>Theory</b>	Theo...	<i>Pagliano et al., Clin. Infect. Dis...</i>	Is Hydroxychloroquine a Possible... CQ and HCQ inhibit replication at early stages of infection, no similar effect repo...
3/23	<b>Theory</b>	Theo...	<i>Hu et al., Nature Nanotechnolo...</i>	Insights from nanomedicine into ... CQ is known in nanomedicine research for the investigation of nanoparticle upta...
3/21	<b>Positive</b> (advisory)	PrEP	<i>ICMR, Indian Council of Medic...</i>	Advisory on the use of hydroxy-ch... Recommends HCQ for prophylaxis in asymptomatic healthcare workers as foun...
3/20	<b>Positive</b> (news)	Late	<i>Hu et al., Shanghai Combined ...</i>	Shanghai Experience of COVID-19... Clinical studies of HCQ with 184 cases and 21 hospitals show HCQ is effective.



3/18	<b>In Vitro</b>	In Vit... <i>Liu et al., Cell Discovery 6, 16 (...</i>	Hydroxychloroquine, a less toxic ... HCQ effective <i>in vitro</i> and less toxic than CQ. In addition to direct antiviral activit...
3/17	<b>Inconc.</b>	Early <i>Gautret et al....</i>	viral+, ↓66.0... Hydroxychloroquine and azithrom... HCQ was significantly associated with reduction / elimination of viral load, whic...
3/17	<b>Review</b>	N/A <i>Sahraei et al., Int. J. Antimicrob...</i>	Aminoquinolines against coronavi... Discussion of mechanisms of action, CQ vs. HCQ, early studies, safety.
3/13	<b>Review</b>	N/A <i>Todaro and Rigano (Review) (P...</i>	An Effective Treatment for Coron... Discussion of existing research, treatment guidelines, and mechanisms of actio...
3/12	<b>Theory</b>	Theo... <i>Devaux et al., International Jou...</i>	New insights on the antiviral effec... Discusses mechanisms of CQ interference with the SARS-CoV-2 replication cycle.
3/10	<b>Meta</b>	N/A <i>Cortegiani et al., J. Crit. Care, J...</i>	A Systematic Review on the Effic... Review of six articles and 23 ongoing clinical trials in China recommending rese...
3/9	<b>In Vitro</b>	N/A <i>Yao et al., Clin. Infect. Dis., 202...</i>	In Vitro Antiviral Activity and Proje... HCQ is more potent than CQ <i>in vitro</i> for inhibiting SARS-CoV-2. Simulates HCQ c...
3/6	<b>Negative</b>	Late <i>Chen et al., J...</i>	progression... A pilot study of hydroxychloroqui... 30 moderate hospitalized cases, all recovered. Time to RNA negative compara...
3/4	<b>Review</b>	Late <i>Colson et al., Int J. Antimicrob ...</i>	Chloroquine and Hydroxychloroqu... Recommending CQ and HCQ for COVID-19 based on 20 clinical studies in Chin...
2/20	<b>Positive</b>	Late <i>Jiang et al., Chin. J. Tuberc. Re...</i>	Expert Consensus on Chloroquin... Early trials in China show CQ results in shorter hospital stays and improved pati...
2/19	<b>Positive</b>	Late <i>Gao et al., BioScience Trends, ...</i>	Breakthrough: Chloroquine phosp... Results from 15 clinical trials in China showing CQ is effective.
2/17	<b>Positive</b> (news)	Late <i>Sun Yanrong, deputy head of t...</i>	Antimalarial drug confirmed effec... HCQ under clinical trials in >10 hospitals in China and has shown fairly good effi...
2/11	<b>Positive</b>	Late <i>Xia et al., Ch...</i>	viral+, ↓37.5... Efficacy of Chloroquine and Lopin... Early results from a very small trial, reported within the application for a later tria...
2/4	<b>In Vitro</b>	In Vit... <i>Wang et al., Cell Res. 30, 269-...</i>	Remdesivir and chloroquine effec... <i>In vitro</i> study, not included in the study count or percentages. Remdesivir and C...
2017	<b>Dosing</b>	N/A <i>Chhonker et al., Journal of Chr...</i>	Simultaneous quantitation of hydr...

Presents a method for quantification of HCQ in mouse blood and tissues. They ...

2014	<b>Animal</b>	Animal <i>Browning, D., Pharmacology of...</i> Pharmacology of Chloroquine an... Review of the pharmacology of CQ and HCQ. Some notable points: - HCQ and C...
2014	<b>In Vitro</b>	In Vit... <i>de Wilde et al., Antimicrobial A...</i> Screening of an FDA-Approved C... CQ inhibits SARS-CoV, MERS-CoV, and HCoV-229E-GFP replication in the low-mi...
2012	<b>Animal</b>	Animal <i>Yan et al., Cell Research, 23, 3...</i> Anti-malaria drug chloroquine is hi... CQ, a known autophagy inhibitor that is in clinical use, can efficiently ameliorate ...
2009	<b>Animal</b>	Animal <i>Keyaerts et al., Antimicrob. Ag...</i> Antiviral Activity of Chloroquine a... CQ inhibits HCoV-OC43 replication in HRT-18 cells. A lethal HCoV-OC43 infectio...
2008	<b>In Vitro</b>	In Vit... <i>Kono et al., Antiviral Research, ...</i> Inhibition of human coronavirus 2... CQ significantly decreased viral replication of HCoV-229E at concentrations low...
2006	<b>In Vitro</b>	In Vit... <i>Savarino et al., Lancet Infect. ...</i> New insights into the antiviral effe... Update to 2003 paper, not included in the study count or percentages. Hypothe...
2005	<b>In Vitro</b>	In Vit... <i>Vincent et al., Virol. J. 2:69, 200...</i> Chloroquine is a potent inhibitor o... <i>In vitro</i> study, SARS-CoV-1, not included in the study count or percentages. CQ h...
2004	<b>In Vitro</b>	In Vit... <i>Keyaerts et al., Biochem. Bioph...</i> In vitro inhibition of severe acute r... <i>In vitro</i> study, SARS-CoV-1, not included in the study count or percentages. IC50...
2003	<b>Theory</b>	Theo... <i>Savarino et al., Lancet Infect. ...</i> Effects of chloroquine on viral infe... Not included in the study count or percentages. Discussion/review noting that C...
1918	<b>Inconc.</b>	N/A <i>Burrows, E., Medical Record, 9...</i> A confirmatory report upon the a... Quinine was found to be effective for the Spanish Flu in 1918.
1890	<b>Inconc.</b> (news)	N/A <i>Le Grelot (News) (not included...</i> Quinine use for the Russian influe... Quinine and antipyrene, a bitherapy for defying death during the Russian influenz...
1889	<b>Inconc.</b> (news)	N/A <i>Edwin Wiley Grove (News) (no...</i> Laxative Bromo Quinine Quinine has been used for respiratory infections since 1889. Not included in the...