

Exhibit 393

Global HCQ/CQ Studies

<https://c19hcq.org/>

Global HCQ/CQ studies

May 7, 2023

@CovidAnalysis

476 HCQ COVID-19 studies, 384 peer reviewed, 389 comparing treatment and control groups. Late treatment and high dosages may be harmful, while early treatment consistently shows positive results. Negative evaluations typically ignore treatment delay. Some *In Vitro* evidence suggested therapeutic levels would not be reached, however that was incorrect [Ruiz]. Recent: [Loo](#) [Bassets-Bosch](#) [Sen](#) [Ho](#) [Chevalier](#) [Aweimer](#) [Million](#). HCQ/CQ was adopted in all or part of 41 countries (57 including non-government medical organizations). [Submit updates/corrections](#).

HCQ

All

- Apr 27* **Covid Analysis (Preprint) (met...** *HCQ for COVID-19: real-time meta analysis of 389 studies*
Early treatment shows 62% [52-70%] improvement with pooled effects in the 36 early treatment studies...
- Apr 25* **Loo et al., Pharmaceutical Re...** *Recent Advances in Inhaled Nanoformulations of Vaccines and Therape...*
Review of nanoformulations for inhaled therapeutics for respiratory viral infections including COVID-19. I...
- Apr 24* **Sen et al., The Lancet Rheum...** *Post-COVID-19 condition in patients with autoimmune rheumatic diseas...*
40% lower PASC [p=0.08]. Retrospective 755 autoimmune rheumatic disease patients, showing lower ris...
- Apr 4* **Million et al., medRxiv, doi:10....** *Early Treatment with Hydroxychloroquine and Azithromycin: A Real-Life ...*
59% lower mortality [p=0.008]. Retrospective 30,423 patients in France, showing very low mortality over...
- Mar 31* **Ho et al., Malaysian Journal o...** *Hydroxychloroquine for COVID-19: A Single Center, Retrospective Cohort...*
890% higher progression [p=0.03]. Retrospective 325 hospitalized COVID-19 patients in Malaysia, showi...
- Mar 29* **Aweimer et al., Scientific Rep...** *Mortality rates of severe COVID-19-related respiratory failure with and wi...*
40% lower mortality [p=0.12]. Retrospective 149 patients under invasive mechanical ventilation in Germ...
- Mar 22* **Chevalier et al., Frontiers in M...** *CovAID: Identification of factors associated with severe COVID-19 in pati...*
35% lower mortality [p=0.19] and 19% lower hospitalization [p=0.36]. Retrospective 1,213 rheumatic dise...
- Mar 22* **Brouqui et al., Authorea, Inc., ...** *Viral clearance in patients with COVID-19: associated factors and the rol...*
15% improved viral clearance [p=0.04]. Retrospective 1,276 patients in France, showing faster viral clear...

Mar 17	<i>Million et al., MDPI AG, doi:10...</i> <i>Cardiovascular Safety of Hydroxychloroquine-Azithromycin in 424 COVID-19 Patients</i> Retrospective 424 consecutive patients in France showing that HCQ+AZ treatment was safe for early st...
Mar 2	<i>Spivak et al., Microbiology Sp...</i> <i>A Randomized Clinical Trial Testing Hydroxychloroquine for Reduction of...</i> 73% higher hospitalization [p=0.54], 20% improved recovery [p=0.19], and 17% improved viral clearance [...]
Feb 28	<i>Mathew et al., Rheumatology ...</i> <i>Predictors of COVID-19 severity and outcomes in Indian patients with rh...</i> 20% lower mortality [p=0.8], no change in hospitalization [p=0.94], and 40% lower severe cases [p=0.37]. ...
Feb 28	<i>Llanos-Cuentas et al., BMC R...</i> <i>Hydroxychloroquine to prevent SARS-CoV-2 infection among healthcare ...</i> 69% more cases [p=0.46]. Early terminated healthcare worker PrEP RCT with only 68 patients and 8 cas...
Feb 20	<i>Delgado et al., Research Squa...</i> <i>Investigational medications in 9,638 hospitalized patients with severe C...</i> 26% lower mortality [p=0.002]. PSM retrospective 9,638 patients in the USA, showing significantly lower ...
Feb 15	<i>Alshamrani et al., Saudi Phar...</i> <i>Comprehensive evaluation of six interventions for hospitalized patients ...</i> 50% lower mortality [p=0.18], 37% lower progression [p=0.21], 9% shorter ICU admission [p=0.66], and 3...
Jan 27	<i>Nasri et al., Advanced Biomed...</i> <i>Efficacy of hydroxychloroquine in pre-exposure severe acute respiratory ...</i> 92% fewer symptomatic cases [p=0.03]. RCT 143 healthcare workers in Iran, showing lower cases with ...
Jan 19	<i>Alam et al., MDPI AG, doi:10.2...</i> <i>Towards Predicting Length of Stay and Identification of Cohort Risk Fact...</i> Deep learning model for the prediction of hospitalization time for COVID-19 based on 311 patients in Sa...
Jan 16	<i>Viglione et al., The Gazette of ...</i> <i>Intravenous high dose vitamin C and ozonated saline effective treatment...</i> Retrospective 479 high risk outpatients in the USA treated with a protocol including intravenous vitamin ...
Jan 16	<i>Asadi et al., Journal of Pharm...</i> <i>Effectiveness of different treatment regimens on patients with COVID-19...</i> Retrospective 660 hospitalized patients in Iran comparing 6 different drug regimens: 1. HCQ or CQ+AZ, ...
Jan 13	<i>Hawari et al., Journal of Aero...</i> <i>Safety, Tolerability, and Pharmacokinetics of Nebulized Hydroxychloroqu...</i> Analysis of a nebulized HCQ formulation with 12 healthy patients, showing low systemic concentrations...
Jan 7	<i>Dhibar et al., Scientific Report...</i> <i>The 'myth of Hydroxychloroquine (HCQ) as post-exposure prophylaxis (P...</i> 27% fewer symptomatic cases [p=0.32] and 21% fewer cases [p=0.21]. Low dose low-risk patient HCQ P...
Jan 4	<i>Mitjà et al., Clinical and Transl...</i> <i>Hydroxychloroquine for treatment of non-hospitalized adults with COVID...</i> 33% improved viral clearance [p=0.02]. Extremely high COI (includes authors of trials playing a key role i...
Dec 16	<i>Higgins et al., JAMA, doi:10.1...</i> <i>Long-term (180-Day) Outcomes in Critically Ill Patients With COVID-19 in...</i>

		51% higher mortality [p=0.06]. Long-term followup for the REMAP-CAP very late stage ICU trial, showing...
Dec 13	Shukla et al., <i>The Lancet Regi...</i>	An observational multi-centric COVID-19 sequelae study among health c... 5% lower PASC [p=0.78]. Retrospective 679 healthcare workers post COVID-19 discharge, 76 using HCQ ...
Dec 7	Shahrin et al., <i>Life, doi:10.339...</i>	Hospital-Based Quasi-Experimental Study on Hydroxychloroquine Pre-Ex... 88% more cases [p=0.09]. Retrospective 230 low risk healthcare workers taking HCQ prophylaxis, and 1...
Nov 24	Alosaimi et al., <i>Pharmaceutic...</i>	Analyzing the Difference in the Length of Stay (LOS) in Moderate to Seve... 400% higher mortality [p=0.49], 43% shorter hospitalization [p=0.63], and 29% higher hospital discharge [...]
Nov 21	Landsteiner de Sampaio Amê...	COVID-19 Infection in Rheumatic Patients on Chronic Antimalarial Drugs... 24% lower mortality [p=0.01] and 20% lower hospitalization [p=0.04]. Systematic review and meta analy...
Nov 17	Bubenek-Turconi et al., <i>Europ...</i>	Clinical characteristics and factors associated with ICU mortality during ... 22% lower mortality [p=0.01]. Prospective study of 9,058 COVID-19 ICU patients in Romania, showing lo...
Nov 14	Sukumar et al., <i>F1000Researc...</i>	The Frontline War: A Case-control study of risk factors for COVID-19 am... 38% fewer cases [p=0.3]. Case control study of healthcare workers in India, showing lower risk of cases ...
Oct 26	Patel et al., <i>Seminars in Arthri...</i>	Factors Associated with COVID-19 Breakthrough Infection Among Vacci... 41% fewer cases [p=0.02]. Retrospective 11,468 vaccinated rheumatic disease patients, showing lower r...
Oct 21	Assad, H., <i>Current Issues in P...</i>	Pharmacotherapy prescribing pattern and outcome for hospitalized pati... 60% lower mortality [p=0.002]. Retrospective 346 hospitalized patients in Iraq, showing lower mortality ...
Oct 18	Cosentino et al., <i>Journal of Cli...</i>	Early Outpatient Treatment of COVID-19: A Retrospective Analysis of 39... Retrospective 392 outpatients in Italy showing 0.2% mortality with early treatment, compared with >3% i...
Oct 13	Gómez et al., <i>Medicina Clínica...</i>	Mortality risk factors in patients with SARS-CoV-2 infection and atrial fib... 36% lower mortality [p<0.0001]. Retrospective 1,799 hospitalized COVID-19 patients with atrial fibrillatio...
Oct 6	Isnardi et al., <i>Clinical Rheuma...</i>	Sociodemographic and clinical factors associated with poor COVID-19 o... 34% lower mortality [p=0.23], 48% lower severe cases [p=0.02], and 17% lower hospitalization [p=0.09]. R...
Sep 28	Obrișcă et al., <i>Biomedicines, d...</i>	Characteristics of SARS-CoV-2 Infection in an Actively Monitored Cohort... 87% fewer cases [p=0.01]. Prospective analysis of 95 Lupus Nephritis patients in Romania, showing low...
Sep 27	Go et al., <i>Frontiers in Pharma...</i>	Hydroxychloroquine, azithromycin and methylprednisolone and in hospit... 55% lower mortality [p=0.03]. Retrospective 759 hospitalized patients in the USA, showing lower mortali...

Sep 14	<i>Yuan et al., Communications ...</i>	<i>Hydroxychloroquine blocks SARS-CoV-2 entry into the endocytic pathwa...</i> In Vitro study showing that HCQ blocks SARS-CoV-2 entry into the endocytic pathway, and that HCQ wa...
Sep 11	<i>Gentry et al., The American Jo...</i>	<i>Development of SARS-CoV-2 infection in patients with rheumatic conditi...</i> 12% lower mortality [p=0.99], 12% lower hospitalization [p=0.81], and 14% more cases [p=0.57]. Updated...
Sep 9	<i>Núñez-Gil et al., Anti-Infective ...</i>	<i>Hydroxychloroquine and Mortality in SARS-Cov-2 Infection; The HOPE- C...</i> 53% lower mortality [p<0.0001]. PSM retrospective 6,217 hospitalized patients in Spain, showing lower ...
Sep 7	<i>Sahebari et al., Reumatologia...</i>	<i>Influence of biologic and conventional disease-modifying antirheumatic ...</i> 56% fewer cases [p=0.02]. Retrospective 512 rheumatic disease patients in Iran, showing lower risk of C...
Sep 6	<i>Oku et al., Modern Rheumatol...</i>	<i>Risk factors for hospitalization or mortality for COVID-19 in patients with...</i> 92% lower mortality [p=1] and 12% lower hospitalization [p=0.34]. Retrospective 220 COVID-19 patients ...
Sep 7	<i>Flores-Chavez et al., Clinical a...</i>	<i>SARS-CoV-2 infection in 898 patients with Sjögren's syndrome: characte...</i> Retrospective 898 patients with Sjögren's disease, showing a lower risk of worse outcomes with HCQ c...
Aug 31	<i>Babayigit et al., Frontiers in M...</i>	<i>The association of antiviral drugs with COVID-19 morbidity: The retrospe...</i> 112% higher ventilation [p=0.21], 53% higher ICU admission [p=0.33], and 17% longer hospitalization [p=...
Aug 25	<i>Bowen et al., Open Forum Infe...</i>	<i>Reduction in risk of death among patients admitted with COVID-19 betw...</i> 20% lower mortality [p=0.007]. Retrospective 4,631 hospitalized patients in New York, showing higher m...
Aug 16	<i>Loucera et al., medRxiv, doi:1...</i>	<i>Real-world evidence with a retrospective cohort of 15,968 Andalusian C...</i> 69% lower mortality [p=0.0002]. Retrospective 15,968 COVID-19 hospitalized patients in Spain, showing ...
Aug 12	<i>Lyashchenko et al., British Jo...</i>	<i>Systemic Exposure to Hydroxychloroquine and its relationship with outc...</i> 48% higher mortality [p<0.0001]. Retrospective very late stage hospitalized patients in New York during t...
Aug 9	<i>García-Albéniz et al., Europea...</i>	<i>Systematic review and meta-analysis of randomized trials of hydroxychl...</i> 28% fewer cases [p=0.003]. Systematic review and meta-analysis of HCQ prophylaxis RCTs showing a s...
Aug 5	<i>Becetti et al., Qatar Medical J...</i>	<i>Prevalence of coronavirus disease 2019 in a multiethnic cohort of patien...</i> 37% fewer cases [p=0.17]. Retrospective 700 patients with autoimmune rheumatic disease in Qatar, sho...
Aug 5	<i>Polo et al., Clinical Microbiolo...</i>	<i>Daily tenofovir disoproxil fumarate/emtricitabine and hydroxychloroquin...</i> 51% fewer symptomatic cases [p=0.79] and 27% fewer cases [p=0.31]. Early terminated healthcare work...
Jul 26	<i>Xu et al., Rapid Communicati...</i>	<i>A study of impurities in the repurposed COVID-19 drug hydroxychloroqui...</i>

		Analysis of HCQ from two manufacturers showing 9 different impurities, with significantly different con...
Jul 15	Patel et al., medRxiv, doi:10.1...	<i>Factors Associated with COVID-19 Breakthrough Infection in the Pre-Om...</i> 46% fewer cases [p=0.001]. Retrospective 11,468 vaccinated rheumatic disease patients in the USA, sho...
Jul 14	Malundo et al., IJID Regions, ...	<i>Predictors of Mortality among inpatients with COVID-19 Infection in a Te...</i> 24% higher mortality [p=0.32]. Retrospective 1,215 hospitalized patients in the Phillipines, showing no si...
Jul 17	Yadav et al., Indian Journal of ...	<i>Hydroxychloroquine/chloroquine prophylaxis among health-care worker...</i> 20% lower seropositivity [p=0.1]. Retrospective 2,224 healthcare workers in India, showing lower risk of ...
Jul 3	Raabe et al., medRxiv, doi:10....	<i>Hydroxychloroquine pre-exposure prophylaxis to prevent SARS-CoV-2 a...</i> 82% fewer symptomatic cases [p=0.17]. Small prophylaxis study with 130 healthcare workers in the US...
Jul 7	Osawa et al., The Journal of C...	<i>Characteristics and risk factors for mortality in critically ill patients with ...</i> 29% lower mortality [p=0.07]. Retrospective 215 mechanically ventilated COVID-19 patients in Brazil, 71 ...
Jun 29	Nimitvilai et al., Journal of Glo...	<i>A randomized controlled trial of combined ivermectin and zinc sulfate ve...</i> 50% worse viral clearance [p=0.12]. RCT low-risk patients in Thailand comparing HCQ, darunavir/ritonavi...
Jun 7	Tirupakuzhi Vijayaraghavan e...	<i>Hydroxychloroquine plus personal protective equipment versus personal...</i> 196% higher progression [p=1], 52% lower hospitalization [p=0.62], and 14% fewer cases [p=0.73]. Low-d...
May 20	Silva et al., Frontiers in Cellula...	<i>Clinical-Epidemiology Aspect of Inpatients With Moderate or Severe COV...</i> 46% higher mortality [p=0.22]. Retrospective 395 hospitalized patients in Brazil, showing higher mortalit...
May 16	Gkioulekas et al., Authorea, In...	<i>Frequentist and Bayesian analysis methods for case series data and app...</i> Hybrid statistical framework for evaluating treatment protocols. COVID-19 treatment protocols often us...
May 4	Hong et al., PLOS ONE, doi:10....	<i>Use of combined treatment of 3rd-generation cephalosporin, azithromyc...</i> 25% faster recovery [p=0.45], 13% longer hospitalization [p=0.75], and no change in viral clearance [p=0....
Apr 30	Bassets-Bosch et al., Anales ...	<i>Negativización de PCR a SARS-CoV-2 en muestra respiratoria en pacient...</i> 29% faster viral clearance [p=0.45]. Retrospective 15 pediatric patients in Spain, showing faster viral clea...
Apr 22	Satti et al., Cureus, doi:10.775...	<i>Characteristics and Obstetric Outcomes in Women With Autoimmune R...</i> 61% fewer cases [p=0.04]. Retrospective 80 consecutive pregnant patients with autoimmune rheumatic ...
Apr 17	Faísca et al., Pharmaceutics, ...	<i>Enhanced In Vitro Antiviral Activity of Hydroxychloroquine Ionic Liquids a...</i> <i>In Vitro</i> study showing improved antiviral activity with ionic formulations of HCQ.

Apr 6	Roy-García et al., medRxiv, doi... Efficacy and Safety of Fixed Combination of Hydroxychloroquine with Az... Small early terminated RCT in Mexico with 31 HCQ and 31 control patients, showing higher progression ...
Apr 8	Hafez et al., Antibiotics, doi:10... Antiviral Used among Non-Severe COVID-19 Cases in Relation to Time til... 12% faster viral clearance [p=0.59]. Retrospective hospitalized patients in the United Arab Emirates, sho...
Apr 6	Walbi et al., Journal of Interna... Effect of chronic hydroxychloroquine use on COVID-19 risk in patients wi... Retrospective RA/SLE patients in Saudi Arabia. Numbers in this paper are contradictory. Figure 1 and th...
Apr 2	Delandre et al., Pharmaceutic... Antiviral Activity of Repurposing Ivermectin against a Panel of 30 Clinical... In Vitro study with 30 COVID-19 strains from 14 variants, showing stronger efficacy with ivermectin com...
Mar 31	Avezum et al., The Lancet Reg... Hydroxychloroquine versus placebo in the treatment of non-hospitalised... 1% lower mortality [p=1], 32% higher ventilation [p=0.79], 16% lower ICU admission [p=0.61], and 23% lo...
Mar 29	MacFadden et al., Open Foru... Screening Large Population Health Databases for Potential COVID-19 Th... 12% fewer cases [p=0.01]. Retrospective 26,121 cases and 2,369,020 controls ≥65yo in Canada, showin...
Mar 23	AlQahtani et al., Scientific Rep... Randomized controlled trial of favipiravir, hydroxychloroquine, and stand... 4% improved recovery [p=0.94] and 47% improved viral clearance [p=0.13]. RCT with 54 favipiravir, 51 HC...
Mar 21	Oztas et al., Journal of Medic... Frequency and Severity of COVID-19 in Patients with Various Rheumatic ... 215% higher hospitalization [p=0.36], 40% more symptomatic cases [p=0.44], and 5% more cases [p=0.8...
Mar 19	Ragonnet et al., Future Pharm... Drug Repositioning in Intensive Care Patients and Pharmacokinetic Vari... Comparison of two HCQ dosing regimens, showing high inter-individual variability of HCQ concentration...
Mar 18	Ebongue et al., Travel Medicin... Factors predicting in-hospital all-cause mortality in COVID 19 patients at... 43% lower mortality [p=0.04]. Retrospective 580 hospitalized COVID+ patients in Cameroon, showing lo...
Mar 17	Uyaroğlu et al., Acta Medica, ... Comparison of Favipiravir to Hydroxychloroquine Plus Azithromycin in th... 200% higher mortality [p=1], 67% lower ICU admission [p=1], and 10% shorter hospitalization [p=0.9]. PS...
Mar 11	Salehi et al., Research Square,... Risk factors of death in mechanically ventilated COVID-19 patients: a retr... 14% higher mortality [p=0.44]. Retrospective 125 mechanically ventilated ICU patients in Iran, showing n...
Mar 3	Azaña Gómez et al., Medicina... Mortality risk factors in patients with SARS-CoV-2 infection and atrial fib... 36% lower mortality [p<0.0001]. Retrospective 1,816 COVID-19 patients with atrial fibrillation in Spain, sh...
Mar 3	Tsanovska et al., Infectious Di... Hydroxychloroquine (HCQ) treatment for hospitalized patients with COVI...

		58% lower mortality [p=0.03], 74% lower ventilation [p=0.0007], and 70% lower ICU admission [p=0.0004]...
Mar 2	Soto et al., PLOS ONE, doi:10...	Mortality and associated risk factors in patients hospitalized due to COVID-19. 6% higher mortality [p=0.46]. Retrospective 1,418 very late stage (46% mortality) patients in Peru, showing...
Feb 26	Rouamba et al., International ...	Assessment of Recovery Time, Worsening and Death, among COVID-19 ... 80% lower mortality [p<0.0001], 20% lower progression [p=0.43], and 31% faster viral clearance [p=0.26]. ...
Feb 23	Opdam et al., Clinical Pharma...	Identification of Risk Factors for COVID-19 Hospitalization in Patients wi... 45% lower hospitalization [p=0.18]. Retrospective 81 cases and 396 controls among rheumatic disease ...
Feb 18	Hall et al., The Annals of Thor...	Multi-institutional Analysis of 505 COVID-19 Patients Supported with EC... 11% lower mortality [p=0.31]. Retrospective 505 ECMO patients showing no significant difference in mo...
Feb 16	Ugarte-Gil et al., Annals of the...	Characteristics associated with poor COVID-19 outcomes in individuals ... 44% lower severe cases [p=0.007]. Retrospective 1,606 SLE patients showing lower risk of severe COVI...
Feb 13	Beaumont et al., Infectious Di...	Factors associated with hospital admission and adverse outcome for C... 14% lower combined mortality/intubation [p=0.55]. Retrospective 296 hospitalized patients in France, sh...
Feb 3	Albarghali et al., Journal of In...	Clinical Characteristics and Treatment Outcomes of Mild to Moderate C... 35% higher mortality [p=0.46]. Retrospective 811 hospitalized COVID+ patients in Saudi Arabia, showing ...
Jan 31	Fernández-Cruz et al., Clinical...	Higher mortality of hospitalized haematologic patients with COVID-19 c... 27% lower mortality [p=0.47]. Retrospective 71 hospitalized haematologic patients in Spain, showing lo...
Jan 31	Omma et al., The Journal of I...	Hydroxychloroquine shortened hospital stay and reduced intensive care ... 28% lower mortality [p=0.3], 50% lower ICU admission [p=0.004], and 17% shorter hospitalization [p=0.0...
Jan 27 2021	Strangfeld et al., Annals of the...	Factors associated with COVID-19-related death in people with rheumati... 48% lower mortality [p<0.0001]. Retrospective 3,729 rheumatic disease patients showing lower risk of ...
Jan 23	Erden et al., Bratislava Medica...	COVID-19 outcomes in patients with antiphospholipid syndrome: a retro... 75% lower hospitalization [p=0.23]. Retrospective 9 COVID-19 patients with antiphospholipid syndrome i...
Jan 21	Lavilla Olleros et al., PLOS ON...	Use of glucocorticoids megadoses in SARS-CoV-2 infection in a spanish... 36% lower mortality [p<0.0001]. Retrospective 14,921 hospitalized patients in Spain, showing lower mor...
Jan 20	Alwafi et al., Cureus, doi:10.77...	Negative Nasopharyngeal SARS-CoV-2 PCR Conversion in Response to ... 15% improved viral clearance [p=0.65]. Retrospective 93 hospitalized patients in Saudi Arabia, 45 treated...

Jan 13	Tu et al., <i>Infectious Diseases ...</i>	<i>Risk Factors for Severity and Mortality in Adult Patients Confirmed with ...</i>	17% lower mortality [p=0.81]. Retrospective 180 hospitalized COVID-19 patients in Sierra Leone, showing...
Jan 13	Tyson et al., <i>Preprint (Preprint)</i>	<i>Low Rates of Hospitalization and Death in 4,376 COVID-19 Patients Give...</i>	100% lower mortality [p<0.0001] and 100% lower hospitalization [p<0.0001]. Retrospective 4,376 patient...
Jan 11	AbdelGhaffar et al., <i>PLOS ON...</i>	<i>Prediction of mortality in hospitalized Egyptian patients with Coronaviru...</i>	100% lower mortality [p<0.0001]. Retrospective 3,712 hospitalized patients in Egypt, showing lower mor...
Jan 7	Juneja et al., <i>Journal of Basic ...</i>	<i>Hydroxychloroquine pre-exposure prophylaxis provides no protection ag...</i>	142% higher severe cases [p=0.59] and 6% more cases [p=0.67]. Retrospective 2,200 healthcare worker...
Dec 23 2021	McKinnon et al., <i>International ...</i>	<i>Safety and Tolerability of Hydroxychloroquine in healthcare workers and ...</i>	2% fewer symptomatic cases [p=1] and 51% fewer cases [p=0.6]. HCQ prophylaxis RCT with 201 weekly ...
Dec 4 2021	Rao et al., <i>Expert Review of A...</i>	<i>Hydroxychloroquine as pre-exposure prophylaxis against COVID-19 infec...</i>	11% fewer cases [p=0.68]. Prospective PrEP study with low risk healthcare workers in India showing RR...
Nov 26 2021	Ferreira et al., <i>Revista da Ass...</i>	<i>Outcomes associated with Hydroxychloroquine and Ivermectin in hospit...</i>	151% higher mortality [p=0.03] and 46% higher combined mortality/intubation [p=0.23]. Retrospective 2...
Nov 23 2021	Calderón et al., <i>PAMJ - Clinica...</i>	<i>Treatment with hydroxychloroquine vs nitazoxanide in patients with COV...</i>	215% higher mortality [p=0.38], 652% higher ventilation [p=0.15], 145% higher ICU admission [p<0.0001], ...
Nov 23 2021	Ahmed et al., <i>BioMed Researc...</i>	<i>Factors Affecting the Incidence, Progression, and Severity of COVID-19 i...</i>	99% fewer cases [p=0.08]. Retrospective type 1 diabetes patients in Saudi Arabia showing reduced risk ...
Nov 17 2021	Samajdar et al., <i>Journal of the...</i>	<i>Ivermectin and Hydroxychloroquine for Chemo-Prophylaxis of COVID-19:...</i>	75% fewer cases [p<0.0001]. Physician survey in India with 164 ivermectin prophylaxis, 129 HCQ prophy...
Nov 12 2021	Schmidt et al., <i>JAMA Network...</i>	<i>Association Between Androgen Deprivation Therapy and Mortality Amon...</i>	333% higher mortality [p=0.0001] and 613% higher severe cases [p<0.0001]. Retrospective 1,106 prostat...
Nov 11 2021	Cortez et al., <i>Western Pacific ...</i>	<i>Clinical characteristics and outcomes of COVID-19 patients in a tertiary ...</i>	15% lower mortality [p=1]. Retrospective 280 hospitalized patients in the Philippines, 25 treated with HC...
Nov 5 2021	Chechter et al., <i>Heliyon, doi:10...</i>	<i>Evaluation of patients treated by telemedicine in the beginning of the CO...</i>	95% lower hospitalization [p=0.004]. Prospective study of 187 telemedicine patients in Brazil. 74 present...
Nov 2 2021	Sarhan et al., <i>Journal of Infect...</i>	<i>Efficacy of the early treatment with tocilizumab-hydroxychloroquine and ...</i>	

26% lower mortality [p=0.39], 26% higher hospital discharge [p=0.39], and 25% longer hospitalization [p=...

Oct 28
2021

Shousha et al., World Journal ... Hepatic and gastrointestinal disturbances in Egyptian patients infected ...
12% lower mortality [p=0.87]. Retrospective 547 hospitalized COVID+ patients in Egypt, showing no signi...

Oct 25
2021

Guglielmetti et al., Scientific R... Treatment for COVID-19—a cohort study from Northern Italy
28% lower mortality [p=0.1]. Retrospective 600 hospitalized patients in Italy, showing lower mortality wit...

Oct 6
2021

Belmont et al., ClinicalTrials.g... COVID-19 PrEP HCW HCQ Study
79% fewer symptomatic cases [p=0.21]. Prospective study of HCQ prophylaxis in the USA, with 56 HCQ ...

Oct 5
2021

Atipornwanich et al., SSRN EL... Various Combinations of Favipiravir, Lopinavir-Ritonavir, Darunavir-Riton...
56% lower mortality [p=0.07], 54% lower progression [p=0.02], and 7% faster viral clearance [p=0.51]. RC...

Oct 7
2021

Fung et al., PLoS ONE, doi:10... Effect of common maintenance drugs on the risk and severity of COVID-...
13% lower mortality [p=0.15], 3% lower hospitalization [p=0.63], and 9% fewer cases [p=0.02]. Retrospect...

Oct 7
2021

Babalola et al., Journal of Infe... A Randomized Controlled Trial of Ivermectin Monotherapy Versus Hydro...
55% lower hospital discharge [p=0.2] and 10% improved viral clearance [p=0.78]. Small RCT with 61 pati...

Sep 30
2021

Menardi et al., PharmAdvance... A retrospective analysis on pharmacological approaches to COVID-19 p...
35% lower mortality [p=0.12]. Retrospective 277 hospitalized patients in Italy, showing lower mortality wi...

Sep 15
2021

Uygen et al., Northern Clinics ... Effect of Hydroxychloroquine Use on the Length Of Hospital Stay in Chil...
12% faster viral clearance [p=0.05]. Retrospective 40 pediatric hospitalized patients, 15 treated with HC...

Sep 15
2021

Çivriz Bozdağ et al., Turk. J. H... Clinical Characteristics and Outcome of COVID-19 in Turkish Hematologi...
399% higher mortality [p=0.003]. Retrospective 340 patients with hematological malignancy in Turkey, s...

Sep 14
2021

Alotaibi et al., International Jo... Effectiveness and Safety of Favipiravir Compared to Hydroxychloroquine...
134% higher mortality [p=0.05]. Retrospective hospitalized patients in Saudi Arabia, showing lower mort...

Sep 14
2021

Agarwal et al., medRxiv, doi:1... Low dose hydroxychloroquine prophylaxis for COVID-19 - a prospective ...
27% lower progression [p=0.21] and 5% more cases [p=0.81]. Small prophylaxis trial with 29 low dose H...

Sep 14
2021

Accinelli et al., Travel Medicin... Hydroxychloroquine / azithromycin in COVID-19: The association betwee...
Retrospective 1,265 outpatients in Peru treated with HCQ+AZ showing mortality associated with treatm...

Sep 9
2021

Sawanpanyalert et al., Southe... Assessment of outcomes following implementation of antiviral treatme...
42% lower progression [p=0.37]. Retrospective 744 hospitalized patients in Thailand, showing lower risk ...

Sep 7 2021	<i>Karruli et al., Microbial Drug R...</i> <i>Multidrug-Resistant Infections and Outcome of Critically Ill Patients with...</i> 5% lower mortality [p=1]. Retrospective 32 ICU patients, showing no significant difference with HCQ trea...
Aug 27 2021	<i>Cordtz et al., Journal of Clinic...</i> <i>Incidence of COVID-19 Hospitalisation in Patients with Systemic Lupus ...</i> 40% lower hospitalization [p=0.39]. Retrospective 2,533 SLE patients in Denmark showing no significant ...
Aug 25 2021	<i>Rodrigues et al., International ...</i> <i>Hydroxychloroquine plus azithromycin early treatment of mild COVID-19 ...</i> 14% improved viral clearance [p=0.15]. RCT 84 low risk patients, 42 treated with HCQ/AZ, showing no si...
Aug 25 2021	<i>Naggie et al., International Jo...</i> <i>Hydroxychloroquine for pre-exposure prophylaxis of COVID-19 in health ...</i> 24% fewer symptomatic cases [p=0.18]. HCQ prophylaxis RCT reporting statistically significant lower ca...
Aug 24 2021	<i>Patil et al., Research Square, ...</i> <i>A Prospective Longitudinal Study Evaluating The Influence of Immunosu...</i> 66% lower mortality [p=0.1] and 9% fewer cases [p=0.43]. Prospective study of 9,212 autoimmune rheu...
Aug 16 2021	<i>Eldeen et al., Microbes and Inf...</i> <i>Comparative study between the therapeutic effect of remdesivir versus ...</i> Small study comparing 25 HCQ and 25 remdesivir hospitalized patients, reporting faster viral clearance ...
Aug 14 2021	<i>Tai et al., Pharmaceutics, doi:...</i> <i>Nebulised Isotonic Hydroxychloroquine Aerosols for Potential Treatment...</i> Analysis of HCQ solutions suitable for nebulization for COVID-19.
Aug 10 2021	<i>Shabani et al., Pulmonary Pha...</i> <i>Evaluation of the Prophylactic Effect of Hydroxychloroquine on People in...</i> 19% fewer symptomatic cases [p=1] and 6% more cases [p=1]. Small PEP trial with 51 HCQ patients, not...
Aug 5 2021	<i>Stricker et al., Journal of Infec...</i> <i>Hydroxychloroquine Pre-Exposure Prophylaxis for COVID-19 in Healthcar...</i> 75% lower mortality [p<0.0001]. Meta analysis of 11 HCQ PrEP studies in India covering 7,616 healthcar...
Aug 4 2021	<i>Özuygur Ermiş et al., Turkish ...</i> <i>The Efficacy of Hydroxychloroquine and Azithromycin Combination Ther...</i> Retrospective 370 hospitalized patients, 222 receiving HCQ+AZ and 148 receiving HCQ, showing mortali...
Aug 4 2021	<i>Bhatt et al., medRxiv, doi:10.1...</i> <i>Hydroxychloroquine Prophylaxis against Coronavirus Disease-19: Practi...</i> 49% more cases [p=0.02]. Observational study of 927 low-risk healthcare workers in India, 731 volunteer...
Aug 4 2021	<i>Alghamdi et al., Saudi Pharm...</i> <i>Clinical characteristics and treatment outcomes of severe (ICU) COVID-1...</i> 39% higher mortality [p=0.52]. Retrospective 171 ICU patients in Saudi Arabia showing no significant diff...
Jul 31 2021	<i>Barra et al., medRxiv, doi:10.1...</i> <i>COVID-19 in hospitalized patients in 4 hospitals in San Isidro, Buenos Air...</i> 11% lower mortality [p=1]. Retrospective 668 hospitalized patients in Argentina, 18 treated with HCQ, no...
Jul 29 2021	<i>Sobngwi et al., medRxiv, doi:1...</i> <i>Doxycycline is a safe alternative to Hydroxychloroquine + Azithromycin t...</i>

		52% improved recovery [p=0.44] and 3% improved viral clearance [p=0.88]. RCT 194 mild/asymptomatic ...
Jul 20 2021	Küçükakkaş et al., Research S...	The effect of hydroxychloroquine against SARS-CoV-2 infection in rheum... 43% higher ICU admission [p=1]. Retrospective 17 rheumatoid arthritis COVID-19+ patients, 7 on HCQ tr...
Jul 16 2021	Alhamlan et al., medRxiv, doi:...	Epidemiology and Clinical Characteristics in Individuals with Confirmed ... 52% higher mortality [p=0.58]. Retrospective hospitalized patients in Saudi Arabia showing higher morta...
Jul 13 2021	Barrat-Due et al., Annals of Int...	Evaluation of the Effects of Remdesivir and Hydroxychloroquine on Viral ... 120% higher mortality [p=0.35]. Small RCT in Norway with 52 HCQ and 42 remdesivir patients, showing ...
Jul 13 2021	Tamura et al., Diabetology & ...	Outcome and death risk of diabetes patients with Covid-19 receiving pre... 299% higher mortality [p=0.04]. Retrospective 188 hospitalized patients in Brazil, showing higher risk of ...
Jul 12 2021	Arabi et al., Intensive Care Me...	Lopinavir-ritonavir and hydroxychloroquine for critically ill patients with C... 44% higher mortality [p=0.01]. Very late stage RCT with 50 ICU patients treated with HCQ, 255 lopinavir-r...
Jul 10 2021	Roger et al., Anaesthesia Criti...	French Multicentre Observational Study on SARS-CoV-2 infections Inten... no change in mortality [p=0.94]. Prospective study of 966 ICU patients in France, 289 treated with HCQ, ...
Jul 6 2021	Jacobs et al., The Annals of T...	Multi-institutional Analysis of 200 COVID-19 Patients treated with ECMO:... 7% lower mortality [p=0.74]. Prospective study of 200 ECMO patients showing no significant difference i...
Jul 7 2021	Shaw et al., Journal of Drugs i...	COVID-19 in Individuals Treated With Long-Term Hydroxychloroquine: A ... 13% fewer cases [p=0.006]. PSM retrospective 144 alopecia patients in the USA, showing lower risk of C...
Jun 30 2021	Taieb et al., J. Clin. Med. 2021...	Hydroxychloroquine and Azithromycin Treatment of Hospitalized Patient... 39% higher hospital discharge [p=0.02]. Retrospective 926 patients in Senegal, 674 treated with HCQ+A...
Jun 24 2021	Gerlovin et al., American Jour...	Pharmacoepidemiology, Machine Learning and COVID-19: An intent-to-tr... 22% higher mortality [p=0.18] and 55% higher ventilation [p=0.02]. Retrospective 1,769 hospitalized patie...
Jun 21 2021	Yadav et al., Research Square,...	Repurposing the Combination Drug of Favipiravir, Hydroxychloroquine a... In Silico study showing stronger inhibition of SAR-CoV-2 for HCQ+favipiravir+oseltamivir compared to a...
Jun 18 2021	Schwartz et al., CMAJ Open, ...	Assessing the efficacy and safety of hydroxychloroquine as outpatient tr... 133% higher ICU admission [p=1] and 533% higher hospitalization [p=0.57]. Small early terminated late t...
Jun 18 2021	Purwati et al., PLOS One, doi:1...	An in vitro study of dual drug combinations of anti-viral agents, antibiotic... In Vitro study of combinations of drugs showing antiviral efficacy of HCQ alone and in combination with ...

Jun 11 2021	<i>Turrini et al., Vaccines, 10.339... Clinical Course and Risk Factors for In-Hospital Mortality of 205 Patients...</i> 10% lower mortality [p=0.15]. Retrospective 205 patients in Italy, 160 treated with HCQ, showing lower ...
Jun 9 2021	<i>Saib et al., PLOS ONE, doi:10.... Lack of efficacy of hydroxychloroquine and azithromycin in patients hos...</i> 125% higher combined mortality/intubation [p=0.23]. 203 hospitalized patients in France, not showing si...
Jun 8 2021	<i>Singh et al., medRxiv, doi:0.11... Safety and efficacy of antiviral therapy alone or in combination in COVID-...</i> 48% lower mortality [p=0.45] and 14% improved recovery [p=0.76]. Very small early terminated RCT in In...
Jun 7 2021	<i>Badyal et al., Journal of the A... Hydroxychloroquine for SARS CoV2 Prophylaxis in Healthcare Workers – ...</i> 60% fewer cases [p<0.0001]. Prophylaxis study with 12,089 Indian healthcare workers, showing lower ris...
Jun 4 2021	<i>Lagier et al., Therapeutics and... Outcomes of 2,111 COVID-19 hospitalised patients treated with 2 hydrox...</i> 32% lower mortality [p=0.004]. Retrospective 2,011 hospitalized patients in France, median age 67, sho...
Jun 4 2021	<i>Byakika-Kibwika et al., Resear... Safety and Efficacy of Hydroxychloroquine for Treatment of Non-Severe ...</i> no change in recovery [p=0.91] and 29% improved viral clearance [p=0.47]. Small 105 patient RCT in Uga...
Jun 3 2021	<i>Sivapalan et al., European Res... Azithromycin and hydroxychloroquine in hospitalised patients with confir...</i> 92% lower mortality [p=0.32], 22% higher ICU admission [p=1], and 8% lower hospital discharge [p=0.36]...
Jun 1 2021	<i>Korkmaz et al., Authorea, doi:... The effect of Hydroxychloroquine use due to rheumatic disease on the ri...</i> 82% lower mortality [p=0.19] and 94% fewer cases [p<0.0001]. Retrospective 683 patients in a rheumato...
Jun 1 2021	<i>Kamstrup et al., International ... Hydroxychloroquine as a primary prophylactic agent against sars-cov-2 i...</i> 44% higher hospitalization [p=0.25] and 10% fewer cases [p=0.23]. Retrospective HCQ users in Denmark...
May 31 2021	<i>Ramírez-García et al., Archivo... Hydroxychloroquine and Tocilizumab in the Treatment of COVID-19: A Lo...</i> 67% lower mortality [p<0.0001] and 6% higher ICU admission [p=1]. Retrospective 403 hospitalized patie...
May 31 2021	<i>Smith et al., medRxiv, doi:10.1... Observational Study on 255 Mechanically Ventilated Covid Patients at th...</i> 27% lower mortality [p=0.002]. Retrospective 255 mechanical ventilation patients in USA, showing that ...
May 29 2021	<i>Ali et al., Journal of Pharmace... Optimizing the Use of Hydroxychloroquine in the Management of COVID...</i> Review of the mechanisms of action, pharmacokinetics and toxicity of HCQ, recommending use as earl...
May 27 2021	<i>Million et al., Reviews in Cardi... Early Treatment with Hydroxychloroquine and Azithromycin in 10,429 C...</i> 83% lower mortality [p=0.0007], 44% lower ICU admission [p=0.18], and 4% lower hospitalization [p=0.77...
May 17 2021	<i>Syed et al., Cureus, doi:10.775... Pre-exposure Prophylaxis With Various Doses of Hydroxychloroquine A...</i>

		60% more symptomatic cases [p=0.41] and 92% more cases [p=0.12]. Small PrEP RCT of low risk health...
May 16 2021	Rojas-Serrano et al., medRxiv,...	Hydroxychloroquine For Prophylaxis Of COVID-19 In Health Workers: A R... 82% fewer symptomatic cases [p=0.12]. Early terminated HCQ PrEP RCT with 62 HCQ and 65 placebo p...
May 12 2021	Drancourt et al., Viruses, doi:1...	SARS-CoV-2 Persistent Viral Shedding in the Context of Hydroxychloroq... Retrospective 3,737 patients in France, showing lower risk of persistent viral shedding with HCQ+AZ tre...
May 10 2021	Sammartino et al., PLOS One, ...	Predictors for inpatient mortality during the first wave of the SARS-CoV-... 240% higher mortality [p=0.002]. Retrospective 1,108 hospitalized patients in New York showing signific...
May 8 2021	Vigbedor et al., Journal of Ap...	Review of four major biomolecular target sites for COVID-19 and possibl... Review of major target sites in SARS-CoV-2 and the host organism along with potential inhibitors.
May 1 2021	De Rosa et al., J. Clin. Med., d...	Risk Factors for Mortality in COVID-19 Hospitalized Patients in Piedmont... 35% lower mortality [p=0.02]. Retrospective 1,538 hospitalized patients in Italy, showing only HCQ assoc...
Apr 30 2021	Çiyiltepe et al., South. Clin. Ist...	The Effect of Pre-admission Hydroxychloroquine Treatment on COVID-1... 3% lower mortality [p=0.85]. Retrospective 147 ICU patients in Turkey, showing no significant difference i...
Apr 30 2021	Bosaeed et al., Infect. Dis. Th...	Favipiravir and Hydroxychloroquine Combination Therapy in Patients wit... 4% lower mortality [p=0.91], 8% higher ventilation [p=0.78], 31% higher ICU admission [p=0.24], and 29% ...
Apr 29 2021	Haji Aghajani et al., Journal of...	Decreased in-hospital mortality associated with aspirin administration in... 19% lower mortality [p=0.09]. Retrospective 991 hospitalized patients in Iran, showing lower mortality wi...
Apr 29 2021	Aghajani et al., Journal of Me...	Decreased In-Hospital Mortality Associated with Aspirin Administration i... 19% lower mortality [p=0.09]. Retrospective 991 hospitalized patients in Iran focusing on aspirin use but...
Apr 28 2021	Kokturk et al., Respiratory Me...	The predictors of COVID-19 mortality in a nationwide cohort of Turkish p... 4% higher mortality [p=0.97]. Retrospective 1,500 hospitalized late stage (median SaO ₂ 87.7) patients in ...
Apr 27 2021	Réa-Neto et al., Scientific Rep...	An open-label randomized controlled trial evaluating the efficacy of chlor... 57% higher mortality [p=0.2], 115% higher ventilation [p=0.03], and 147% worse recovery [p=0.02]. Early t...
Apr 26 2021	Mohandas et al.,	Clinical review of COVID-19 patients presenting to a quaternary care priv... 81% higher mortality [p=0.007]. Retrospective 3,345 hospitalized patients in India, 11.5% treated with HC...
Apr 24 2021	Corradini et al., Internal and E...	Clinical factors associated with death in 3044 COVID-19 patients manag... 70% lower mortality [p<0.0001]. Retrospective 3,044 hospitalized COVID-19 patients in Italy, showing HC...

Apr 23 2021	<i>Toya et al., SSRN (Preprint)</i>	<i>A Cross-Country Analysis of the Determinants of COVID-19 Fatalities</i> Country based analysis finding lower mortality with the use of HCQ.
Apr 22 2021	<i>Reis et al., JAMA Network Op...</i>	<i>Effect of Early Treatment With Hydroxychloroquine or Lopinavir and Rito...</i> 24% lower hospitalization [p=0.57] and 4% improved viral clearance [p=0.1]. Early terminated RCT in Braz...
Apr 15 2021	<i>Alzahrani et al., Rheumatolog...</i>	<i>Clinical characteristics and outcome of COVID-19 in patients with rheum...</i> 59% lower mortality [p=1], 81% lower ventilation [p=0.54], and 33% lower severe cases [p=0.7]. Retrospe...
Apr 15 2021	<i>Alegiani et al., Rheumatology, ...</i>	<i>Risk of COVID-19 hospitalization and mortality in rheumatic patients tre...</i> 8% higher mortality [p=0.64] and 18% lower hospitalization [p=0.03]. Retrospective database analysis ca...
Apr 14 2021	<i>Seet et al., International Journ...</i>	<i>Positive impact of oral hydroxychloroquine and povidone-iodine throat s...</i> 35% fewer symptomatic cases [p=0.05] and 32% fewer cases [p=0.009]. Prophylaxis RCT in Singapore w...
Apr 8 2021	<i>Gadhiya et al., BMJ Open, doi:...</i>	<i>Clinical characteristics of hospitalised patients with COVID-19 and the i...</i> 5% higher mortality [p=0.89]. Retrospective 283 patients in the USA showing higher mortality with all tre...
Apr 7 2021	<i>Mulhem et al., BMJ Open, doi:...</i>	<i>3219 hospitalised patients with COVID-19 in Southeast Michigan: a retro...</i> 28% higher mortality [p=0.1]. Retrospective database analysis of 3,219 hospitalized patients in the USA. ...
Apr 6 2021	<i>Mokhtari et al., International I...</i>	<i>Clinical outcomes of patients with mild COVID-19 following treatment wi...</i> 70% lower mortality [p<0.0001] and 35% lower hospitalization [p<0.0001]. Retrospective 28,759 adult ou...
Apr 5 2021	<i>Edington et al., European Jour...</i>	<i>Safety of treatment with chloroquine and hydroxychloroquine: A ten-year...</i> Safety analysis of CQ and HCQ covering 46 RCTs with 23,132 patients, showing no mortality attributed t...
Mar 31 2021	<i>Alghamdi et al., Antibiotics, d...</i>	<i>Clinical Efficacy of Hydroxychloroquine in Patients with COVID-19: Findin...</i> 7% higher mortality [p=0.88]. Retrospective 775 hospitalized patients in Saudi Arabia showing no signific...
Mar 26 2021	<i>Faruqui et al., Indian J. Med. R...</i>	<i>Safety of hydroxychloroquine in healthcare workers for COVID-19 prophy...</i> Retrospective 1303 health care workers finding that HCQ prophylaxis was well tolerated. 20% reported a...
Mar 24 2021	<i>Dev et al., Transactions of The...</i>	<i>Risk factors and frequency of COVID-19 among healthcare workers at a ...</i> 26% fewer cases [p=0.003]. Retrospective case control study of 3,100 healthcare workers in India showi...
Mar 23 2021	<i>Barry et al., International Jour...</i>	<i>Clinical Characteristics and Outcomes of Hospitalized COVID-19 Patient...</i> 99% lower mortality [p=0.6]. 605 hospitalized patients in Saudi Arabia showing no mortality with HCQ (o...
Mar 17 2021	<i>Stewart et al., PLoS ONE, doi:...</i>	<i>COVID-19 Evidence Accelerator: A parallel analysis to describe the use of...</i>

18% higher mortality [p=0.27] and 29% higher ventilation [p=0.09]. Collection of seven retrospective data...

Mar 17
2021

Dang et al., bioRxiv, doi:10.11... *Structural basis of anti-SARS-CoV-2 activity of hydroxychloroquine: speci...*
Microscopy/spectroscopy study showing that HCQ binds to both N-terminal domain and C-terminal do...

Mar 12
2021

Roy et al., medRxiv, doi:10.11... *Outcome of Different Therapeutic Interventions in Mild COVID-19 Patient...*
2% faster recovery [p=0.96]. Retrospective database analysis of 56 mild COVID-19 patients, all treated w...

Mar 9
2021

Vivanco-Hidalgo et al., Eurosu... *Incidence of COVID-19 in patients exposed to chloroquine and hydroxyc...*
46% higher hospitalization [p=0.1] and 8% more cases [p=0.5]. Retrospective database analysis of chron...

Mar 8
2021

Martin-Vicente et al., medRxiv... *Absent or insufficient anti-SARS-CoV-2 S antibodies at ICU admission ar...*
59% lower mortality [p=0.41]. Retrospective 92 ICU patients with almost all treated with HCQ and only o...

Mar 4
2021

Salvador et al., Cureus, doi:10... *Clinical Features and Prognostic Factors of 245 Portuguese Patients Ho...*
33% lower mortality [p=0.1], 448% higher ventilation [p=0.003], and 17% lower combined mortality/intub...

Mar 2
2021

Pham et al., Rheumatology A... *Failure of chronic hydroxychloroquine in preventing severe complication...*
20% lower mortality [p=0.77] and 35% higher ICU admission [p=0.61]. Tiny retrospective database analy...

Feb 28
2021

Thakar et al., Indian J. Med. R... *Chloroquine nasal drops in asymptomatic & mild COVID-19: An explorat...*
Small RCT for CQ nasal drops suggesting efficacy in preventing infection, while no significant difference ...

Feb 28
2021

Bhandari et al., International J... *A Preventive Study on Hydroxychloroquine Prophylaxis against COVID-1...*
Retrospective 4,239 healthcare workers using HCQ prophylaxis showing no mortality, 8 mild symptomat...

Feb 26
2021

Amaravadi et al., medRxiv, doi... *Hydroxychloroquine for SARS-CoV-2 positive patients quarantined at ho...*
60% improved recovery [p=0.13]. Tiny early-terminated 34 patient RCT for outpatient treatment showing ...

Feb 26
2021

Tanriverdi et al., Turkish Journ... *Hydroxychloroquine plus azithromycin and early hospital admission are ...*
Retrospective 83 hospitalized patients in Turkey confirming that earlier treatment is better, and showing ...

Feb 26
2021

Giraud-Gatineau et al., Resear... *The Need for Early Management in Patients With COVID-19*
Review of early treatment of COVID-19 at IHU Méditerranée Infection in France, including HCQ+AZ treat...

Feb 23
2021

Beltran Gonzalez et al., Infecti... *Efficacy and Safety of Ivermectin and Hydroxychloroquine in Patients wit...*
63% lower mortality [p=0.27] and 25% lower progression [p=0.57]. RCT late stage severe condition (93% ...

Feb 20
2021

Bae et al., Viruses 2021, doi:1... *Recent Hydroxychloroquine Use Is Not Significantly Associated with Pos...*
30% fewer cases [p=0.18]. Retrospective database analysis of prior HCQ usage in South Korea, showing...

Feb 19 2021	<i>Lamback et al., The Brazilian ...</i> Hydroxychloroquine with azithromycin in patients hospitalized for mild a... 9% lower mortality [p=0.83], 20% higher ICU admission [p=0.61], and 12% shorter hospitalization. Retros...
Feb 18 2021	<i>Awad et al., American Journal...</i> Impact of hydroxychloroquine on disease progression and ICU admissio... 19% higher mortality [p=0.6], 461% higher ventilation [p<0.0001], and 463% higher ICU admission [p<0.0...
Feb 15 2021	<i>Mahto et al., American Journ...</i> Seroprevalence of IgG against SARS-CoV-2 and its determinants among ... 27% lower IgG positivity [p=0.38]. Retrospective 689 healthcare workers in India, showing no significant ...
Feb 11 2021	<i>Lora-Tamayo et al., J. Infectio...</i> Early Lopinavir/ritonavir does not reduce mortality in COVID-19 patients: ... 50% lower mortality [p<0.0001]. Lopinavir/ritonavir retrospective study also showing univariate results f...
Feb 10 2021	<i>Desai et al., J. Clinical Medici...</i> The Use of Antiviral Agents against SARS-CoV-2: Ineffective or Time and... Retrospective 143 COVID-19 hospitalized patients >65yo, showing adjusted OR for antiviral treatment st...
Feb 9 2021	<i>Lounnas e al., Archives of Mic...</i> Revisiting a Meta-analysis Shows that Hydroxychloroquine with Azithro... Analysis of the Fiolet meta analysis and correction of bias evaluation, showing HCQ RR 0.45 [0.31-0.59], ...
Feb 9 2021	<i>Purwati et al., Biochemistry R...</i> A Randomized, Double-Blind, Multicenter Clinical Study Comparing the E... 66% improved viral clearance [p<0.0001]. RCT 754 patients comparing HCQ+AZ along with other treatm...
Feb 5 2021	<i>Fitzgerald et al., medRxiv, doi:...</i> Risk Factors for Infection and Health Impacts of the COVID-19 Pandemi... 9% fewer cases [p=0.54]. Retrospective 4666 people with autoimmune or inflammatory conditions, sho...
Feb 5 2021	<i>Hernandez-Cardenas et al., m...</i> Hydroxychloroquine for the treatment of severe respiratory infection by ... 12% lower mortality [p=0.66]. Very late stage RCT with 214 patients, mean SpO ₂ 65%, 162 on mechanic...
Feb 5 2021	<i>Ouedraogo et al., Revue des ...</i> Factors associated with the occurrence of acute respiratory distress and... 33% lower mortality [p=0.38] and 68% lower severe cases [p=0.001]. Retrospective 456 patients in Burki...
Feb 7 2021	<i>Alexander et al., medRxiv, doi:...</i> Early Multidrug Outpatient Treatment of SARS-CoV-2 Infection (COVID-1... Review of studies on treatment of COVID-19 for nursing home residents, concluding that there is a large...
Feb 7 2021	<i>Ubaldo et al., Critical Care Res...</i> COVID-19: A Single-Center ICU Experience of the First Wave in the Philip... 18% lower mortality [p=0.64]. Retrospective ICU patients in the Philippines showing unadjusted HCQ RR ...
Jan 31 2021	<i>Naderi et al., Immunopatholo...</i> Prophylactic effects of hydroxychloroquine on the incidence of COVID-1... Prospective observational study of 215 RA patients treated with HCQ showing 9 cases, 1 hospitalization...
Jan 31 2021	<i>Roig et al., Revista Espanola d...</i> Clinical and pharmacological data in COVID-19 hospitalized nonagenaria...

		16% lower mortality [p=0.76]. Retrospective 79 hospitalized nonagenarian patients showing unadjusted ...
Jan 29 2021	Di Castelnuovo et al., Journal ...	Disentangling the Association of Hydroxychloroquine Treatment with Mo... 40% lower mortality [p<0.0001]. Retrospective 4,396 hospitalized patients in Italy showing significantly l...
Jan 27 2021	Trefond et al., Revue du Rhum...	Effet d'un traitement par hydroxychloroquine prescrit comme traitement ... 17% higher mortality [p=0.8], 78% higher combined mortality/ICU admission [p=0.21], and 45% higher ho...
Jan 26 2021	Eftekhar et al., medRxiv, doi:1...	Hydroxychloroquine and azithromycin: As a double edge sword for COVI... Retrospective 172 hospitalized patients, 83% treated and HCQ+AZ and 17% with HCQ, not finding a sign...
Jan 25 2021	Dabbous et al., Archives of Vir...	Efficacy of favipiravir in COVID-19 treatment: a multi-center randomized ... This study was retracted.
Jan 25 2021	Hussein et al., Journal of Mol...	Molecular Docking Identification for the efficacy of Some Zinc Complexe... Molecular dynamics analysis recommending Zn (CQ) Cl2(H2O) and Zn (HCQ) Cl2(H2O) as potential inhi...
Jan 24 2021	Zelenko, Z., Preprint (Preprint)	Nebulized Hydroxychloroquine for COVID-19 Treatment: 80x Improve... Report on the use of nebulized HCQ showing much more rapid improvement compared to tablets, with ...
Jan 23 2021	Cifuentes et al., Medicina Clíni...	Incidence of COVID-19 in patients under chronic treatment with hydroxy... Retrospective 3,817 chronic HCQ patients showing 4.4% COVID-19 positive rate, 1.3% severe. There is n...
Jan 18 2021	Li et al., Science China Life Sc...	Evaluation of the efficacy and safety of hydroxychloroquine in comparis... 50% higher hospital discharge [p=0.09]. Small RCT comparing HCQ and CQ in China with 88 very late st...
Jan 13 2021	Khoubnasabjafari et al., Post...	Prevalence of COVID-19 in patients with rheumatoid arthritis (RA) ahead... 17% fewer cases [p=0.59]. Survey analysis of 1,858 RA patients in Iran, showing no significant difference...
Jan 12 2021	Li et al., Research Square, doi:...	Treatment of COVID-19 patients with hydroxychloroquine or chloroquine: ... 40% slower viral clearance [p=0.06]. Small retrospective database analysis of 37 late stage patients hos...
Jan 10 2021	Rangel et al., Journal of the A...	Chronic Hydroxychloroquine Therapy and COVID-19 Outcomes: A Retros... 25% lower mortality [p=0.77] and 22% lower hospitalization [p=0.29]. Retrospective 50 COVID-19 patient...
Jan 8 2021	Yegerov et al., medRxiv, doi:1...	Epidemiological and Clinical Characteristics, and Virologic Features of C... 95% lower mortality [p=1]. Retrospective 1,072 hospitalized patients in Kazakhstan showing no mortalit...
Jan 7 2021	Baidya et al., Journal of Mole...	Inhibitory capacity of Chloroquine against SARS-COV-2 by effective bindi... Molecular docking study of 16 drugs showing CQ had the highest binding affinity with ACE2, and molec...

Jan 6 2021	<i>Noureddine et al., Journal of ...</i> Quantum chemical studies on molecular structure, AIM, ELF, RDG and a... <i>In silico</i> analysis of hydroxychloroquine and hydroxychloroquine sulfate predicting that hydroxychloroqui...
Jan 4 2021	<i>Gautret et al., International Jo...</i> Safety profile of hydroxychloroquine and azithromycin combined treatm... Report on the safety of HCQ+AZ with 3,737 COVID-19 patients. 138 had contraindications and treatment...
Jan 2 2021	<i>Sarfaraz et al., medRxiv, doi:1...</i> Determinants of in-hospital mortality in COVID-19; a prospective cohort ... 45% higher mortality [p=0.07]. Retrospective 186 hospitalized patients in Pakistan showing unadjusted ...
Jan 1 2021	<i>Lotfy et al., Turk. Thorac. J., d...</i> Use of Hydroxychloroquine in Patients with COVID-19: A Retrospective O... 25% higher mortality [p=0.76], 41% higher ventilation [p=0.34], and 17% higher ICU admission [p=0.53]. R...
Jan 1 2021	<i>Sands et al., International Jou...</i> No clinical benefit in mortality associated with hydroxychloroquine treat... 70% higher mortality [p=0.01]. Retrospective database analysis of 1,669 patients in the US showing OR ...
Dec 31 2020	<i>Mahale et al., Indian Journal o...</i> A Retrospective Observational Study of Hypoxic COVID-19 Patients Treat... 29% lower mortality [p=0.36]. Retrospective 134 hospitalized COVID-19 patients in India, showing no sig...
Dec 31 2020	<i>Matada et al., Bioorganic & M...</i> A comprehensive review on the biological interest of quinoline and its de... Review of quinolone and derivatives, natural and drug sources, and biological activity.
Dec 31 2020	<i>Pseudos et al., Open Forum In...</i> Corona Virus Disease-19 (COVID-19) in a Veterans Affairs Hospital at Su... 63% higher mortality [p=0.52]. Retrospective 67 hospitalized patients in the USA showing non-statistical...
Dec 31 2020	<i>Texeira et al., Open Forum Inf...</i> Characteristics and outcomes of COVID-19 patients admitted to a region... 79% higher mortality [p=0.1]. Retrospective 161 hospitalized patients in the USA showing non-statistical...
Dec 31 2020	<i>Vernaz et al., Swiss Medical ...</i> Early experimental COVID-19 therapies: associations with length of hosp... 15% lower mortality [p=0.71] and 49% longer hospitalization [p=0.002]. Retrospective 840 hospitalized p...
Dec 30 2020	<i>McCullough et al., Reviews in ...</i> Multifaceted highly targeted sequential multidrug treatment of early am... Review urging early treatment of COVID-19 with sequential multidrug treatment that has been shown to ...
Dec 30 2020	<i>Procter et al., Reviews in Card...</i> Clinical outcomes after early ambulatory multidrug therapy for high-risk ... Retrospective 922 outpatients, with 320 treated early due to age>50 or comorbidities, showing 2.2% hos...
Dec 29 2020	<i>Güner et al., Journal of Infecti...</i> Comparing ICU Admission Rates of Mild/Moderate COVID-19 Patients Tr... 77% lower ICU admission [p=0.16]. Retrospective 824 hospitalized patients in Turkey showing lower ICU...
Dec 28 2020	<i>Cordtz et al., Rheumatology, d...</i> Incidence and severeness of COVID-19 hospitalisation in patients with in...

	Retrospective 58,052 rheumatic disease patients in Denmark showing that RA patients have a higher ris...
Dec 24 2020	<i>Chari et al., Blood, doi:10.118...</i> <i>Clinical features associated with COVID-19 outcome in multiple myelom...</i> 33% lower mortality [p=0.17]. Retrospective multiple myeloma patients showing lower mortality with HC...
Dec 23 2020	<i>Su et al., BioScience Trends, d...</i> <i>Efficacy of early hydroxychloroquine treatment in preventing COVID-19 p...</i> 85% lower progression [p=0.006], 24% faster improvement [p=0.02], and 36% improved viral clearance [p...
Dec 23 2020	<i>Taccone et al., The Lancet Re...</i> <i>The role of organizational characteristics on the outcome of COVID-19 p...</i> 25% lower mortality [p=0.02]. Retrospective 1,747 ICU patients in Belgium showing lower mortality with ...
Dec 22 2020	<i>Cangiano et al., Aging, doi:10....</i> <i>Mortality in an Italian nursing home during COVID-19 pandemic: correlati...</i> 73% lower mortality [p=0.03]. 73% lower mortality with HCQ. Analysis of 98 PCR+ nursing home resident...
Dec 19 2020	<i>Huh et al., International Journ...</i> <i>Association of prescribed medications with the risk of COVID-19 infectio...</i> 251% higher progression [p=0.11] and 6% fewer cases [p=0.82]. Retrospective database analysis with 1...
Dec 18 2020	<i>Matangila et al., PLoS ONE, d...</i> <i>Clinical characteristics of COVID-19 patients hospitalized at Clinique Ng...</i> 55% lower mortality [p=0.21]. 55% lower death with HCQ+AZ. Retrospective 160 hospitalized patients in ...
Dec 16 2020	<i>Signes-Costa et al., Archivos ...</i> <i>Prevalence and 30-day mortality in hospitalized patients with COVID-19 ...</i> 47% lower mortality [p=0.0005]. 47% lower mortality with HCQ/CQ. Retrospective 1,271 patients with lu...
Dec 16 2020	<i>Gönenli et al., Infectious Dise...</i> <i>Analysis of the Prophylactic use of Hydroxychloroquine at the Beginning ...</i> 30% lower progression [p=0.77] and 19% more cases [p=0.58]. Small prophylaxis survey showing lower, ...
Dec 14 2020	<i>De Luna et al., medRxiv, doi:1...</i> <i>Clinical and Demographic Characteristics of COVID-19 Patients Admitte...</i> 105% higher mortality [p=0.69]. Retrospective 150 patients in the Dominican Republic, 132 treated with ...
Dec 14 2020	<i>Sofian et al., Wiener Medizinis...</i> <i>SARS-CoV-2, a virus with many faces: a series of cases with prolonged p...</i> Report on a series of 10 patients experiencing prolonged COVID-19 symptoms that were given HCQ 250...
Dec 14 2020	<i>Orioli et al., Diabetes & Metab...</i> <i>Clinical characteristics and short-term prognosis of in-patients with diab...</i> 13% lower mortality [p=1]. Small retrospective study of 73 diabetic patients in Belgium, 55 HCQ patients,...
Dec 14 2020	<i>Naseem et al., medRxiv, doi:1...</i> <i>Predicting mortality in SARS-COV-2 (COVID-19) positive patients in the in...</i> 33% lower mortality [p=0.34]. Retrospective 1,214 hospitalized patients in Pakistan, 77 HCQ patients, sh...
Dec 14 2020	<i>Tan et al., Virus Research, doi:...</i> <i>A retrospective comparison of drugs against COVID-19</i> 35% shorter hospitalization [p=0.04]. Retrospective 333 patients in China, with only 8 HCQ patients, sho...

- Dec 11 2020 **Bielza et al., Journal of the A...** *Clinical characteristics, frailty and mortality of residents with COVID-19 i...*
22% lower mortality [p=0.09]. Retrospective 630 elderly patients in Spain showing lower mortality with H...
- Dec 11 2020 **Sogut et al., The American Jo...** *Safety and efficacy of hydroxychloroquine in 152 outpatients with confir...*
Safety study of 152 outpatients concluding that HCQ is safe for COVID-19, was well tolerated, and was n...
- Dec 11 2020 **Jung et al., Clinical Microbiolo...** *Effect of hydroxychloroquine pre-exposure on infection with SARS-CoV-2...*
59% lower mortality [p=1] and 13% more cases [p=0.86]. Retrospective cohort study of RA and SLE patie...
- Dec 10 2020 **Rosenthal et al., JAMA Netwo...** *Risk Factors Associated With In-Hospital Mortality in a US National Sam...*
8% higher mortality [p=0.13]. Retrospective database analysis of 64,781 hospitalized patients in the USA...
- Dec 10 2020 **Alqassieh et al., F1000Resear...** *Clinical characteristics and predictors of the duration of hospital stay in ...*
18% shorter hospitalization [p=0.11]. Prospective observational study of 131 COVID-19 patients in Jorda...
- Dec 10 2020 **Italian Council of State (News)** *Consiglio di Stato, sì all'uso dell'idrossiclorachina per la cura del Covid*
Consiglio di Stato ruling in Italy re-establishes the right of Italian MDs to prescribe HCQ, which was susp...
- Dec 9 2020 **Johnston et al., EClinicalMedi...** *Hydroxychloroquine with or Without Azithromycin for Treatment of Early...*
30% lower hospitalization [p=0.73], 2% improved recovery [p=0.95], and 29% faster viral clearance. Small...
- Dec 9 2020 **Agusti et al., Enfermedades In...** *Efficacy and safety of hydroxychloroquine in healthcare professionals wi...*
68% lower progression [p=0.21] and 32% faster viral clearance. Small trial of low dose HCQ for healthcar...
- Dec 9 2020 **Guglielmetti et al., Journal of I...** *Severe COVID-19 pneumonia in Piacenza, Italy – a cohort study of the fir...*
35% lower mortality [p=0.22]. Retrospective 218 hospitalized patients in Italy showing non-statistically si...
- Dec 7 2020 **Barnabas et al., Annals of Inte...** *Hydroxychloroquine for Post-exposure Prophylaxis to Prevent Acute Res...*
27% more cases [p=0.33]. Early terminated PEP RCT comparing HCQ and vitamin C with 781 low-risk pa...
- Dec 4 2020 **Ozturk et al., Nephrology Dialy...** *Mortality analysis of COVID-19 infection in chronic kidney disease, haem...*
44% lower mortality [p=0.14]. Retrospective 1210 hospitalized patients in Turkey focused on chronic kid...
- Dec 4 2020 **Modrák et al., medRxiv, doi:10...** *Detailed disease progression of 213 patients hospitalized with Covid-19 ...*
59% lower mortality [p=0.04]. Retrospective 213 hospitalized patients in Czech Republic showing lower ...
- Dec 4 2020 **Peng et al., Nephrology Dialys...** *Early versus late acute kidney injury among patients with COVID-19—a ...*
11% lower progression [p=0.63]. Retrospective 4020 hospitalized patients in China showing non-statistic...
- Dec 2 2020 **Wiseman et al., medRxiv, doi:...** *Effective post-exposure prophylaxis of Covid-19 is associated with use o...*

		42% fewer cases [p=0.04]. 6th independent analysis showing efficacy from the Boulware PEP trial. This ...
Dec 7 2020	Capsoni et al., Research Squa...	CPAP Treatment In COVID-19 Patients: A Retrospective Observational St... 40% lower ventilation [p=0.3]. Small 52 patient retrospective study of patients with acute respiratory fail...
Nov 30 2020	Abdulrahman et al., medRxiv, ...	The efficacy and safety of hydroxychloroquine in COVID19 patients : a m... 17% lower mortality [p=1] and 75% higher combined mortality/intubation [p=0.24]. Retrospective analysi...
Nov 29 2020	Abd-El salam et al., Biological ...	Do Zinc Supplements Enhance the Clinical Efficacy of Hydroxychloroqui... 191 patient RCT in Egypt comparing the addition of zinc to HCQ, not showing a significant difference. N...
Nov 28 2020	Lambermont et al., Critical Ca...	Predictors of Mortality and Effect of Drug Therapies in Mechanically Ven... 32% lower mortality [p=0.46]. Retrospective 247 mechanically ventilated patients showing lower mortali...
Nov 28 2020	Ruiz et al., International Journ...	Hydroxychloroquine lung pharmacokinetics in critically ill patients infect... HCQ lung pharmacokinetic study confirming that lung concentrations can be much higher than plasma ...
Nov 28 2020	Rodriguez-Gonzalez et al., Int...	COVID-19 in hospitalized patients in Spain: a cohort study in Madrid 23% lower mortality [p=0.26]. Retrospective 1255 patients in Spain showing lower mortality with HCQ. S...
Nov 27 2020	van Halem et al., BMC Infect ...	Risk factors for mortality in hospitalized patients with COVID-19 at the st... 32% lower mortality [p=0.05]. Retrospective 319 hospitalized patients in Belgium showing lower mortalit...
Nov 26 2020	Burdick et al., Journal of Clini...	Is Machine Learning a Better Way to Identify COVID-19 Patients Who Mig... 59% higher mortality [p=0.12]. 290 patient observational trial in the USA, not showing a significant differ...
Nov 24 2020	Abbas et al., Int. J. Clin. Pract...	Assessment of COVID-19 Treatment containing both Hydroxychloroquin... Prospective study of 161 hospitalized patients in Iraq showing HCQ+AZ appears to help recovery. Most ...
Nov 23 2020	Qin et al., Thrombosis Resear...	Low molecular weight heparin and 28-day mortality among patients with... 34% lower mortality [p=0.61]. Low molecular weight heparin study also showing results for HCQ treatm...
Nov 21 2020	Revollo et al., Journal of Anti...	Hydroxychloroquine pre-exposure prophylaxis for COVID-19 in healthcar... 23% fewer cases [p=0.52]. Retrospective PrEP analysis with 69 healthcare workers on PrEP HCQ, and 41...
Nov 20 2020	Omrani et al., EclinicalMedici...	Randomized double-blinded placebo-controlled trial of hydroxychloroqui... 12% lower hospitalization [p=1], 26% improved recovery [p=0.58], and 10% worse viral clearance [p=0.13]...
Nov 19 2020	Falcone et al., Open Forum Inf...	Role of low-molecular weight heparin in hospitalized patients with SARS-... 65% lower mortality [p=0.2]. Prospective observational study of 315 hospitalized patients in Italy showin...

Nov 18 2020	<i>Budhiraja et al., medRxiv, doi:...</i> <i>Clinical Profile of First 1000 COVID-19 Cases Admitted at Tertiary Care H...</i> 65% lower mortality [$p<0.0001$]. Retrospective 976 hospitalized patients with 834 treated with HCQ+AZ ...
Nov 17 2020	<i>Boari et al, Biosci. Rep., doi:10...</i> <i>Prognostic factors and predictors of outcome in patients with COVID-19 ...</i> 55% lower mortality [$p=0.001$]. Retrospective 258 hospitalized patients in Italy showing lower mortality ...
Nov 13 2020	<i>Sheshah et al., Diabetes Rese...</i> <i>Prevalence of Diabetes, Management and Outcomes among Covid-19 A...</i> 80% lower mortality [$p=0.001$]. Retrospective 300 hospitalized patients in Saudi Arabia showing HCQ adj...
Nov 12 2020	<i>Simova et al., New Microbes ...</i> <i>Hydroxychloroquine for prophylaxis and treatment of COVID-19 in health...</i> 94% lower hospitalization [$p=0.01$] and 96% improved viral clearance [$p=0.001$]. 100% reduction in hospit...
Nov 12 2020	<i>Simova et al., New Microbes ...</i> <i>Hydroxychloroquine for prophylaxis and treatment of COVID-19 in health...</i> 93% fewer cases [$p=0.01$]. 100% reduction in cases with HCQ+zinc post-exposure prophylaxis. Brief rep...
Nov 12 2020	<i>Tchounga et al., Journal of Ph...</i> <i>Composition analysis of falsified chloroquine phosphate samples seized...</i> Analysis of fake CQ tablets finding: - no CQ in six samples, substituted with metronidazole (at sub-thera...
Nov 11 2020	<i>Águila-Gordo et al., Revista Es...</i> <i>Mortality and associated prognostic factors in elderly and very elderly h...</i> 67% lower mortality [$p=0.1$]. 67% lower mortality with HCQ. Retrospective 416 elderly patients in Spain s...
Nov 9 2020	<i>Khamis et al., International Jo...</i> <i>Randomized Controlled Open Label Trial on the Use of Favipiravir Combi...</i> Small 89 patient RCT comparing favipiravir and inhaled interferon with HCQ for moderate to severe COV...
Nov 9 2020	<i>Rodriguez et al., Medicina Int...</i> <i>Severe infection due to the SARS-CoV-2 coronavirus: Experience of a tert...</i> 59% lower mortality [$p=0.23$]. Small prospective study of 43 hospitalized patients with 39 taking HCQ, sh...
Nov 9 2020	<i>Self et al., JAMA, doi:10.1001/...</i> <i>Effect of Hydroxychloroquine on Clinical Status at 14 Days in Hospitalize...</i> 6% higher mortality [$p=0.85$] and 3% worse 7-point scale results [$p=0.87$]. Early terminated very late stag...
Nov 9 2020	<i>Brown et al., Annals of the Am...</i> <i>Hydroxychloroquine vs. Azithromycin for Hospitalized Patients with COV...</i> Small early terminated very late stage (86% on oxygen, 44% enrolled in the ICU) RCT comparing HCQ vs....
Nov 9 2020	<i>Núñez-Gil et al., Intern. Emerg...</i> <i>Mortality risk assessment in Spain and Italy, insights of the HOPE COVID...</i> 8% lower mortality [$p=0.005$]. Retrospective database study of 1,021 patients in Ecuador, Germany, Italy, ...
Nov 6 2020	<i>Mathai et al., J. Marine Medic...</i> <i>Hydroxychloroquine as pre-exposure prophylaxis against COVID-19 in he...</i> 90% fewer cases [$p<0.0001$]. 90% reduction in cases with HCQ pre-exposure prophylaxis. Retrospective ...
Nov 6 2020	<i>Datta et al., Journal of Vaccin...</i> <i>No Role of HCQ in COVID-19 Prophylaxis: A Survey amongst Indian Doct...</i>

22% fewer cases [p=0.47]. Survey of Indian doctors not finding a significant effect of HCQ prophylaxis.

Nov 6
2020

Dhibar et al., International Jou... *Post Exposure Prophylaxis with Hydroxychloroquine (HCQ) for the Preve...*
44% fewer symptomatic cases [p=0.21] and 50% fewer cases [p=0.04]. Low dose prospective PEP study...

Nov 5
2020

Maldonado et al., Nefrología, ... *COVID-19 incidence and outcomes in a home dialysis unit in Madrid (Sp...*
91% lower mortality [p=0.17]. Very small retrospective of 12 dialysis patients showing 1/11 deaths with ...

Nov 5
2020

Rodriguez-Nava et al., Mayo C... *Clinical characteristics and risk factors for mortality of hospitalized patie...*
6% higher mortality [p=0.77]. Retrospective 313 patients, mostly critical stage and mostly requiring respi...

Nov 4
2020

Salazar et al., The American J... *Significantly Decreased Mortality in a Large Cohort of Coronavirus Disea...*
37% higher mortality [p=0.28]. Convalescent plasma study also showing mortality based on HCQ treatm...

Nov 4
2020

Cadegiani et al., New Microbe... *Early COVID-19 Therapy with azithromycin plus nitazoxanide, ivermectin ...*
81% lower mortality [p=0.21], 95% lower ventilation [p=0.0008], and 98% lower hospitalization [p<0.0001]...

Nov 3
2020

Behera et al., PLoS ONE, doi:1... *Role of ivermectin in the prevention of SARS-CoV-2 infection among heal...*
28% fewer cases [p=0.29]. Retrospective matched case-control prophylaxis study for HCQ, ivermectin, a...

Nov 2
2020

López et al., Annals of Pediatr... *Telemedicine follow-ups for COVID-19: experience in a tertiary hospital*
64% lower progression [p=0.02]. Retrospective 72 pediatric patients showing HCQ associated with a sh...

Nov 1
2020

Niwas et al., Advances in Res... *Clinical outcome, viral response and safety profile of chloroquine in COVI...*
29% faster recovery [p=0.008]. Retrospective 12 hospitalized patients in India treated with CQ and 17 co...

Oct 31
2020

Szente Fonseca et al., Travel ... *Risk of Hospitalization for Covid-19 Outpatients Treated with Various Dr...*
64% lower hospitalization [p=0.0008]. 64% lower hospitalization with HCQ. Retrospective 717 patients in...

Oct 30
2020

Tehrani et al., International Jo... *Risk factors for mortality in adult COVID-19 patients: frailty predicts fatal...*
13% lower mortality [p=0.63]. Retrospective 255 hospitalized patients, 65 treated with HCQ, showing un...

Oct 27
2020

Arleo et al., medRxiv, doi:10.1... *Clinical Course and Outcomes of coronavirus disease 2019 (COVID-19) i...*
50% lower mortality [p=0.67]. Retrospective hospitalized rheumatic disease patients showing 50% lower...

Oct 27
2020

Choi et al., International Journ... *Comparison of antiviral effect for mild-to-moderate COVID-19 cases bet...*
22% slower viral clearance [p=0.0001]. Health insurance database analysis failing to adjust for disease s...

Oct 26
2020

Frontera et al., Research Squa... *Treatment with Zinc is Associated with Reduced In-Hospital Mortality A...*
37% lower mortality [p=0.02]. Retrospective 3,473 hospitalized patients showing lower mortality with HC...

Oct 24 2020	Goenka et al., SSRN, doi:10.21... Seroprevalence of COVID-19 Amongst Health Care Workers in a Tertiary ... 87% lower IgG positivity [p=0.03]. Study of SARS-CoV-2-IgG antibodies in 1122 health care workers in In...
Oct 23 2020	Coll et al., American Journal o... Covid-19 in transplant recipients: the spanish experience 46% lower mortality [p<0.0001]. Retrospective 652 transplant recipient patients in Spain showing 46% lo...
Oct 21 2020	Lano et al., Clinical Kidney Jo... Risk factors for severity of COVID-19 in chronic dialysis patients from a ... 33% lower mortality [p=0.28] and 39% lower combined mortality/ICU admission [p=0.23]. 33% lower mo...
Oct 21 2020	Dubee et al., Clinical Microbiol... Hydroxychloroquine in mild-to-moderate COVID-19: a placebo-controlled... 46% lower mortality [p=0.21] and 26% lower combined mortality/intubation [p=0.48]. Small early termina...
Oct 21 2020	Ñamendys-Silva et al., Heart ... Outcomes of patients with COVID-19 in the Intensive Care Unit in Mexico... 32% lower mortality [p=0.19]. Retrospective 164 ICU patients in Mexico showing 32% lower mortality wit...
Oct 20 2020	IHU Marseille (Preprint) (meta... Meta-analysis on chloroquine derivatives and COVID-19 mortality Updated meta analysis of 41 studies showing CQ/HCQ OR 0.57, p<0.0001 from clinical studies. For big ...
Oct 20 2020	Solh et al., medRxiv, doi:10.11... Clinical course and outcome of COVID-19 acute respiratory distress syn... 18% higher mortality [p=0.17]. Retrospective database analysis of 7,816 Veterans Affairs hospitalized pa...
Oct 17 2020	Mohana et al., International J... Hydroxychloroquine Safety Outcome within Approved Therapeutic Proto... Safety study of 2,733 patients in Saudi Arabia showing HCQ in mild to moderate cases in an outpatient ...
Oct 15 2020	Guisado-Vasco Clinical characteristics and outcomes among hospitalized adults with se... 20% lower mortality [p=0.36]. Retrospective 607 patients reporting results for early outpatient HCQ use ...
Oct 15 2020	SOLIDARITY Trial Consortium... Repurposed antiviral drugs for COVID-19; interim WHO SOLIDARITY trial ... 19% higher mortality [p=0.23]. WHO SOLIDARITY open-label trial with 954 very late stage (64% on oxyge...
Oct 12 2020	Annie et al., Pharmacotherapy... Hydroxychloroquine in hospitalized COVID-19 patients: Real world experi... 4% lower mortality [p=0.83]. Retrospective database analysis with PSM not including COVID-19 severity, ...
Oct 11 2020	Sili et al., medRxiv, doi:10.110... Factors associated with progression to critical illness in 28 days among ... Analysis of hospitalized patients in Turkey showing HCQ was given to 99.2% of patients and the inciden...
Oct 8 2020	Aparisi et al., medRxiv, doi:10... Low-density lipoprotein cholesterol levels are associated with poor clinic... 63% lower mortality [p=0.008]. Retrospective 654 hospitalized patients focused on low-density lipoprote...
Oct 8 2020	Soto-Becerra et al., medRxiv, ... Real-World Effectiveness of hydroxychloroquine, azithromycin, and iver...

	18% lower mortality [p<0.0001]. Retrospective database study of 5683 patients, 692 received HCQ/CQ+...
Oct 6 2020	Ader et al., medRxiv, doi:10.11... An open-label randomized, controlled trial of the effect of lopinavir/riton... 15% higher mortality [p=0.7] and 24% improved viral clearance [p=0.68]. Early terminated very late stage ...
Oct 5 2020	Mori et al., Journal of Microbi... Triple therapy with hydroxychloroquine, azithromycin, and ciclesonide fo... Small case study of 5 patients in Japan showing improvement with HCQ+AZ+ciclesonide.
Oct 5 2020	Prodromos et al., New Microb... Hydroxychloroquine is effective, and consistently so used early, for Covi... Meta analysis of 43 studies reporting: "HCQ was found consistently effective against COVID-19 when us...
Oct 2 2020	Nachega et al., The American ... Clinical Characteristics and Outcomes of Patients Hospitalized for COVI... 28% lower mortality [p=0.17] and 26% greater improvement [p=0.13]. Retrospective 766 hospitalized pat...
Oct 7 2020	Almazrou et al., Saudi Pharm... Comparing the impact of Hydroxychloroquine based regimens and stan... 65% lower ventilation [p=0.16] and 21% lower ICU admission [p=0.78]. Retrospective 161 hospitalized pa...
Sep 30 2020	Yadav et al., ResearchGate, d... Sero-survey for health-care workers provides corroborative evidence for ... 82% lower hospitalization [p=0.01] and 42% fewer cases [p=0.05]. ICMR seroprevalence survey of 500 h...
Sep 30 2020	Polat et al., Medical Journal o... Hydroxychloroquine Use on Healthcare Workers Exposed to COVID-19 - ... 57% fewer cases [p=0.03]. Small prophylaxis study of 208 healthcare workers in Turkey, 138 with high ri...
Sep 30 2020	Ayerbe et al., Internal and Em... The association of treatment with hydroxychloroquine and hospital mort... 52% lower mortality [p=0.001]. 2075 hospital patients in Spain showing HCQ reduces mortality 52%, odd...
Sep 30 2020	Ladapo et al., medRxiv, doi:10... Randomized Controlled Trials of Early Ambulatory Hydroxychloroquine i... 24% lower combined death/hospitalization/cases [p=0.03]. Meta analysis of prophylactic and early treat...
Sep 30 2020	Abella et al., JAMA Internal M... Efficacy and Safety of Hydroxychloroquine vs Placebo for Pre-exposure ... 5% fewer cases [p=1]. Very small early-terminated underpowered PrEP RCT with 64/61 HCQ/control pati...
Sep 29 2020	Lammers et al., Int. J. Infectio... Early hydroxychloroquine but not chloroquine use reduces ICU admissio... 32% lower combined mortality/ICU admission [p=0.02]. Observational study 1,064 hospitalized patients ...
Sep 29 2020	Dabbous et al., Scientific Rep... Safety and efficacy of favipiravir versus hydroxychloroquine in managem... This paper has been retracted [nature.com].
Sep 28 2020	Luco, J., Trends Med, doi:10.1... Hydroxychloroquine as post-exposure prophylaxis for Covid-19: Why sim... Reanalysis of Boulware et al. PEP trial data showing statistically significant improvements with HCQ.

- Sep 24
2020 *Gasperetti et al., EP Europace,...* *Arrhythmic safety of hydroxychloroquine in COVID-19 patients from diffe...*
Safety study of 649 patients finding that HCQ administration is safe for short-term treatment for patient...
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- Sep 24
2020 *Shoaibi et al., medRxiv, doi:10...* *Comparative Effectiveness of Famotidine in Hospitalized COVID-19 Pati...*
15% lower mortality [p=0.001]. Retrospective database analysis focused on Famotidine but also showin...
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- Sep 23
2020 *Ulrich et al., Open Forum Infe...* *Treating Covid-19 With Hydroxychloroquine (TEACH): A Multicenter, Dou...*
6% higher mortality [p=1]. Small RCT on very late stage use of HCQ, with 48% on oxygen at baseline. 67 ...
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- Sep 22
2020 *Serrano et al., Ann. Oncol., 20...* *COVID-19 and lung cancer: What do we know?*
43% lower mortality [p=0.15]. Small retrospective study of 22 lung cancer patients, 14 treated with HCQ...
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- Sep 21
2020 *Gentry et al., Lancet Rheumat...* *Long-term hydroxychloroquine use in patients with rheumatic conditions...*
91% lower mortality [p=0.1] and 21% fewer cases [p=0.27]. Retrospective patients with rheumatologic c...
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- Sep 21
2020 *Rajasingham et al., medRxiv, ...* *Hydroxychloroquine as pre-exposure prophylaxis for COVID-19 in health...*
27% fewer cases [p=0.12]. PrEP RCT showing HR 0.73, p = 0.12. Trial halted after 47% enrollment, p < 0...
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- Sep 21
2020 *Grau-Pujol et al., Trials, doi:10...* *Pre-exposure prophylaxis with hydroxychloroquine for COVID-19: a doubl...*
11% fewer cases [p=1]. Small PrEP RCT showing that PrEP with HCQ is safe at the dosage used. There ...
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- Sep 21
2020 *Lofgren et al., Open Forum Inf...* *Safety of Hydroxychloroquine among Outpatient Clinical Trial Participant...*
Analysis of 2,795 outpatients not showing significant safety concerns with HCQ. No deaths were related...
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- Sep 18
2020 *Axfors et al., Nature, doi:10.10...* *Mortality outcomes with hydroxychloroquine and chloroquine in COVID-...*
Meta analysis assigning 89% weight to the RECOVERY and SOLIDARITY trials, producing the same resul...
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- Sep 16
2020 *Karatzas et al., Xenobiotica* *Optimization of hydroxychloroquine dosing scheme based on COVID-19 ...*
Analysis of HCQ dosing, suggesting that high initial doses followed by low and sparse doses may offer ...
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- Sep 15
2020 *Ashinyo et al., Pan African Me...* *Clinical characteristics, treatment regimen and duration of hospitalizatio...*
33% shorter hospitalization [p=0.03]. Retrospective 307 hospital patients in Ghana showing 33% reducti...
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- Sep 14
2020 *Lauriola et al., Clinical and Tra...* *Effect of combination therapy of hydroxychloroquine and azithromycin o...*
74% lower mortality [p=0.001]. Retrospective 377 patients, 73% reduction in mortality with HCQ+AZ, adj...
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- Sep 13
2020 *Sulaiman et al., medRxiv, doi:...* *The Effect of Early Hydroxychloroquine-based Therapy in COVID-19 Pati...*
64% lower mortality [p=0.01] and 39% lower hospitalization [p=0.001]. Observational prospective 5,541 p...
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- Sep 12
2020 *Heberto et al., IJC Heart & Va...* *Implications of myocardial injury in Mexican hospitalized patients with c...*

		54% lower mortality [p=0.04] and 65% lower ventilation [p=0.008]. Observational prospective 254 hospit...
Sep 9 2020	Alamdari et al., <i>Tohoku J. Exp...</i>	<i>Mortality Risk Factors among Hospitalized COVID-19 Patients in a Major...</i> 55% lower mortality [p=0.03]. Retrospective 459 patients in Iran with 93% treated with HCQ, showing HC...
Sep 9 2020	Kirenga et al., <i>BMJ Open Res...</i>	<i>Characteristics and outcomes of admitted patients infected with SARS-...</i> 26% faster recovery [p=0.2]. Prospective 56 patients in Uganda, 29 HCQ and 27 control, showing 25.6% f...
Sep 9 2020	Rentsch et al., <i>The Lancet Rh...</i>	<i>Effect of pre-exposure use of hydroxychloroquine on COVID-19 mortality...</i> 3% higher mortality [p=0.83]. Observational database study of RA/SLE patients in the UK, 194,637 RA/S...
Sep 9 2020	Laplana et al., <i>PLOS ONE, doi:...</i>	<i>Lack of protective effect of chloroquine derivatives on COVID-19 disease...</i> 56% more cases [p=0.24]. Survey of 319 autoimmune disease patients taking CQ/HCQ with 5.3% COVID...
Sep 7 2020	IHU, <i>Expert Review of Clinical ...</i>	<i>Natural history and therapeutic options for COVID-19</i> Review of the current state of knowledge regarding the natural history of and therapeutic options for CO...
Sep 5 2020	Synolaki et al., <i>medRxiv, doi:1...</i>	<i>The Activin/Follistatin-axis is severely deregulated in COVID-19 and inde...</i> 24% lower mortality [p=0.27]. Retrospective 117 patients, 58 HCQ showing lower mortality for HCQ patie...
Sep 4 2020	Furtado et al., <i>The Lancet, doi:...</i>	<i>Azithromycin in addition to standard of care versus standard of care alo...</i> Small RCT comparing the addition of AZ for very late stage patients on ventilation or oxygen. No signific...
Sep 2 2020	Wang et al., <i>Phytomedicine, d...</i>	<i>Chloroquine and hydroxychloroquine as ACE2 blockers to inhibit viropexi...</i> <i>In Vitro</i> study providing novel insights into the molecular mechanism of CQ/HCQ treatment, showing tha...
Sep 2 2020	Heras et al., <i>European Geriatri...</i>	<i>COVID-19 mortality risk factors in older people in a long-term care center</i> 96% lower mortality [p=0.004]. Retrospective 100 COVID+ elderly nursing home patients, HCQ+AZ mort...
Sep 2 2020	de la Iglesia et al., <i>medRxiv, d...</i>	<i>Hydroxicloroquine for pre-exposure prophylaxis for SARS-CoV-2</i> 43% more cases [p=0.15]. Analysis of autoimmune disease patients on HCQ, compared to a control gro...
Sep 1 2020	Hecel et al., <i>Pharmaceuticals, ...</i>	<i>Zinc(II)—The Overlooked Éminence Grise of Chloroquine's Fight against ...</i> Review of zinc as an inhibitor of SARS-CoV-2's RNA-dependent RNA polymerase, and zinc ionophores in...
Sep 1 2020	Elbazidi et al., <i>New Microbes ...</i>	<i>Pandemic and social changes, political fate</i> Analysis of US states and countries. Country analysis shows a significant correlation between the dates...
Aug 30 2020	Albani et al., <i>J, Clinical Medici...</i>	<i>Impact of Azithromycin and/or Hydroxychloroquine on Hospital Mortalit...</i> 18% lower mortality [p=0.15] and 9% higher ICU admission [p=0.7]. Retrospective 1376 hospitalized pati...

- Aug 29
2020 *Castillo et al., Journal of Stero...* *Effect of calcifediol treatment and best available therapy versus best av...*
RCT on calcifediol (25-hydroxyvitamin D) treatment for hospitalized COVID-19 patients showing signific...
- Aug 28
2020 *Fried et al., Clinical Infectious ...* *Patient Characteristics and Outcomes of 11,721 Patients with COVID19 ...*
27% higher mortality [p=0.001]. Database analysis of 11,721 hospitalized patients, 4,232 on HCQ. Strong...
- Aug 27
2020 *Ferri et al., Clinical Rheumatol...* *COVID-19 and rheumatic autoimmune systemic diseases: report of a lar...*
63% fewer cases [p=0.02]. Analysis of 1641 systemic autoimmune disease patients showing csDMARD ...
- Aug 26
2020 *Fiolet et al., Clinical Microbiol...* *Effect of hydroxychloroquine with or without azithromycin on the mortali...*
Meta analysis of late stage studies (and one early treatment study with only 2 deaths), showing HCQ RR...
- Aug 25
2020 *Ip et al., BMC Infectious Disea...* *Hydroxychloroquine in the treatment of outpatients with mildly sympto...*
55% lower mortality [p=0.43] and **37% lower hospitalization [p=0.04]**. Retrospective 1,274 outpatients, 47...
- Aug 25
2020 *Di Castelnuovo et al., Europea...* *Use of hydroxychloroquine in hospitalised COVID-19 patients is associat...*
30% lower mortality [p<0.0001]. Retrospective 3,451 hospitalized patients, 30% reduction in mortality wit...
- Aug 24
2020 *Catteau et al., Int. J. Antimicr...* *Low-dose Hydroxychloroquine Therapy and Mortality in Hospitalized Pat...*
32% lower mortality [p<0.0001]. Retrospective 8,075 hospitalized patients, 4,542 low-dose HCQ, 3,533 c...
- Aug 23
2020 *Pasquini et al., Journal of Anti...* *Effectiveness of remdesivir in patients with COVID-19 under mechanical ...*
16% lower mortality [p=0.34]. Retrospective 51 ICU patients under mechanical ventilation, 33 treated wit...
- Aug 21
2020 *Ly et al., International Journal ...* *Pattern of SARS-CoV-2 infection among dependant elderly residents livin...*
56% lower mortality [p=0.02]. Retrospective analysis of retirement homes, HCQ+AZ >= 3 days mortality ...
- Aug 21
2020 *Lane et al., The Lancet Rheu...* *Risk of hydroxychloroquine alone and in combination with azithromycin i...*
Retrospective study of RA patients using HCQ vs. sulfasalazine (another DMARD). HCQ treatment show...
- Aug 21
2020 *Gonzalez et al., medRxiv, doi:...* *The Prognostic Value of Eosinophil Recovery in COVID-19: A Multicentre...*
27% lower mortality [p=0.06]. Retrospective study focused on eosinophil recovery with 9,644 hospitalize...
- Aug 20
2020 *Dubernat et al., J. Global Anti...* *A comprehensive strategy for the early treatment of COVID-19 with azith...*
88% lower ICU admission [p=0.008]. Retrospective analysis of 36 hospitalized patients showing HCQ/A...
- Aug 20
2020 *Prodromos, C., New Microbes...* *Hydroxychloroquine is protective to the heart, not harmful: A systematic ...*
Review concluding that HCQ/AZ does not cause Torsade de Pointes or related deaths, HCQ decreases c...
- Aug 18
2020 *Pinato et al., Cancer Discover...* *Clinical portrait of the SARS-CoV-2 epidemic in European cancer patients*

		59% lower mortality [p=0.0001]. Restrospective 890 cancer patients with COVID-19, adjusted mortality ...
Aug 15 2020	Peters et al., <i>Clinical Microbiol...</i>	<i>Outcomes of Persons With COVID-19 in Hospitals With and Without Sta...</i> 9% higher mortality [p=0.57]. Retrospective study of HCQ use in 9 hospitals in the Netherlands, showing ...
Aug 14 2020	Abd-El salam et al., <i>American ...</i>	<i>Hydroxychloroquine in the Treatment of COVID-19: A Multicenter Rando...</i> This study was retracted.
Aug 13 2020	Roomi et al., <i>J. Medical Intern...</i>	<i>Efficacy of hydroxychloroquine and tocilizumab in patients with COVID-1...</i> 38% higher mortality [p=0.54]. Retrospective 176 hospitalized patients (144 HCQ, 32 control) showing n...
Aug 12 2020	Pablos et al., <i>Annals of the Rh...</i>	<i>Clinical outcomes of hospitalised patients with COVID-19 and chronic in...</i> 126% higher severe cases [p=0.002]. Retrospective 228 rheumatic disease and 228 non-rheumatic dise...
Aug 11 2020	Tarek et al., <i>European Journal...</i>	<i>Pharmacokinetic Basis of the Hydroxychloroquine Response in COVID-1...</i> <i>In Silico</i> analysis of HCQ treatment showing concluding that HCQ may affect viral clearance if administe...
Aug 11 2020	Bakhshaliyev et al., <i>J. Electro...</i>	<i>The effect of 5-day course of hydroxychloroquine and azithromycin com...</i> Safety study of 109 patients showing 5 days of HCQ+AZ did not lead to clinically significant QT prolong...
Aug 11 2020	Saleemi et al., <i>medRxiv, doi:1...</i>	<i>Time to negative PCR from symptom onset in COVID-19 patients on Hyd...</i> 21% slower viral clearance [p=0.05]. Retrospective 65 HCQ+AZ, 20 control patients, showing median tim...
Aug 8 2020	Lopez et al., <i>Int. J. Antimicrob...</i>	<i>Effects of Hydroxychloroquine on Covid-19 in Intensive Care Unit Patient...</i> Small retrospective study of 29 ICU patients comparing those with HCQ plasma concentration within tar...
Aug 6 2020	Salvarani et al., <i>Arthritis & Rhe...</i>	<i>Susceptibility to COVID-19 in Patients Treated With Antimalarials: A Pop...</i> 6% fewer cases [p=0.75]. Comparison of CQ/HCQ users with the general population in a region of Italy, s...
Aug 6 2020	McCullough et al., <i>The Americ...</i>	<i>Pathophysiological Basis and Rationale for Early Outpatient Treatment o...</i> Review of pathophysiological principles related to early outpatient treatment and therapeutic approache...
Aug 6 2020	Watanabe et al., <i>Open Letter (...</i>	<i>Concerns regarding the misinterpretation of statistical hypothesis testin...</i> Open letter signed by 38 professors and doctors regarding misinterpretation of statistics in HCQ RCTs. ...
Aug 5 2020	Singer et al., <i>Annals of the Rh...</i>	<i>Hydroxychloroquine ineffective for COVID-19 prophylaxis in lupus and rh...</i> 9% more cases [p=0.62]. Comparison of the percentage of SLE/RA patients on immunosuppressants th...
Aug 5 2020	Kalligeros et al., <i>Journal of Gl...</i>	<i>Hydroxychloroquine use in hospitalised patients with COVID-19: An obse...</i> 67% higher mortality [p=0.57]. Small retrospective database analysis of 36 patients receiving HCQ not s...

Aug 4 2020	<i>Kamran et al., medRxiv, doi:10...</i> <i>Clearing the fog: Is HCQ effective in reducing COVID-19 progression: A ra...</i> 5% lower progression [p=1] and 26% improved viral clearance [p=0.001]. Study of 349 low-risk hospitaliz...
Aug 3 2020	<i>Berenguer et al., Clinical Micr...</i> <i>Characteristics and predictors of death among 4035 consecutively hosp...</i> 18% lower mortality [p=0.0001]. Retrospective 4035 hospitalized patients in Spain showing reduced mor...
Aug 3 2020	<i>Yu et al., Science China Life S...</i> <i>Beneficial effects exerted by hydroxychloroquine in treating COVID-19 pa...</i> 83% lower progression [p=0.05] and 85% lower mortality [p=0.02]. Retrospective 2,882 patients in China,...
Aug 2 2020	<i>Davido et al., Int. J. Antimicro...</i> <i>Impact of medical care including anti-infective agents use on the progno...</i> 55% lower combined intubation/hospitalization [p=0.04]. Retrospective of 132 hospitalized patients. HC...
Aug 2 2020	<i>Sheaff, R., bioRxiv, doi:10.110...</i> <i>A New Model of SARS-CoV-2 Infection Based on (Hydroxy)Chloroquine A...</i> <i>In Vitro</i> study presenting a new theory on SARS-CoV-2 infection and why HCQ/CQ provides benefits, whi...
Aug 1 2020	<i>Bernabeu-Wittel et al., J. Gero...</i> <i>Effectiveness of a On-Site Medicalization Program for Nursing Homes w...</i> 59% lower mortality [p=0.03]. Retrospective 272 nursing home residents showing significantly improved...
Jul 31 2020	<i>Mazzitelli et al., Travel Medici...</i> <i>Apparent inefficacy of hydroxychloroquine combined with azithromycin ...</i> Report on HCQ+AZ use in 41 elderly high-risk patients. 29 of 30 patients with treatment >= 5 days surviv...
Jul 29 2020	<i>D'Arminio Monforte et al., Int. ...</i> <i>Effectiveness of Hydroxychloroquine in COVID-19 disease: A done and d...</i> 34% lower mortality [p=0.12]. HCQ+AZ adjusted death HR 0.44, p=0.009. Propensity scores include base...
Jul 28 2020	<i>BaŞaran et al., Turk. J. Med. S...</i> <i>Outcome of Non-Critical COVID-19 Patients with Early Hospitalization an...</i> Observational study of 174 hospitalized patients in Turkey, median age 45.4, 23 treated with HCQ, 113 w...
Jul 27 2020	<i>Santos et al., Clinical Rheuma...</i> <i>Determinants of COVID-19 disease severity in patients with underlying rh...</i> 92% lower mortality [p=0.19]. Prospective study of 38 hospitalized rheumatic disease patients with COVI...
Jul 26 2020	<i>Mitjà et al., NEJM, doi:10.105...</i> <i>A Cluster-Randomized Trial of Hydroxychloroquine as Prevention of Covi...</i> 46% lower mortality [p=0.39], 17% lower hospitalization [p=0.71], and 32% fewer cases [p=0.27]. For posi...
Jul 24 2020	<i>Khurana et al., medRxiv, doi:1...</i> <i>Prevalence and clinical correlates of COVID-19 outbreak among healthc...</i> 51% fewer cases [p=0.02]. Study of hospital health care workers showing HCQ prophylaxis reduces COV...
Jul 23 2020	<i>Cavalcanti et al., NEJM, July ...</i> <i>Hydroxychloroquine with or without Azithromycin in Mild-to-Moderate C...</i> 16% lower mortality [p=0.77] and 28% higher hospitalization [p=0.3]. Late stage RCT of 667 hospitalized ...
Jul 22 2020	<i>Kadnur et al., Journal of Famil...</i> <i>Hydroxychloroquine pre-exposure prophylaxis for COVID-19 among healt...</i>

	62% fewer cases [p=0.01]. Prophylaxis study with 334 low-risk healthcare workers in India, showing sign...
Jul 22 2020	<i>Ou et al., PLOS Pathogens, doi...</i> <i>Hydroxychloroquine-mediated inhibition of SARS-CoV-2 entry is attenuat...</i> In Vitro analysis showing that HCQ efficiently blocks viral entry mediated by cathepsin L, but not by TMP...
Jul 22 2020	<i>Hoffmann et al., Nature, (202...</i> <i>Chloroquine does not inhibit infection of human lung cells with SARS-Co...</i> The title of this paper does not appear to match the results. Fig. 1b @100uM shows CQ results in a ~4.5...
Jul 22 2020	<i>Rivera et al., Cancer Discovery...</i> <i>Utilization of COVID-19 Treatments and Clinical Outcomes among Patie...</i> 2% higher mortality [p=0.92]. Retrospective cancer patients, showing adjusted OR 1.03 [0.62-1.73] for H...
Jul 22 2020	<i>Kelly et al., British Journal of ...</i> <i>Clinical outcomes and adverse events in patients hospitalised with COVI...</i> 143% higher mortality [p=0.03]. Retrospective 82 hospitalized patients HCQ/AZ, 52 SOC, not finding stati...
Jul 21 2020	<i>Bernaola et al., medRxiv, doi:1...</i> <i>Observational Study of the Efficiency of Treatments in Patients Hospitali...</i> 17% lower mortality [p<0.0001]. HCQ HR 0.83 [0.77-0.89] based on propensity score matched retrospect...
Jul 20 2020	<i>Krishnan et al., J Clin Anesth.,...</i> <i>Clinical comorbidities, characteristics, and outcomes of mechanically ve...</i> 20% lower mortality [p=0.48]. Retrospective 152 mechanically ventilated patients in the USA showing un...
Jul 20 2020	<i>Desbois et al., Research Squa...</i> <i>Prevalence and clinical features of COVID-19 in a large cohort of 199 pat...</i> 17% fewer cases [p=1]. Retrospective 199 sarcoidosis patients showing non-statistically significant HC...
Jul 20 2020	<i>Risch, H., American Journal o...</i> <i>Response to: "Early Outpatient Treatment of Symptomatic, High-Risk Co...</i> Updated meta analysis including 7 new studies of high-risk outpatients, for a total of 12 studies, all sho...
Jul 18 2020	<i>Watanabe, M., arXiv.org, arXiv:...</i> <i>Efficacy of Hydroxychloroquine as Prophylaxis for Covid-19</i> Secondary analysis of Boulware et al.'s PEP trial and treatment delay-response data, confirming that HC...
Jul 19 2020	<i>McGrail et al., medRxiv, doi:10...</i> <i>COVID-19 Case Series at UnityPoint Health St. Luke's Hospital in Cedar R...</i> 70% higher mortality [p=0.69]. HCQ+AZ early in the epidemic had a fairly good success rate with few co...
Jul 17 2020	<i>Lyngbakken et al., Nature Co...</i> <i>A pragmatic randomized controlled trial reports lack of efficacy of hydro...</i> 4% lower mortality [p=1] and 71% improved viral reduction rate [p=0.51]. Small RCT of nasopharyngeal vi...
Jul 16 2020	<i>Hong et al., Infect. Chemother...</i> <i>Early Hydroxychloroquine Administration for Rapid Severe Acute Respira...</i> 65% improved viral clearance [p=0.001]. HCQ 1-4 days from diagnosis was the only protective factor ag...
Jul 16 2020	<i>Skipper et al., Annals of Intern...</i> <i>Hydroxychloroquine in Nonhospitalized Adults With Early COVID-19: A R...</i> 37% lower combined mortality/hospitalization [p=0.58], 49% lower hospitalization [p=0.38], and 20% imp...

- Jul 16 2020 **Mitjà et al., *Clinical Infectious Diseases* ...** *Hydroxychloroquine for Early Treatment of Adults with Mild Covid-19: A Randomized Trial* 16% lower hospitalization [p=0.64], 34% improved recovery [p=0.38], and 2% improved viral clearance. Th...
- Jul 15 2020 **Gupta et al., *JAMA Intern. Med.* ...** *Factors Associated With Death in Critically Ill Patients With Coronavirus Disease 2019* 6% higher mortality [p=0.41]. Analysis of 2215 intensive care unit patients showing no significant difference...
- Jul 15 2020 **Kavanagh et al., *Med. Hypotheses* ...** *Inhaled hydroxychloroquine to improve efficacy and reduce harm in the treatment of COVID-19* Proposal to use an inhaled formulation of HCQ which has passed safety studies in clinical trials for the treatment of COVID-19.
- Jul 14 2020 **Trullàs et al., *Research Square* ...** *High in-hospital mortality due to COVID-19 in a community hospital in Spain* 36% lower mortality [p=0.12]. Retrospective 100 hospitalized patients in Spain showing lower mortality ...
- Jul 14 2020 **Chowdhury et al., *Eurasian Journal of Biochemistry* ...** *A Randomized Trial of Ivermectin-Doxycycline and Hydroxychloroquine-azithromycin for COVID-19* Small 116 patient RCT comparing ivermectin+doxycycline and HCQ+AZ, not showing a significant difference...
- Jul 11 2020 **Lecronier et al., *Critical Care Medicine* ...** *Comparison of hydroxychloroquine, lopinavir/ritonavir, and standard of care for COVID-19* 42% lower mortality [p=0.24], 6% lower treatment escalation [p=0.73], and 15% improved viral clearance [p=0.001].
- Jul 10 2020 **Cravedi et al., *American Journal of Kidney Diseases* ...** *COVID-19 and kidney transplantation: Results from the TANGO International Cohort* 53% higher mortality [p=0.17]. Analysis of 144 hospitalized kidney transplant patients showing HCQ mortality...
- Jul 10 2020 **Chen et al., *PLoS ONE*, doi:10.1371/journal.pone.0236881** *A Multicenter, randomized, open-label, controlled trial to evaluate the efficacy of hydroxychloroquine for COVID-19* 24% improved viral clearance [p=0.71]. 2 very small studies with hospitalized patients in Taiwan. RCT with...
- Jul 9 2020 **Rivera-Izquierdo et al., *Medicine* ...** *Agentes terapéuticos utilizados en 238 pacientes hospitalizados por COVID-19* 19% lower mortality [p=0.75]. Retrospective 238 hospitalized patients in Spain showing lower mortality ...
- Jul 9 2020 **Raoult et al., *Preprint (Preprint)* ...** *Hydroxychloroquine and Azithromycin as a Treatment of COVID-19: Results from an Open-Label, Controlled Trial* Updated meta analysis showing significant reductions in mortality and viral shedding. Mortality OR 0.53...
- Jul 8 2020 **Marzolini et al., *Antimicrobial Agents and Chemotherapy* ...** *Effect of Systemic Inflammatory Response to SARS-CoV-2 on Lopinavir and Hydroxychloroquine Plasma Concentrations* Study of Lopinavir and HCQ plasma concentrations and CRP levels in late stage (treatment initiation me...
- Jul 8 2020 **Li et al., *Cell Death & Disease* ...** *Is hydroxychloroquine beneficial for COVID-19 patients?* Review of the anti-inflammatory, antiviral, and protective vascular effects of CQ and HCQ, noting that HCQ...
- Jul 7 2020 **Goldstein, L., *Preprint*, July 7, 2020** *Hydroxychloroquine-based COVID-19 Treatment, A Systematic Review of the Literature* 85% of globally surveyed physicians recognized HCQ as at least partially effective in treating COVID-19, ...
- Jul 7 2020 **An et al., *medRxiv*, doi:10.1101/2020.07.07.20155881** *Treatment Response to Hydroxychloroquine and Antibiotics for mild to moderate COVID-19*

		3% faster viral clearance [p=0.92]. Retrospective of hospitalized patients with 31 HCQ patients and 195 s...
Jul 3 2020	Derwand et al., International J...	COVID-19 Outpatients – Early Risk-Stratified Treatment with Zinc Plus L... 79% lower mortality [p=0.12] and 82% lower hospitalization [p=0.001]. 79% lower mortality and 82% low...
Jul 3 2020	Zhong et al., Lancet Rheuma...	COVID-19 in patients with rheumatic disease in Hubei province, China: a ... 91% fewer cases [p=0.04]. Rheumatic disease patients on HCQ had a lower risk of COVID-19 than those ...
Jul 7 2020	Arshad et al., Int. J. Infect. Dis...	Treatment with Hydroxychloroquine, Azithromycin, and Combination in P... 51% lower mortality [p=0.009]. HCQ decreases mortality from 26.4% to 13.5% (HCQ) or 20.1% (HCQ+AZ)...
Jul 7 2020	Samuel et al., Heart Rhythm, ...	Incidence of arrhythmias and electrocardiographic abnormalities in sym... In pediatric patients with PCR positive active COVID-19 infection, significant arrhythmias are infrequent, ...
Jun 30 2020	Martinez-Lopez et al., Blood C...	Multiple Myeloma and SARS-CoV-2 Infection: Clinical Characteristics an... 33% lower mortality [p=0.2]. Retrospective 167 multiple myeloma patients in Spain, showing no signfica...
Jun 30 2020	Mikami et al., J. Gen. Intern. ...	Risk Factors for Mortality in Patients with COVID-19 in New York City 47% lower mortality [p<0.0001]. HCQ decreases mortality, HR 0.53 (CI 0.41–0.67). IPTW adjustment doe...
Jun 30 2020	Komissarov et al., medRxiv, d...	Hydroxychloroquine has no effect on SARS-CoV-2 load in nasopharynx o... 25% worse viral load [p=0.45]. Small late stage (7-10 days post symptoms) study of nasal swab RNA wit...
Jun 29 2020	Sosa-García et al., Cir Cir. 202...	Experience in the management of severe COVID-19 patients in an intensi... 11% higher mortality [p=1]. Small retrospective study of 56 ICU patients in Mexico showing HCQ RR 1.1, ...
Jun 29 2020	Ferreira et al., J. Medical Virol...	Chronic treatment with hydroxychloroquine and SARS-CoV-2 infection 47% fewer cases [p<0.0001]. Chronic treatment with HCQ provides protection against COVID, odds ratio ...
Jun 29 2020	Mfeukeu-Kuate et al. (Preprint)	Electrocardiographic safety of daily Hydroxychloroquine 400mg plus Azi... No life-threatening modifications of the QT interval was observed in non-severe COVID-19 patients treat...
Jun 25 2020	Gendebien et al., Annals of th...	Systematic analysis of COVID-19 infection and symptoms in a systemic ... 4% fewer cases [p=0.93]. Small study of SLE patients taking HCQ with a phone survey for COVID-19 sug...
Jun 25 2020	Lagier et al., Travel Med. Infec...	Outcomes of 3,737 COVID-19 patients treated with hydroxychloroquine/... 59% lower mortality [p=0.05]. Early treatment leads to significantly better clinical outcome and faster vir...
Jun 23 2020	Bousquet et al., Aging, 12:12, ...	ADL-dependency, D-Dimers, LDH and absence of anticoagulation are ind... 43% lower mortality [p=0.15]. Observational prospective 108 hospitalized patients 65 and older, showing...

- Jun 22 2020 *Isaksen et al., medRxiv, doi:10...* Chloroquine, but not hydroxychloroquine, prolongs the QT interval in a pri... Safety analysis in patients without COVID-19, finding a small increase in QTc associated with use of CQ, ...
- Jun 22 2020 *Fontana et al., Clinical Kidney ...* SARS-CoV-2 infection in dialysis patients in northern Italy: a single-centr... 50% lower mortality [p=0.53]. Very small observational study of 15 dialysis patients showing HCQ morta...
- Jun 22 2020 *Chen et al., medRxiv, doi:10.1...* Efficacy and safety of chloroquine or hydroxychloroquine in moderate ty... 20% faster recovery [p=0.51] and 71% faster viral clearance [p=0.0004]. RCT 48 hospitalized patients in ...
- Jun 21 2020 *Faico-Filho et al., Braz J Micro...* No benefit of hydroxychloroquine on SARS-CoV-2 viral load reduction in ... 81% improved viral reduction rate [p=0.4]. Viral load comparison for 34 HCQ and 32 control patients hos...
- Jun 19 2020 *SMSH Sawai Man Singh Hosp...* HCQ beneficial as preventive drug: SMS doctors told ICMR PrEP with 4,300 very high risk healthcare workers in a hospital with up to 500+ COVID patients at a time,...
- Jun 19 2020 *NIH, study not available yet (N...* NIH halts clinical trial of hydroxychloroquine NIH halts late stage trial reporting no harm and no benefit. 470 patients.
- Jun 19 2020 *Sbidian et al., medRxiv, doi:10...* Hydroxychloroquine with or without azithromycin and in-hospital mortali... 5% higher mortality [p=0.74] and 20% higher hospital discharge [p=0.002]. Retrospective of 4,642 hospit...
- Jun 19 2020 *Kaptein et al., bioRxiv, doi:10...* Favipiravir at high doses has potent antiviral activity in SARS-CoV-2-infe... Animal study with Syrian hamsters, showing treatment of SARS-CoV-2-infected hamsters with favipiravi...
- Jun 18 2020 *Paccoud et al., Clinical Infecti...* Compassionate use of hydroxychloroquine in clinical practice for patient... 11% lower mortality [p=0.88]. Retrospective of 89 hospitalized patients, survival HR 0.89 [0.23-3.47], not ...
- Jun 17 2020 *Capucci et al., J. Cardiovasc. ...* Low hospitalization rate without severe arrhythmias: a prospective surve... Prospective analysis of early treatment of 350 patients in Italy (without waiting for PCR results), showin...
- Jun 17 2020 *Xue et al., J. Med. Virology, Ju...* Hydroxychloroquine treatment in COVID-19: a descriptive observational ... 30 hospitalized patients. Early use of HCQ is more effective, 43% reduction in progression from moderat...
- Jun 17 2020 *Luo et al., Annals of Oncology,...* COVID-19 in patients with lung cancer 2% higher mortality [p=0.99]. Analysis of hospitalized lung cancer patients with 35 of 48 taking HCQ, mo...
- Jun 16 2020 *Kim et al., Korean J Intern Me...* Lopinavir-ritonavir versus hydroxychloroquine for viral clearance and clin... Small retrospective study of hospitalized patients with 31 lopinavir-ritonavir and 34 HCQ patients, HCQ 4...
- Jun 16 2020 *Huang et al., Annals of the Rh...* Clinical characteristics of 17 patients with COVID-19 and systemic autoi...

		80% lower hospitalization [p=0.001]. Analysis of 1255 COVID-19 patients in Wuhan Tongji Hospital findin...
Jun 12 2020	Scherrmann, AAPS J 22, 86 (2...	<i>Intracellular ABCB1 as a Possible Mechanism to Explain the Synergistic ...</i> Proposes a new mechanism supporting the synergistic interaction between HCQ+AZ.
Jun 12 2020	Giacomelli et al., Journal of M...	<i>Early administration of lopinavir/ritonavir plus hydroxychloroquine does ...</i> Late stage study of hospitalized patients comparing treatment starting within 5 days versus later. Note t...
Jun 10 2020	Wang et al., medRxiv, doi:10.1...	<i>Comorbidity and Sociodemographic determinants in COVID-19 Mortality...</i> 6% lower mortality [p=0.63]. Database analysis of 7,592 patients in NYC, showing adjusted HCQ mortalit...
Jun 10 2020	Otea et al., medRxiv, doi:10.11...	<i>A short therapeutic regimen based on hydroxychloroquine plus azithrom...</i> 80 moderate cases, HCQ+AZ appears to reduce serious complications and death. Moderate treated cas...
Jun 9 2020	Pirnay et al., Hosp. Pharm. an...	<i>Beneficial effect of Hydroxychloroquine-Azithromycin combination in the...</i> 68 very high risk nursing home residents, median age 86, HCQ+AZ early treatment within 2.5 days onset...
Jun 9 2020	Bhattacharya et al., medRxiv, ...	<i>Pre exposure Hydroxychloroquine use is associated with reduced COVID...</i> 81% fewer cases [p=0.001]. HCQ reduced cases from 38% to 7%. 106 people. No serious adverse effects.
Jun 6 2020	Roussel et al., New Microbes ...	<i>Influence of conflicts of interest on public positions in the COVID-19 era, ...</i> Shows a correlation (Spearman test, $p = 0.017$) between the amount received from Gilead Sciences and ...
Jun 6 2020	Million et al., New Microbes a...	<i>Clinical Efficacy of Chloroquine derivatives in COVID-19 Infection: Comp...</i> [H]CQ effective and reduces mortality by a factor 3. Meta analysis of 20 studies.
Jun 5 2020	RECOVERY Collaborative Gro...	<i>Effect of Hydroxychloroquine in Hospitalized Patients with COVID-19: Pr...</i> 9% higher mortality [p=0.15] and 15% higher ventilation [p=0.19]. RECOVERY trial finds no significant be...
Jun 3 2020	Boulware et al., NEJM, June 3...	<i>A Randomized Trial of Hydroxychloroquine as Postexposure Prophylaxis...</i> 17% fewer cases [p=0.35]. Remote post-exposure prophylaxis RCT reporting "[HCQ] did not prevent illne...
Jun 1 2020	Al-Kofahi et al., Clin. Pharmac...	<i>Finding the Dose for Hydroxychloroquine Prophylaxis for COVID-19: The ...</i> Analysis of HCQ dosing regimens, recommending: PrEP: 800mg loading dose followed by 400mg 2 or 3 ...
May 31 2020	Guérin et al., Asian J. Medicin...	<i>Azithromycin and Hydroxychloroquine Accelerate Recovery of Outpatien...</i> 65% faster recovery [p=0.0001]. Mean clinical recovery time reduced from 26 days (SOC) to 9 days, $p < 0...$
May 29 2020	Rogado et al., Lung Cancer, d...	<i>Covid-19 and lung cancer: A greater fatality rate?</i> 92% lower mortality [p=0.02]. Retrospective 17 hospitalized lung cancer patients showing lower mortalit...

- May 28 2020 *Chamieh et al., medRxiv 2020...* *Viral Dynamics Matter in COVID-19 Pneumonia: the success of early trea...*
HCQ+AZ potentially explains 94.7% success in treating a fairly complex cohort.
- May 28 2020 *Chatterjee et al., Indian J. Me...* *Healthcare workers & SARS-CoV-2 infection in India: A case-control inve...*
67% fewer cases [p=0.001]. 4+ doses of HCQ associated with a significant decline in the odds of getting...
- May 28 2020 *Huang et al., National Science...* *Preliminary evidence from a multicenter prospective observational study...*
67% faster viral clearance [p=0.0001]. 197 CQ patients, 176 control. Mean time to undetectable viral RN...
- May 27 2020 *Goldman et al., NEJM, doi:10....* *Remdesivir for 5 or 10 Days in Patients with Severe Covid-19*
22% lower mortality [p=0.46]. Study focused on remdesivir but with results for HCQ in the supplementar...
- May 28 2020 *Kuderer et al., Lancet, June 2...* *Clinical impact of COVID-19 on patients with cancer (CCC19): a cohort s...*
134% higher mortality [p<0.0001]. Retrospective 928 cancer patients, showing HCQ OR 1.06 [0.51-2.20]. ...
- May 28 2020 *Gianfrancesco et al., Annals o...* *Characteristics associated with hospitalisation for COVID-19 in people w...*
3% lower hospitalization [p=0.82]. Analysis of rheumatic disease patients showing no significant associ...
- May 27 2020 *Risch, American Journal of E...* *Early Outpatient Treatment of Symptomatic, High-Risk Covid-19 Patients...*
Five studies, including two controlled clinical trials, have demonstrated significant outpatient treatment ...
- May 25 2020 *Ip et al., PLoS ONE, doi:10.137...* *Hydroxychloroquine and Tocilizumab Therapy in COVID-19 Patients - An ...*
1% lower mortality [p=0.93]. Retrospective study of late stage use on 2,512 hospitalized patients showin...
- May 24 2020 *Hraiech et al., Ann. Intensive ...* *Lack of viral clearance by the combination of hydroxychloroquine and az...*
65% lower mortality [p=0.21] and 3% worse viral clearance [p=1]. Retrospective 45 ICU patients, 17 treat...
- May 22 2020 *ICMR, Indian Council of Medic...* *Revised advisory on the use of Hydroxychloroquine (HCQ) as prophylaxi...*
Healthcare workers on HCQ prophylaxis less likely to get COVID. Significant dose-response relationship. ...
- May 22 2020 *Mehra et al., The Lancet, May ...* *Hydroxychloroquine or chloroquine with or without a macrolide for treat...*
Incorrect at first read (implausible death, ventilation, and population numbers). This paper was retracted.
- May 21 2020 *Luo et al., The American Jour...* *Metformin Treatment Was Associated with Decreased Mortality in COVI...*
32% lower mortality [p=0.72]. Retrospective 283 COVID-19+ diabetes patients in China, showing non-sta...
- May 19 2020 *Singh et al., medRxiv, doi:10.1...* *Outcomes of Hydroxychloroquine Treatment Among Hospitalized COVID...*
5% lower mortality [p=0.72] and 19% lower ventilation [p=0.26]. EHR analysis of 3,372 hospitalized COVI...
- May 18 2020 *Kim et al., medRxiv, doi:10.11...* *Treatment Response to Hydroxychloroquine, Lopinavir/Ritonavir, and An...*

	51% shorter hospitalization [p=0.01] and 56% faster viral clearance [p=0.005]. Retrospective of 97 moder...
May 18 2020	<i>Ahmad et al., doi:10.1101/20...</i> Doxycycline and Hydroxychloroquine as Treatment for High-Risk COVID-... 54 patients in long term care facilities. 6% death with HCQ+AZ compared to 22% using a naive indirect c...
May 16 2020	<i>Macias et al., medRxiv, 10.11...</i> Similar incidence of Coronavirus Disease 2019 (COVID-19) in patients wi... 26% lower hospitalization [p=1] and 49% more cases [p=0.53]. Very small retrospective study of rheuma...
May 15 2020	<i>Yu et al., Science China Life S...</i> Low Dose of Hydroxychloroquine Reduces Fatality of Critically Ill Patient... 60% lower mortality [p=0.002]. Retrospective, 550 critically ill patients. 19% fatality for HCQ versus 47% f...
May 14 2020	<i>Mahévas et al., BMJ 2020, 36...</i> Clinical efficacy of hydroxychloroquine in patients with covid-19 pneumo... 20% higher mortality [p=0.75]. Observational study of 181 patients with advanced disease requiring oxy...
May 13 2020	<i>Okour et al., Journal of Pharm...</i> Hydroxychloroquine and azithromycin as potential treatments for COVID... Odds of PCR-positive decrease by 53% for each unit increase in HCQ log-concentration. Similarly, the od...
May 12 2020	<i>Cassione et al., Annals of the ...</i> COVID-19 infection in a northern-Italian cohort of systemic lupus erythe... 50% more cases [p=0.59]. Survey of 165 SLE patients, 127 on HCQ. 8 patients with suspected COVID-19...
May 11 2020	<i>Shabrawishi et al., medRxiv, d...</i> Negative nasopharyngeal SARS-CoV-2 PCR conversion in response to di... 15% improved viral clearance [p=0.66]. Retrospective 93 hospitalized patients in Saudi Arabia showing a ...
May 11 2020	<i>Rosenberg et al., JAMA, May ...</i> Association of Treatment With Hydroxychloroquine or Azithromycin With... 35% higher mortality [p=0.31]. Restrospective observational late stage study showing no significant diff...
May 10 2020	<i>Alberici et al., Kidney Int., 98:1...</i> A report from the Brescia Renal COVID Task Force on the clinical charac... 43% lower mortality [p=0.12]. Analysis of 94 hemodialysis COVID-19 positive patients, showing lower m...
May 8 2020	<i>Grassin-Delyle et al., Clinical I...</i> Chloroquine Inhibits the Release of Inflammatory Cytokines by Human L... On human lung parenchymal explants, CQ concentration clinically achievable in the lung (100µM) inhibit...
May 8 2020	<i>Carlucci et al., J. Med. Microbi...</i> Zinc sulfate in combination with a zinc ionophore may improve outcome... Retrospective 932 patients showing that the addition of zinc to HCQ+AZ reduced mortality / transfer to ...
May 7 2020	<i>Konig et al., Annals of the Rhe...</i> Baseline use of hydroxychloroquine in systemic lupus erythematosus do... 3% lower hospitalization [p=0.88]. Analysis of 80 SLE patients diagnosed with COVID-19, showing the fre...
May 7 2020	<i>Derendorf, H., Int. J. Antimicr...</i> Excessive lysosomal ion-trapping of hydroxychloroquine and azithromycin Discusses pharmacokinetic properties of HCQ+AZ as a potential underlying mechanism of the observe...

May 7 2020	<i>Geleris et al., NEJM, May 7, 2020</i>	<i>Observational Study of Hydroxychloroquine in Hospitalized Patients with COVID-19</i> 4% higher combined mortality/intubation [p=0.76]. Before propensity matching, 38 control patients had ...
May 7 2020	<i>Sermo (News)</i>	<i>Sermo reports: COVID-19 treatment trends over 6 weeks and 33,700 interviews</i> HCQ used by 55% of physicians worldwide for COVID. Survey of 6,150 physicians.
May 6 2020	<i>Maisonnette et al., Nature, 2020</i>	<i>Hydroxychloroquine use against SARS-CoV-2 infection in non-human primates</i> Monkey study which reports no effect of HCQ or HCQ+AZ. However, there are several signs of effectiveness...
May 5 2020	<i>Membrillo de Novales et al., PLoS One, 2020</i>	<i>Early Hydroxychloroquine Is Associated with an Increase of Survival in COVID-19 Patients</i> 55% lower mortality [p=0.002]. 166 patients hospitalised with COVID-19, HCQ increased survival 1.4 - 1.8...
May 5 2020	<i>Million et al., Travel Med Infect Dis, 2020</i>	<i>Early Treatment of COVID-19 Patients With Hydroxychloroquine and Azithromycin</i> Retrospective 1061 patients. HCQ+AZ safe and results in a low fatality rate.
May 5 2020	<i>Gendelman et al., Autoimmun Rev, 2020</i>	<i>Continuous Hydroxychloroquine or Colchicine Therapy Does Not Prevent COVID-19 Infection</i> 8% fewer cases [p=0.88]. Very small study of rheumatic disease/autoimmune disorder patients showing...
May 5 2020	<i>Mitchell et al., SSRN, doi:10.21203/rs.3.rs-321111/v1, 2020</i>	<i>Markedly Lower Rates of Coronavirus Infection and Fatality in Malaria-Exposed Populations</i> 99% lower mortality [p=0.0001]. Analysis of COVID-19 amongst 2.4B people shows a wide counterintuitive...
May 2 2020	<i>Mallat et al., Medicine (Baltimore), 2020</i>	<i>Hydroxychloroquine is associated with slower viral clearance in clinical COVID-19 patients</i> 203% slower viral clearance [p=0.02]. Very small retrospective analysis of 34 patients finding slower bin...
May 7 2020	<i>Mercuro et al., JAMA Cardiol., 2020</i>	<i>Risk of QT Interval Prolongation Associated With Use of Hydroxychloroquine in COVID-19 Patients</i> Study of 90 hospitalized patients given HCQ, 53 also receiving AZ, 53% hypertension, 29% diabetes mellitus...
May 7 2020	<i>Bessière et al., JAMA Cardiol., 2020</i>	<i>Assessment of QT Intervals in a Case Series of Patients With Coronavirus Disease 2019</i> Study of 40 very serious condition ICU patients, 75% required invasive mechanical ventilation, 63% received...
May 2 2020	<i>Seydi (News)</i>	<i>Coronavirus: a study in Senegal confirms the effectiveness of hydroxychloroquine</i> Preliminary results of Senegal trial with 181 patients showing faster recovery with HCQ, and even faster...
Apr 30 2020	<i>Meo et al., Eur. Rev. Med. Pharmacol., 2020</i>	<i>Efficacy of chloroquine and hydroxychloroquine in the treatment of COVID-19</i> Analysis of COVID-19 and malaria, finding that COVID-19 is highly pandemic in countries where malaria is...
Apr 27 2020	<i>Sánchez-Álvarez et al., Nefrol., 2020</i>	<i>Status of SARS-CoV-2 infection in patients on renal replacement therapy</i> 46% lower mortality [p=0.005]. Analysis of 868 patients on renal replacement therapy. Statistically significant...
Apr 29 2020	<i>Saleh et al., Circulation: Arrhythmia and Electrophysiology, 2020</i>	<i>The Effect of Chloroquine, Hydroxychloroquine and Azithromycin on the Efficacy of COVID-19 Treatment</i> Retrospective study of 1061 patients. HCQ+AZ safe and results in a low fatality rate.

201 hospitalized patients. No serious side effects of HCQ. No instances of Torsade de pointes, or arrhyt...

Apr 27
2020

Klimke et al., Med. Hypothese... Hydroxychloroquine as an aerosol might markedly reduce and even prev...
Proposal to use HCQ as an aerosol in order to reach sufficient therapeutic levels at the alveolar epithelial...

Apr 26
2020

Auld et al., Critical Care Medic... ICU and ventilator mortality among critically ill adults with COVID-19
3% higher mortality [p=1]. Retrospective 217 critically ill patients, 114 receiving HCQ, showing no signific...

Apr 25
2020

Andreani et al., Microbial Path... In vitro testing of combined hydroxychloroquine and azithromycin on SA...
In Vitro study showing that HCQ and AZ have a synergistic effect on SARS-CoV-2 at concentrations com...

Apr 24
2020

Ashraf et al., medRxiv doi:10.... COVID-19 in Iran, a comprehensive investigation from exposure to treat...
68% lower mortality [p=0.15]. Small limited trial with 100 patients concluding that HCQ improved clinical...

Apr 21
2020

Izoulet M., SSRN, doi:10.2139... Countries which Primarily Use Antimalarial Drugs As COVID-19 Treatme...
85% lower mortality [p=0.001]. Compares the dynamics of daily deaths in the 10 days following the 3rd ...

Apr 21
2020

Magagnoli et al., Med (2020), ... Outcomes of hydroxychloroquine usage in United States veterans hospit...
11% lower mortality [p=0.74]. Retrospective 807 hospitalized patients, no statistically significant reducti...

Apr 17
2020

Lee at al., Int. J. Antimicrob. A... Can Post-Exposure Prophylaxis for COVID-19 Be Considered as an Outbr...
Post exposure prophylaxis of 211 high-risk people after major exposure event in a long term care hospit...

Apr 16
2020

Borba et al., JAMA Network O... Chloroquine diphosphate in two different dosages as adjunctive therapy ...
Comparison of typical CQ dosage with high dosage CQ (600mg CQ twice daily for 10 days), showing hig...

Apr 15
2020

Esper et al., Prevent Senior In... Empirical treatment with hydroxychloroquine and azithromycin for susp...
64% lower hospitalization [p=0.02]. 636 patients. HCQ+AZ reduced hospitalization 79% when used withi...

Apr 15
2020

Brufsky, A., J. Medical Virolog... Hyperglycemia, hydroxychloroquine, and the COVID-19 pandemic
Theory on the effectiveness of HCQ. HCQ has been shown to block the polarization of macrophages to ...

Apr 14
2020

Tang et al., BMJ 2020, 369, do... Hydroxychloroquine in patients with mainly mild to moderate coronaviru...
21% improved viral clearance [p=0.51]. 150 patients very late stage RCT showing no significant differenc...

Apr 13
2020

Gao et al., Biosci Trends, May ... Update on Use of Chloroquine/Hydroxychloroquine to Treat Coronavirus ...
Increasing evidence from completed clinical studies shows CQ and HCQ effective (HCQ more effective).

Apr 12
2020

Barbosa et al., Preprint (Prepri... Clinical outcomes of hydroxychloroquine in hospitalized patients with C...
147% higher mortality [p=0.58]. Small retrospective study with 63 patients (32 treated with HCQ), showi...

Apr 11 2020	<i>Gautret et al., Travel Medicine ...</i> <i>Clinical and microbiological effect of a combination of hydroxychloroqui...</i> Pilot study suggesting improvement with HCQ+AZ and recommending further study. 80 patients with re...
Apr 10 2020	<i>Lover, medRxiv, doi:10.1101/2...</i> <i>Quantifying treatment effects of hydroxychloroquine and azithromycin f...</i> Secondary analysis of Gautret et al. showing "modest to no impact of HCQ treatment, with more signific...
Apr 6 2020	<i>Derwand et al., Medical Hypot...</i> <i>Does zinc supplementation enhance the clinical efficacy of chloroquine/...</i> Hypothesis that HCQ/CQ + zinc will be more effective than HCQ/CQ alone for COVID-19.
Apr 3 2020	<i>Fantini et al., Int J Antimicrob ...</i> <i>Structural and molecular modelling studies reveal a new mechanism of ...</i> <i>In Silico</i> analysis confirming the antiviral properties of CQ, showing a new mechanism of action of CQ, a...
Apr 1 2020	<i>Huang et al., Journal of Molec...</i> <i>Treating COVID-19 with Chloroquine</i> 92% improved recovery [p=0.02] and 83% lower pneumonia [p=0.22]. 22 patients. All CQ patients dischar...
Mar 31 2020	<i>Chen et al., medRxiv doi:10.11...</i> <i>Efficacy of hydroxychloroquine in patients with COVID-19: results of a ra...</i> 57% lower pneumonia [p=0.04]. 62 patients. RCT showing significantly faster recovery with HCQ. 13% pr...
Mar 31 2020	<i>Clementi et al., Front. Microbi...</i> <i>Combined Prophylactic and Therapeutic Use Maximizes Hydroxychloroq...</i> <i>In Vitro</i> study showing greater inhibition for combined pre and post-exposure treatment for Vero E6 and ...
Mar 28 2020	<i>Molina et al., Médecine et Mal...</i> <i>No evidence of rapid antiviral clearance or clinical benefit with the combi...</i> Report on 11 patients treated with HCQ with no control group. Authors suggest there is no evidence of b...
Mar 26 2020	<i>Zhong Nanshan (钟南山) (Pre...</i> <i>Efficacy and safety of chloroquine for treatment of COVID-19. An open-la...</i> 80% improved viral clearance [p=0.0001]. 197 patients. CQ effective. Day 10 viral RNA negative 91.4% H...
Mar 24 2020	<i>Pagliano et al., Clin. Infect. Di...</i> <i>Is Hydroxychloroquine a Possible Post-Exposure Prophylaxis Drug to Li...</i> CQ and HCQ inhibit replication at early stages of infection, no similar effect reported for other drugs whi...
Mar 23 2020	<i>Hu et al., Nature Nanotechnol...</i> <i>Insights from nanomedicine into chloroquine efficacy against COVID-19</i> CQ is known in nanomedicine research for the investigation of nanoparticle uptake in cells, and may hav...
Mar 21 2020	<i>ICMR, Indian Council of Medic...</i> <i>Advisory on the use of hydroxy-chloroquine as prophylaxis for SARS-Co...</i> Recommends HCQ for prophylaxis in asymptomatic healthcare workers as found effective in-vitro and i...
Mar 20 2020	<i>Hu et al., Shanghai Combined ...</i> <i>Shanghai Experience of COVID-19 Management</i> Clinical studies of HCQ with 184 cases and 21 hospitals show HCQ is effective.
Mar 18 2020	<i>Liu et al., Cell Discovery 6, 16 ...</i> <i>Hydroxychloroquine, a less toxic derivative of chloroquine, is effective in ...</i>

	<i>In Vitro</i> study showing that HCQ is effective <i>in vitro</i> and less toxic than CQ. In addition to direct antiviral ...
Mar 17 2020	Gautret et al., Int. J. of Antimi... <i>Hydroxychloroquine and azithromycin as a treatment of COVID-19: resul...</i> 66% improved viral clearance [p=0.001]. HCQ was significantly associated with reduction / elimination o...
Mar 17 2020	Sahraei et al., Int. J. Antimicro... <i>Aminoquinolines against coronavirus disease 2019 (COVID-19): chloroq...</i> Discussion of mechanisms of action, CQ vs. HCQ, early studies, safety.
Mar 13 2020	Todaro and Rigano (Review) (... <i>An Effective Treatment for Coronavirus (COVID-19)</i> Discussion of existing research, treatment guidelines, and mechanisms of action for CQ and HCQ, reco...
Mar 12 2020	Devaux et al., International Jo... <i>New insights on the antiviral effects of chloroquine against coronavirus: ...</i> Discusses mechanisms of CQ interference with the SARS-CoV-2 replication cycle.
Mar 10 2020	Cortegiani et al., J. Crit. Care, ... <i>A Systematic Review on the Efficacy and Safety of Chloroquine for the Tr...</i> Review of six articles and 23 ongoing clinical trials in China recommending research and clinical use ad...
Mar 9 2020	Yao et al., Clin. Infect. Dis., 20... <i>In Vitro Antiviral Activity and Projection of Optimized Dosing Design of H...</i> <i>In Vitro</i> study showing that HCQ is more potent than CQ <i>in vitro</i> for inhibiting SARS-CoV-2. Simulates HC...
Mar 6 2020	Chen et al., J. Zhejiang Univer... <i>A pilot study of hydroxychloroquine in treatment of patients with commo...</i> 29% lower progression [p=0.57] and 100% worse viral clearance [p=1]. 30 moderate hospitalized cases, ...
Mar 4 2020	Colson et al., Int J. Antimicrob... <i>Chloroquine and Hydroxychloroquine as Available Weapons to Fight CO...</i> Recommending CQ and HCQ for COVID-19 based on 20 clinical studies in China and a strong rationale f...
Feb 20 2020	Jiang et al., Chin. J. Tuberc. R... <i>Expert Consensus on Chloroquine Phosphate for the Treatment of Novel...</i> Early trials in China show CQ results in shorter hospital stays and improved patient outcomes.
Feb 19 2020	Gao et al., BioScience Trends, ... <i>Breakthrough: Chloroquine phosphate has shown apparent efficacy in tr...</i> Results from 15 clinical trials in China showing CQ is effective.
Feb 17 2020	Sun, Y., deputy head of the Chi... <i>Antimalarial drug confirmed effective on COVID-19</i> HCQ under clinical trials in >10 hospitals in China and has shown fairly good efficacy.
Feb 11 2020	Xia et al., ChiCTR2000029741... <i>Efficacy of Chloroquine and Lopinavir/ Ritonavir in mild/general novel co...</i> 38% improved viral clearance [p=0.17]. Early results from a very small trial, reported within the applicatio...
Feb 4 2020	Wang et al., Cell Res. 30, 269... <i>Remdesivir and chloroquine effectively inhibit the recently emerged nove...</i> <i>In Vitro</i> study showing that Remdesivir and CQ potently blocked SARS-CoV-2 infection.

Nov 23 2017	<i>Chhonker et al., Journal of Ch...</i>	<i>Simultaneous quantitation of hydroxychloroquine and its metabolites in ...</i> Presents a method for quantification of HCQ in mouse blood and tissues. They show a lung concentrati...
Apr 4 2014	<i>Browning, D., Pharmacology o...</i>	<i>Pharmacology of Chloroquine and Hydroxychloroquine</i> Review of the pharmacology of CQ and HCQ. Some notable points: - HCQ and CQ are equipotent but CQ...
Jul 15 2014	<i>de Wilde et al., Antimicrobial ...</i>	<i>Screening of an FDA-Approved Compound Library Identifies Four Small-...</i> CQ inhibits SARS-CoV, MERS-CoV, and HCoV-229E-GFP replication in the low-micromolar range.
Dec 4 2012	<i>Yan et al., Cell Research, 23, 3...</i>	<i>Anti-malaria drug chloroquine is highly effective in treating avian influenz...</i> CQ, a known autophagy inhibitor that is in clinical use, can efficiently ameliorate acute lung injury and dr...
Aug 7 2009	<i>Keyaerts et al., Antimicrob. Ag...</i>	<i>Antiviral Activity of Chloroquine against Human Coronavirus OC43 Infect...</i> CQ inhibits HCoV-OC43 replication in HRT-18 cells. A lethal HCoV-OC43 infection in newborn C57BL/6 m...
Dec 4 2007	<i>Kono et al., Antiviral Research,...</i>	<i>Inhibition of human coronavirus 229E infection in human epithelial lung ...</i> CQ significantly decreased viral replication of HCoV-229E at concentrations lower than in clinical usage. ...
Feb 7 2006	<i>Savarino et al., Lancet Infect. ...</i>	<i>New insights into the antiviral effects of chloroquine</i> Update to 2003 paper. Hypothesis of CQ inhibiting SARS replication has been confirmed in two in-vitro s...
Oct 22 2005	<i>Vincent et al., Virol. J. 2:69, 20...</i>	<i>Chloroquine is a potent inhibitor of SARS coronavirus infection and spre...</i> In Vitro study for SARS-CoV-1. CQ has strong antiviral effects on SARS CoV infection when cells treated ...
Aug 28 2004	<i>Keyaerts et al., Biochem. Biop...</i>	<i>In vitro inhibition of severe acute respiratory syndrome coronavirus by c...</i> In Vitro study for SARS-CoV-1. IC ₅₀ of CQ for antiviral activity (8.8) is significantly lower than cytostatic a...
Nov 7 2003	<i>Savarino et al., Lancet Infect. ...</i>	<i>Effects of chloroquine on viral infections: an old drug against today's dis...</i> Discussion/review noting that CQ exerts antiviral effects, inhibiting the replication of several viruses incl...
Dec 27 1918	<i>Burrows, E., Medical Record, ...</i>	<i>A confirmatory report upon the abortive action of quinine dihydrochloride</i> Quinine was found to be effective for the Spanish Flu in 1918.
Jan 7 1901	<i>Yeo, B., 1901</i>	<i>A manual of medical treatment or clinical therapeutics</i> Quinine is referred to as "the remedy that is most deserving of confidence in the treatment of influenza".
Nov 3 1894	<i>Mossé, Lancet, Nov 3, 1894</i>	<i>Pathogenesis and Treatment of Influenza</i> Lancet study showing quinine protected rabbits from influenza and recommending use for prophylaxis ...
Jan 7 1890	<i>Le Grelot (News)</i>	<i>Quinine use for the Russian influenza pandemic of 1889-1890</i>

Quinine and antipyrine, a bitherapy for defying death during the Russian influenza pandemic of 1889-18...

Jan 7
1889

Edwin Wiley Grove (News) Laxative Bromo Quinine



Quinine was considered effective for respiratory infections as early as 1889.

For search methods, inclusion criteria, effect extraction criteria (more serious outcomes have priority), PRISMA answers, and statistical methods see methods. Meta, Theory, Safety, Review, News, and Retracted items are not included in the study count. There is a total of 563 items. Studies with preprints and journal versions are listed under the earlier preprint date.

Please send us corrections, updates, or comments. Vaccines and treatments are complementary. All practical, effective, and safe means should be used based on risk/benefit analysis. No treatment, vaccine, or intervention is 100% available and effective for all current and future variants. We do not provide medical advice. Before taking any medication, consult a qualified physician who can provide personalized advice and details of risks and benefits based on your medical history and situation. [FLCCC](#) and [WCH](#) provide treatment protocols.

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