

Global HCQ/CQ studies

September 3, 2023

@CovidAnalysis

551 HCQ COVID-19 studies, 425 peer reviewed, 408 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: [Shu-Han Lin](#) [Wen](#) [Afşin](#) [de Reus](#) [White](#) [Connor](#) [Okasha](#). HCQ/CQ was [adopted](#) in all or part of 42 countries (57 including non-government medical organizations). [Submit updates/corrections](#).

HCQ

All

Aug 29

Covid Analysis

HCQ for COVID-19: real-time meta analysis of 408 studies

Early treatment shows 62% [53-70%] improvement with pooled effects in 38 studies. Results are similar for hi...

Aug 28

Zhou et al., BMJ Open Respir...

Repurposed drug studies on the primary prevention of SARS-CoV-2 infec...

Meta analysis with many errors/limitations/biases, including many missing studies, use of unadjusted results, ...

Aug 15

Shu-Han Lin et al., Journal of ...

Inhalable Chitosan-Based Hydrogel as a Mucosal Adjuvant for Hydroxych...

Hamster study showing intranasal administration of HCQ + chitosan oligosaccharide (COS) resulted in higher ...

Aug 11

Alsmadi et al., AAPS PharmSc...

The In Vitro, In Vivo, and PBPK Evaluation of a Novel Lung-Targeted Cardi...

Analysis of a novel inhaled formulation of HCQ showing sustained drug release, higher lung bioavailability, long...

Aug 5

Chaudhary et al., Scientific Re...

Impact of prophylactic hydroxychloroquine on ultrastructural impairment...

Ex vivo analysis of HCQ showing preferential protection for early target cell types in the lung, consistent with th...

Aug 7

Afşin et al., Acta Clinica Croat...

Factors affecting prognosis and mortality in severe COVID-19 pneumoni...

17% lower mortality (p=0.5). Retrospective 80 hospitalized severe COVID-19 patients in Turkey, showing no sig...

Jul 31

Ganesh et al., CMAJ Open, d...

Patient-reported outcomes of neurologic and neuropsychiatric symptom...

37% improvement (p=0.15). Long term neurologic and neuropsychiatric followup for a 7 day delayed treatment...

Jul 25

Wen et al., Journal of Molecul...

Cholinergic $\alpha 7$ nAChR signaling suppresses SARS-CoV-2 infection and in...

In Vitro and mouse study showing that activating $\alpha 7$ nAChR with the agonist GTS-21 reduced oxidative stress ...

- Jul 17 Shamsi et al., *Canadian Journ...* **Survival and Mortality in Hospitalized Children with COVID-19: A Referral ...**
39% higher mortality ($p=0.51$). Retrospective 183 hospitalized pediatric COVID-19 patients in Iran, showing no ...
- Jul 12 Kamga Kapchoup et al., *Front...* **In vitro effect of hydroxychloroquine on pluripotent stem cells and their c...**
In vitro study of HCQ with mouse and human pluripotent stem cells and their cardiomyocyte derivatives. Result...
- Jul 1 Klebanov et al., *Journal of Dr...* **Antimalarials are not Effective as Pre-Exposure Prophylaxis for COVID-19...**
31% lower mortality ($p=0.8$) and 6% more cases ($p=0.7$). Retrospective 3,074 patients with antimalarial prescri...
- Jun 29 Finkelstein et al., *Studies in H...* **The Efficacy of Long-Term Hydroxychloroquine Use in the Prevention of C...**
21% fewer cases ($p=0.0007$). PSM retrospective SLE/RA patients in the USA, showing lower COVID-19 cases wi...
- Jun 30 Milan Bonotto et al., *Antiviral ...* **Cathepsin inhibitors nitroxoline and its derivatives inhibit SARS-CoV-2 inf...**
In Vitro study showing that CatB inhibitors including nitroxoline and its derivatives significantly impair SARS-Co...
- Jun 22 Brouqui et al., *New Microbes ...* **There is no such thing as a Ministry of Truth and why it is important to ch...**
 Discussion of censorship in scientific journals and the media; fraudulent, false, and misleading information use...
- Jun 20 Cárdenas-Jaén et al., *Gastroe...* **Gastrointestinal symptoms and complications in patients hospitalized du...**
56% lower severe cases ($p=0.13$). Retrospective 829 hospitalized COVID-19 patients in Spain focused on gastr...
- Jun 17 de Gonzalo-Calvo et al., *Respi...* **A blood microRNA classifier for the prediction of ICU mortality in COVID-...**
38% lower mortality ($p=0.23$). Retrospective 491 ICU patients in Spain showing lower mortality with HCQ witho...
- Jun 16 Hong et al., *BMJ Open, doi:1...* **Safety and efficacy of hydroxychloroquine as prophylactic against COVID...**
 Meta analysis of 10 RCTs showing lower COVID-19 cases with HCQ, without statistical significance. This analy...
- Jun 10 Wade et al., *Value in Health, d...* **Variation in Demographic Characteristics, Socioeconomic Status, Clinica...**
 Retrospective analysis of mortality for COVID-19 patients in the USA. Authors do not provide adjusted results, ...
- Jun 7 Rathod et al., *The Journal of t...* **Risk Factors associated with COVID-19 Patients in India: A Single Center ...**
73% lower mortality ($p=0.02$). Retrospective 565 COVID-19 patients 5 days from symptom onset in India, show...
- Jun 7 Rudraraju et al., *Stem Cell Re...* **Parallel use of human stem cell lung and heart models provide insights f...**
In Vitro study showing that SARS-CoV-2 cell entry differs across cell types. ACE2 was required for infection in b...
- May 31 Dulcey et al., *Journal of Clinic...* **Long-Term Hydroxychloroquine and Its Association with Covid-19 Infecti...**
21% fewer cases ($p=0.27$). PSM retrospective 322 rheumatological patients on HCQ and 645 matched control...
- May 30 Gutte et al., *Indian Journal of ...* **QTc Interval of Healthcare Workers from India: Baseline and Effect of Hyd...**

	Prospective study of 250 healthcare workers in India, showing no significant change in QTc interval with HCQ p...
May 22	Souza Neves, F., <i>Infectious Di...</i> Does Widespread Use of Hydroxychloroquine Reduce the Transmissibilit... Analysis of 7 states in Brazil showing that consumption of HCQ was a significant negative predictor of the COV...
May 11	Yilgwan et al., <i>Nigerian Medic...</i> Clinical profile and Predictors of Outcomes of Hospitalized Patients with ... 93% lower mortality (p<0.0001) . Retrospective 3,462 hospitalized COVID-19 patients across 13 states in Nigier...
May 10	AlQadheeb et al., <i>Clinical Infe...</i> Impact of common comorbidities on antimicrobial consumption and mo... 35% lower mortality (p=0.0001) . Retrospective 848 ICU patients in Saudi Arabia, showing lower mortality with ...
May 7	Galgate et al., <i>Journal of Coa...</i> Formulation and Evaluation of Hydroxychloroquine Sulfate Nasal Spray f... Formulation and testing of a HCQ nasal spray for improved bioavailability and prolonged release.
May 7	Said et al., <i>Journal of Multidis...</i> Profiles of Independent-Comorbidity Groups in Senior COVID-19 Patients... 78% lower mortality (p<0.0001) . Retrospective 750 COVID-19 patients in Saudi Arabia, showing lower mortality...
Apr 25	Loo et al., <i>Pharmaceutical Re...</i> Recent Advances in Inhaled Nanoformulations of Vaccines and Therapeu... Review of nanoformulations for inhaled therapeutics for respiratory viral infections including COVID-19. Inhaled...
Apr 24	Sen et al., <i>The Lancet Rheum...</i> Post-COVID-19 condition in patients with autoimmune rheumatic diseas... 40% lower PASC (p=0.08) . Retrospective 755 autoimmune rheumatic disease patients, showing lower risk of P...
Apr 5	Krishnan et al., <i>The American ...</i> Predictors of Mortality among Patients Hospitalized with COVID-19 durin... 40% lower mortality (p=0.05) . Case control study with 2,431 hospitalized COVID-19 patients in India, showing l...
Apr 4	Million et al., <i>medRxiv, doi:10...</i> 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 overall for ...
Mar 31	Ho et al., <i>Malaysian Journal o...</i> Hydroxychloroquine for COVID-19: A Single Center, Retrospective Cohort... 890% higher progression (p=0.03) . Retrospective 325 hospitalized COVID-19 patients in Malaysia, showing hig...
Mar 29	Aweimer et al., <i>Scientific Rep...</i> 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 Germany sh...
Mar 22	Chevalier et al., <i>Frontiers in M...</i> 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 disease p...
Mar 22	Brouqui et al., <i>Authorea, Inc., ...</i> 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 clearance ...

Mar 17	Million et al., MDPI AG, doi:10... Cardiovascular Safety of Hydroxychloroquine-Azithromycin in 424 COVID-19 Patients with Severe Respiratory Distress: Retrospective Cohort Study	Retrospective 424 consecutive patients in France showing that HCQ+AZ treatment was safe for early stage CO...
Mar 2	Spivak et al., Microbiology Sp... A Randomized Clinical Trial Testing Hydroxychloroquine for Reduction of COVID-19 Severity	73% higher hospitalization ($p=0.54$), 20% improved recovery ($p=0.19$), and 17% improved viral clearance ($p=0.002$)
Feb 28	Mathew et al., Rheumatology ... Predictors of COVID-19 severity and outcomes in Indian patients with rheumatoid arthritis	20% lower mortality ($p=0.8$), no change in hospitalization ($p=0.94$), and 40% lower severe cases ($p=0.37$). Pros...
Feb 28	Llanos-Cuentas et al., BMC R... Hydroxychloroquine to prevent SARS-CoV-2 infection among healthcare workers: a randomized controlled trial	69% more cases ($p=0.46$). Early terminated healthcare worker PrEP RCT with only 68 patients and 8 cases, sho...
Feb 20	Delgado et al., Research Squa... Investigational medications in 9,638 hospitalized patients with severe COVID-19	26% lower mortality ($p=0.002$). PSM retrospective 9,638 patients in the USA, showing significantly lower morta...
Feb 15	Alshamrani et al., Saudi Phar... Comprehensive evaluation of six interventions for hospitalized patients with COVID-19	50% lower mortality ($p=0.18$), 37% lower progression ($p=0.21$), 9% shorter ICU admission ($p=0.66$), and 3% lo...
Jan 27	Nasri et al., Advanced Biome... Efficacy of hydroxychloroquine in pre-exposure severe acute respiratory syndrome coronavirus 2	92% fewer symptomatic cases ($p=0.03$). RCT 143 healthcare workers in Iran, showing lower cases with HCQ p...
Jan 19	Alam et al., MDPI AG, doi:10.... Towards Predicting Length of Stay and Identification of Cohort Risk Factors for COVID-19 Hospitalization	Deep learning model for the prediction of hospitalization time for COVID-19 based on 311 patients in Saudi Ara...
Jan 16	Viglione et al., The Gazette of ... Intravenous high dose vitamin C and ozonated saline effective treatment for COVID-19	Retrospective 479 high risk outpatients in the USA treated with a protocol including intravenous vitamin C, vita...
Jan 16	Asadi et al., Journal of Pharm... Effectiveness of different treatment regimens on patients with COVID-19: a retrospective study	Retrospective 660 hospitalized patients in Iran comparing 6 different drug regimens: 1. HCQ or CQ+AZ, 2. inter...
Jan 13	Hawari et al., Journal of Aero... Safety, Tolerability, and Pharmacokinetics of Nebulized Hydroxychloroquine	Analysis of a nebulized HCQ formulation with 12 healthy patients, showing low systemic concentrations and s...
Jan 7	Dhibar et al., Scientific Report... The 'myth of Hydroxychloroquine (HCQ) as post-exposure prophylaxis (PEP) for COVID-19	27% fewer symptomatic cases ($p=0.32$) and 21% fewer cases ($p=0.21$). Low dose low-risk patient HCQ PEP RC...
Jan 4	Mitjà et al., Clinical and Transl... Hydroxychloroquine for treatment of non-hospitalized adults with COVID-19	33% improved viral clearance ($p=0.02$). Extremely high COI (includes authors of trials playing a key role in the s...
Dec 31 2022	Genton et al., NCT04385264 #StayHome: Early Hydroxychloroquine to Reduce Secondary Hospitalisation	

Estimated 800 patient HCQ early treatment RCT with results not reported over 8 months after estimated comp...

Dec 16
2022

Higgins et al., *JAMA*, doi:10.1... **Long-term (180-Day) Outcomes in Critically Ill Patients With COVID-19 in ...**
51% higher mortality ($p=0.06$). Long-term followup for the REMAP-CAP very late stage ICU trial, showing higher...

Dec 13
2022

Shukla et al., *The Lancet Regi...* **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 prop...

Dec 7
2022

Shahrin et al., *Life*, doi:10.339... **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 106 tha...

Nov 24
2022

Alosaimi et al., *Pharmaceutic...* **Analyzing the Difference in the Length of Stay (LOS) in Moderate to Sever...**
400% higher mortality ($p=0.49$), 43% shorter hospitalization ($p=0.63$), and 29% higher hospital discharge ($p=0...$

Nov 21
2022

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 analysis of ...

Nov 17
2022

Bubenek-Turconi et al., *Europ...* **Clinical characteristics and factors associated with ICU mortality during t...**
22% lower mortality ($p=0.01$). Prospective study of 9,058 COVID-19 ICU patients in Romania, showing lower m...

Nov 14
2022

Sukumar et al., *F1000Resear...* **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 with H...

Oct 26
2022

Patel et al., *Seminars in Arthri...* **Factors Associated with COVID-19 Breakthrough Infection Among Vacci...**
41% fewer cases ($p=0.02$). Retrospective 11,468 vaccinated rheumatic disease patients, showing lower risk of ...

Oct 21
2022

Assad, H., *Current Issues in P...* **Pharmacotherapy prescribing pattern and outcome for hospitalized patie...**
60% lower mortality ($p=0.002$). Retrospective 346 hospitalized patients in Iraq, showing lower mortality with H...

Oct 18
2022

Cosentino et al., *Journal of Cl...* **Early Outpatient Treatment of COVID-19: A Retrospective Analysis of 392...**
Retrospective 392 outpatients in Italy showing 0.2% mortality with early treatment, compared with >3% in Italy...

Oct 13
2022

Gómez et al., *Medicina Clínic...* **Mortality risk factors in patients with SARS-CoV-2 infection and atrial fibr...**
36% lower mortality ($p<0.0001$). Retrospective 1,799 hospitalized COVID-19 patients with atrial fibrillation in S...

Oct 6
2022

Isnardi et al., *Clinical Rheuma...* **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 ($p=0.09$). Retro...

Sep 28
2022

Obrișcă et al., *Biomedicines, ...* **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 lower risk ...

- Sep 27 2022 Go et al., *Frontiers in Pharma...* **Hydroxychloroquine, azithromycin and methylprednisolone and in hospit...**
55% lower mortality ($p=0.03$). Retrospective 759 hospitalized patients in the USA, showing lower mortality with...
- Sep 16 2021 Guillaume et al., *Rheumatolo...* **Antirheumatic Drug Intake Influence on Occurrence of COVID-19 Infectio...**
2% higher hospitalization ($p=1$) and 3% more cases ($p=0.96$). Retrospective 459 SLE, RA, SjS, or PsA patients i...
- Sep 14 2022 Yuan et al., *Communications ...* **Hydroxychloroquine blocks SARS-CoV-2 entry into the endocytic pathwa...**
In Vitro study showing that HCQ blocks SARS-CoV-2 entry into the endocytic pathway, and that HCQ was more...
- Sep 11 2022 Gentry et al., *The American J...* **Development of SARS-CoV-2 infection in patients with rheumatic conditi...**
12% lower mortality ($p=0.99$), 12% lower hospitalization ($p=0.81$), and 14% more cases ($p=0.57$). Updated vers...
- Sep 9 2022 Núñez-Gil et al., *Anti-Infective...* **Hydroxychloroquine and Mortality in SARS-Cov-2 Infection; The HOPE- C...**
53% lower mortality ($p<0.0001$). PSM retrospective 6,217 hospitalized patients in Spain, showing lower mortali...
- Sep 7 2022 Sahebari et al., *Reumatologia...* **Influence of biologic and conventional disease-modifying antirheumatic ...**
56% fewer cases ($p=0.02$). Retrospective 512 rheumatic disease patients in Iran, showing lower risk of COVID-...
- Sep 6 2022 Oku et al., *Modern Rheumatol...* **Risk factors for hospitalization or mortality for COVID-19 in patients with ...**
92% lower mortality ($p=1$) and 12% lower hospitalization ($p=0.34$). Retrospective 220 COVID-19 patients with ...
- Sep 7 2022 Flores-Chavez et al., *Clinical ...* **SARS-CoV-2 infection in 898 patients with Sjögren's syndrome: characte...**
Retrospective 898 patients with Sjögren's disease, showing a lower risk of worse outcomes with HCQ compar...
- Aug 31 2022 Babayigit et al., *Frontiers in M...* **The association of antiviral drugs with COVID-19 morbidity: The retrospe...**
112% higher ventilation ($p=0.21$), 53% higher ICU admission ($p=0.33$), and 17% longer hospitalization ($p=0.05$)...
- Aug 25 2022 Bowen et al., *Open Forum Inf...* **Reduction in risk of death among patients admitted with COVID-19 betw...**
20% lower mortality ($p=0.007$). Retrospective 4,631 hospitalized patients in New York, showing higher mortalit...
- Aug 16 2022 Loucera et al., *medRxiv, doi:1...* **Real-world evidence with a retrospective cohort of 15,968 Andalusian C...**
69% lower mortality ($p=0.0002$). Retrospective 15,968 COVID-19 hospitalized patients in Spain, showing lower ...
- Aug 12 2022 Lyashchenko et al., *British Jo...* **Systemic Exposure to Hydroxychloroquine and its relationship with outc...**
48% higher mortality ($p<0.0001$). Retrospective very late stage hospitalized patients in New York during the fir...
- Aug 9 2022 García-Albéniz et al., *Europea...* **Systematic review and meta-analysis of randomized trials of hydroxychlo...**
28% fewer cases ($p=0.003$). Systematic review and meta-analysis of HCQ prophylaxis RCTs showing a statistic...
- Aug 5 2022 de Reus et al., *PLOS ONE, doi...* **Tolerability and pharmacokinetic evaluation of inhaled dry powder hydro...**

Tolerability and pharmacokinetic evaluation of an inhaled dry powder formulation of HCQ. Inhaled HCQ was ge...

Aug 5
2022

Becetti et al., *Qatar Medical J...* *Prevalence of coronavirus disease 2019 in a multiethnic cohort of patien...*
37% fewer cases ($p=0.17$). Retrospective 700 patients with autoimmune rheumatic disease in Qatar, showing l...

Aug 5
2022

Polo et al., *Clinical Microbiolo...* *Daily tenofovir disoproxil fumarate/emtricitabine and hydroxychloroquine...*
51% fewer symptomatic cases ($p=0.79$) and **27% fewer cases** ($p=0.31$). Early terminated healthcare worker pro...

Jul 26
2022

Xu et al., *Rapid Communicati...* *A study of impurities in the repurposed COVID-19 drug hydroxychloroqui...*
Analysis of HCQ from two manufacturers showing 9 different impurities, with significantly different concentrati...

Jul 20
2022

Hawari et al., *NCT05113810* *The Potential Use of Nebulized Hydroxychloroquine for the Treatment of ...*
Estimated 110 patient HCQ nebulized late treatment RCT with results not reported over 1 year after estimated ...

Jul 15
2022

Patel et al., *medRxiv, doi:10.1...* *Factors Associated with COVID-19 Breakthrough Infection in the Pre-Om...*
46% fewer cases ($p=0.001$). Retrospective 11,468 vaccinated rheumatic disease patients in the USA, showing l...

Jul 14
2022

Malundo et al., *IJID Regions, ...* *Predictors of Mortality among inpatients with COVID-19 Infection in a Ter...*
24% higher mortality ($p=0.32$). Retrospective 1,215 hospitalized patients in the Phillipines, showing no signfica...

Jul 11
2022

Yadav et al., *Indian Journal of ...* *Hydroxychloroquine/chloroquine prophylaxis among health-care workers...*
20% lower seropositivity ($p=0.1$). Retrospective 2,224 healthcare workers in India, showing lower risk of serop...

Jul 3
2022

Raabe et al., *medRxiv, doi:10...* *Hydroxychloroquine pre-exposure prophylaxis to prevent SARS-CoV-2 a...*
82% fewer symptomatic cases ($p=0.17$). Small prophylaxis study with 130 healthcare workers in the USA, sho...

Jul 1
2022

Osawa et al., *The Journal of C...* *Characteristics and risk factors for mortality in critically ill patients with C...*
29% lower mortality ($p=0.07$). Retrospective 215 mechanically ventilated COVID-19 patients in Brazil, 71 treat...

Jun 30
2022

Ghanem-Zoubi et al., *NCT044...* *Hydroxychloroquine Post-Exposure Prophylaxis for Coronavirus Disease (...)*
Estimated 582 participant HCQ prophylaxis RCT with results not reported over 1 year after estimated completi...

Jun 29
2022

Nimitvilai et al., *Journal of Glo...* *A randomized controlled trial of combined ivermectin and zinc sulfate ve...*
50% worse viral clearance ($p=0.12$). RCT low-risk patients in Thailand comparing HCQ, darunavir/ritonavir, and ...

Jun 1
2022

Tirupakuzhi Vijayaraghavan e... *Hydroxychloroquine plus personal protective equipment versus personal ...*
196% higher progression ($p=1$), **52% lower hospitalization** ($p=0.62$), and **14% fewer cases** ($p=0.73$). Low-dose ...

May 20
2022

Silva et al., *Frontiers in Cellula...* *Clinical-Epidemiology Aspect of Inpatients With Moderate or Severe COV...*
46% higher mortality ($p=0.22$). Retrospective 395 hospitalized patients in Brazil, showing higher mortality with ...

- May 16 2022 Gkioulekas et al., *Authorea, In...* *Frequentist and Bayesian analysis methods for case series data and appl...*
Hybrid statistical framework for evaluating treatment protocols. COVID-19 treatment protocols often use risk s...
- May 4 2022 Hong et al., *PLOS ONE, doi:1...* *Use of combined treatment of 3rd-generation cephalosporin, azithromyc...*
25% faster recovery ($p=0.45$), **13% longer hospitalization** ($p=0.75$), and no change in viral clearance ($p=0.99$). R...
- Apr 30 2022 Bassets-Bosch et al., *Anales ...* *Negativización de PCR a SARS-CoV-2 en muestra respiratoria en pacient...*
29% faster viral clearance ($p=0.45$). Retrospective 15 pediatric patients in Spain, showing faster viral clearance...
- Apr 22 2022 Satti et al., *Cureus, doi:10.77...* *Characteristics and Obstetric Outcomes in Women With Autoimmune Rh...*
61% fewer cases ($p=0.04$). Retrospective 80 consecutive pregnant patients with autoimmune rheumatic diseas...
- Apr 17 2022 Faisca et al., *Pharmaceutics, ...* *Enhanced In Vitro Antiviral Activity of Hydroxychloroquine Ionic Liquids a...*
In Vitro study showing improved antiviral activity with ionic formulations of HCQ.
- Apr 16 2022 Roy-García et al., *medRxiv, do...* *Efficacy and Safety of Fixed Combination of Hydroxychloroquine with Azi...*
Small early terminated RCT in Mexico with 31 HCQ and 31 control patients, showing higher progression with tr...
- Apr 8 2022 Hafez et al., *Antibiotics, doi:1...* *Antiviral Used among Non-Severe COVID-19 Cases in Relation to Time till...*
12% faster viral clearance ($p=0.59$). Retrospective hospitalized patients in the United Arab Emirates, showing n...
- Apr 6 2022 Walbi et al., *Journal of Interna...* *Effect of chronic hydroxychloroquine use on COVID-19 risk in patients wi...*
Retrospective RAVSLE patients in Saudi Arabia. Numbers in this paper are contradictory. Figure 1 and the introd...
- Apr 2 2022 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 compared ...
- Mar 31 2022 Avezum et al., *The Lancet Re...* *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% lower ...**
- Mar 30 2022 Gagneux-Brunon et al., *Trials,...* *Acceptability of a COVID-19 pre-exposure prophylaxis trial with hydroxyc...*
118 participant HCQ prophylaxis RCT with results not reported over 1 year after completion.
- Mar 29 2022 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 ≥ 65 yo in Canada, showing low...
- Mar 23 2022 AlQahtani et al., *Scientific Re...* *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 HCQ, an...
- Mar 22 2022 White et al., *COPCOV, NCT04...* *Chloroquine/ Hydroxychloroquine Prevention of Coronavirus Disease (CO...*

4,652 participant HCQ prophylaxis RCT with results not reported over 1 year after completion.

- Mar 21 2022 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** ($p=0.88$). R...
- Mar 19 2022 Ragonnet et al., *Future Pharm...* *Drug Repositioning in Intensive Care Patients and Pharmacokinetic Varia...* Comparison of two HCQ dosing regimens, showing high inter-individual variability of HCQ concentrations (as i...
- Mar 18 2022 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 lower m...
- Mar 17 2022 Uyaroglu 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** ($p=0.9$). PSM re...
- Mar 11 2022 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 no signi...
- Mar 10 2022 Azaña Gómez et al., *Medicina...* *Mortality risk factors in patients with SARS-CoV-2 infection and atrial fibr...* **36% lower mortality** ($p<0.0001$). Retrospective 1,816 COVID-19 patients with atrial fibrillation in Spain, showin...
- Mar 3 2022 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** ($p=0.0004$). PS...
- Mar 2 2022 Soto et al., *PLOS ONE, doi:10...* *Mortality and associated risk factors in patients hospitalized due to COVI...* **6% higher mortality** ($p=0.46$). Retrospective 1,418 very late stage (46% mortality) patients in Peru, showing no ...
- Feb 26 2022 Rouamba et al., *International ...* *Assessment of Recovery Time, Worsening and Death, among COVID-19 i...* **80% lower mortality** ($p<0.0001$), **20% lower progression** ($p=0.43$), and **31% faster viral clearance** ($p=0.26$). Retr...
- Feb 23 2022 Opdam et al., *Clinical Pharma...* *Identification of Risk Factors for COVID-19 Hospitalization in Patients wit...* **45% lower hospitalization** ($p=0.18$). Retrospective 81 cases and 396 controls among rheumatic disease patien...
- Feb 18 2022 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 mortality i...
- Feb 16 2022 Ugarte-Gil et al., *Annals of th...* *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 COVID-19 o...
- Feb 13 2022 Beaumont et al., *Infectious Di...* *Factors associated with hospital admission and adverse outcome for CO...* **14% lower combined mortality/intubation** ($p=0.55$). Retrospective 296 hospitalized patients in France, showing...

Feb 3 2022	Albanghali et al., <i>Journal of In...</i> Clinical Characteristics and Treatment Outcomes of Mild to Moderate Co... 35% higher mortality ($p=0.46$). Retrospective 811 hospitalized COVID+ patients in Saudi Arabia, showing highe...
Jan 31 2022	Fernández-Cruz et al., <i>Clinical...</i> Higher mortality of hospitalized haematologic patients with COVID-19 co... 27% lower mortality ($p=0.47$). Retrospective 71 hospitalized haematologic patients in Spain, showing lower m...
Jan 31 2022	Omma et al., <i>The Journal of I...</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 ($p=0.007$). R...
Jan 23 2022	Erden et al., <i>Bratislava Medic...</i> COVID-19 outcomes in patients with antiphospholipid syndrome: a retro... 75% lower hospitalization ($p=0.23$). Retrospective 9 COVID-19 patients with antiphospholipid syndrome in Turk...
Jan 21 2022	Lavilla Olleros et al., <i>PLOS ON...</i> 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 mortality ...
Jan 20 2022	Alwafi et al., <i>Cureus, doi:10.7...</i> 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 with ...
Jan 13 2022	Tu et al., <i>Infectious Diseases ...</i> Risk Factors for Severity and Mortality in Adult Patients Confirmed with C... 17% lower mortality ($p=0.81$). Retrospective 180 hospitalized COVID-19 patients in Sierra Leone, showing no si...
Jan 13 2022	Tyson et al., <i>Preprint</i> Low Rates of Hospitalization and Death in 4,376 COVID-19 Patients Give... 100% lower mortality ($p<0.0001$) and 100% lower hospitalization ($p<0.0001$). Retrospective 4,376 patients wit...
Jan 11 2022	AbdelGhaffar et al., <i>PLOS ON...</i> Prediction of mortality in hospitalized Egyptian patients with Coronavirus... 100% lower mortality ($p<0.0001$). Retrospective 3,712 hospitalized patients in Egypt, showing lower mortality ...
Jan 7 2022	Juneja et al., <i>Journal of Basic ...</i> Hydroxychloroquine pre-exposure prophylaxis provides no protection ag... 142% higher severe cases ($p=0.59$) and 6% more cases ($p=0.67$). Retrospective 2,200 healthcare workers in In...
Dec 31 2021	Pineda et al., <i>NCT04954040</i> Prevention and Treatment With Hydroxychloroquine + Azithromycin of Ac... Estimated 132 patient HCQ early treatment RCT with results not reported over 1.5 years after estimated compl...
Dec 31 2021	Aston et al., <i>NCT04334382</i> Hydroxychloroquine vs. Azithromycin for Outpatients in Utah With COVID... Estimated 1,550 patient HCQ early treatment RCT with results not reported over 1.5 years after estimated com...
Dec 31 2021	Al Ansari et al., <i>NCT04437693</i> Post Exposure Prophylaxis in Healthcare Workers Exposed to COVID-19 ... Estimated 500 participant HCQ prophylaxis RCT with results not reported over 1.5 years after estimated compl...
Dec 23 2021	McKinnon et al., <i>International ...</i> Safety and Tolerability of Hydroxychloroquine in healthcare workers and ...

		2% fewer symptomatic cases ($p=1$) and 51% fewer cases ($p=0.6$). HCQ prophylaxis RCT with 201 weekly HCQ ...
Dec 4 2021	Rao et al., <i>Expert Review of A...</i>	Hydroxychloroquine as pre-exposure prophylaxis against COVID-19 infec... 11% fewer cases ($p=0.68$). Prospective PrEP study with low risk healthcare workers in India showing RR=0.89 [...]
Nov 26 2021	Ferreira et al., <i>Revista da Ass...</i>	Outcomes associated with Hydroxychloroquine and Ivermectin in hospit... 151% higher mortality ($p=0.03$) and 46% higher combined mortality/intubation ($p=0.23$). Retrospective 230 ho...
Nov 23 2021	Calderón et al., <i>PAMJ - Clinic...</i>	Treatment with hydroxychloroquine vs nitazoxanide in patients with COVI... 215% higher mortality ($p=0.38$), 652% higher ventilation ($p=0.15$), 145% higher ICU admission ($p<0.0001$), and ...
Nov 23 2021	Ahmed et al., <i>BioMed Resear...</i>	Factors Affecting the Incidence, Progression, and Severity of COVID-19 i... 99% fewer cases ($p=0.08$). Retrospective type 1 diabetes patients in Saudi Arabia showing reduced risk of case...
Nov 17 2021	Samajdar et al., <i>Journal of th...</i>	Ivermectin and Hydroxychloroquine for Chemo-Prophylaxis of COVID-19:... 75% fewer cases ($p<0.0001$). Physician survey in India with 164 ivermectin prophylaxis, 129 HCQ prophylaxis, ...
Nov 12 2021	Schmidt et al., <i>JAMA Network...</i>	Association Between Androgen Deprivation Therapy and Mortality Amon... 333% higher mortality ($p=0.0001$) and 613% higher severe cases ($p<0.0001$). Retrospective 1,106 prostate can...
Nov 11 2021	Cortez et al., <i>Western Pacific ...</i>	Clinical characteristics and outcomes of COVID-19 patients in a tertiary ... 15% lower mortality ($p=1$). Retrospective 280 hospitalized patients in the Philippines, 25 treated with HCQ, not...
Nov 5 2021	Chechter et al., <i>Heliyon, doi:1...</i>	Evaluation of patients treated by telemedicine in the beginning of the CO... 95% lower hospitalization ($p=0.004$). Prospective study of 187 telemedicine patients in Brazil. 74 presenting wi...
Nov 2 2021	Sarhan et al., <i>Journal of Infect...</i>	Efficacy of the early treatment with tocilizumab-hydroxychloroquine and ... 26% lower mortality ($p=0.39$), 26% higher hospital discharge ($p=0.39$), and 25% longer hospitalization ($p=0.06$)...
Oct 13 2021	Perrella et al., <i>Viruses, doi:10...</i>	Pre-Exposure Prophylaxis with Hydroxychloroquine Does Not Prevent CO... 71% higher ventilation ($p=0.28$), 33% higher ARDS ($p=0.7$), and 476% more cases ($p<0.0001$). Retrospective 8,...
Oct 31 2021	González et al., <i>Trials, doi:10...</i>	Hydroxychloroquine efficacy and safety in preventing SARS-CoV-2 infecti... 129 participant HCQ early treatment and prophylaxis RCT with results not reported over 1.5 years after comple...
Oct 28 2021	Shousha et al., <i>World Journal ...</i>	Hepatic and gastrointestinal disturbances in Egyptian patients infected ... 12% lower mortality ($p=0.87$). Retrospective 547 hospitalized COVID+ patients in Egypt, showing no significant ...
Oct 25 2021	Guglielmetti et al., <i>Scientific R...</i>	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 with HCQ...

Oct 6 2021	Belmont et al., <i>ClinicalTrials.g...</i> COVID-19 PrEP HCW HCQ Study 79% fewer symptomatic cases ($p=0.21$). Prospective study of HCQ prophylaxis in the USA, with 56 HCQ patien...
Oct 5 2021	Atipornwanich et al., <i>SSRN El...</i> 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 ($p=0.51$). RCT 32...
Oct 1 2021	Fung et al., <i>PLoS ONE, doi:10...</i> 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 ($p=0.02$). Retrospective d...
Oct 1 2021	Babalola et al., <i>Journal of Infe...</i> A Randomized Controlled Trial of Ivermectin Monotherapy Versus Hydrox... 55% lower hospital discharge ($p=0.2$) and 10% improved viral clearance ($p=0.78$). Small RCT with 61 patients i...
Sep 30 2021	Nanni et al., <i>Trials, doi:10.118...</i> PROTECT Trial: A cluster-randomized study with hydroxychloroquine vers... Estimated 2,300 participant HCQ early treatment and prophylaxis RCT with results not reported over 2 years af...
Sep 30 2021	Panda et al., <i>Clinical Pharmac...</i> Antiviral Combination Clinically Better Than Standard Therapy in Severe ... 48% lower mortality ($p=0.45$). RCT 111 patients in India in 5 groups: severe patients: A) standard treatment, B) ...
Sep 30 2021	Menardi et al., <i>PharmAdvanc...</i> A retrospective analysis on pharmacological approaches to COVID-19 pa... 35% lower mortality ($p=0.12$). Retrospective 277 hospitalized patients in Italy, showing lower mortality with HC...
Sep 15 2021	Uygen et al., <i>Northern Clinics ...</i> Effect of Hydroxychloroquine Use on the Length Of Hospital Stay in Child... 12% faster viral clearance ($p=0.05$). Retrospective 40 pediatric hospitalized patients, 15 treated with HCQ, sho...
Sep 15 2021	Çivriz Bozdağ et al., <i>Turk. J. H...</i> Clinical Characteristics and Outcome of COVID-19 in Turkish Hematologi... 399% higher mortality ($p=0.003$). Retrospective 340 patients with hematological malignancy in Turkey, showin...
Sep 14 2021	Alotaibi et al., <i>International Jo...</i> Effectiveness and Safety of Favipiravir Compared to Hydroxychloroquine ... 134% higher mortality ($p=0.05$). Retrospective hospitalized patients in Saudi Arabia, showing lower mortality w...
Sep 14 2021	Agarwal et al., <i>medRxiv, doi:1...</i> Low dose hydroxychloroquine prophylaxis for COVID-19 - a prospective s... 27% lower progression ($p=0.21$) and 5% more cases ($p=0.81$). Small prophylaxis trial with 29 low dose HCQ an...
Sep 14 2021	Accinelli et al., <i>Travel Medicin...</i> Hydroxychloroquine / azithromycin in COVID-19: The association betwee... Retrospective 1,265 outpatients in Peru treated with HCQ+AZ showing mortality associated with treatment del...
Sep 9 2021	Sawanpanyalert et al., <i>Southe...</i> Assessment of outcomes following implementation of antiviral treatment... 42% lower progression ($p=0.37$). Retrospective 744 hospitalized patients in Thailand, showing lower risk of a p...
Sep 1 2021	Karruli et al., <i>Microbial Drug R...</i> Multidrug-Resistant Infections and Outcome of Critically Ill Patients with ...

		5% lower mortality ($p=1$). Retrospective 32 ICU patients, showing no significant difference with HCQ treatment...
Aug 27 2021	Cordtz et al., <i>Journal of Clinic...</i>	40% lower hospitalization ($p=0.39$). Retrospective 2,533 SLE patients in Denmark showing no significant differ...
Aug 25 2021	Rodrigues et al., <i>International ...</i>	14% improved viral clearance ($p=0.15$). RCT 84 low risk patients, 42 treated with HCQ/AZ, showing no significa...
Aug 25 2021	Naggie et al., <i>International Jo...</i>	24% fewer symptomatic cases ($p=0.18$). HCQ prophylaxis RCT reporting statistically significant lower cases wh...
Aug 24 2021	Patil et al., <i>Research Square, ...</i>	66% lower mortality ($p=0.1$) and 9% fewer cases ($p=0.43$). Prospective study of 9,212 autoimmune rheumatic ...
Aug 23 2021	Navya et al., <i>Informatics in M...</i>	<i>In Silico</i> analysis showing that HCQ binds to multiple targets related to SARS-CoV-2 infection, including the AC...
Aug 20 2021	McCullough et al., <i>NCT04333...</i>	52% fewer cases ($p=0.01$). Prospective study with 221 healthcare workers, showing lower risk of COVID-19 wit...
Aug 16 2021	Eldeen et al., <i>Microbes and In...</i>	Small study comparing 25 HCQ and 25 remdesivir hospitalized patients, reporting faster viral clearance with re...
Aug 14 2021	Tai et al., <i>Pharmaceutics, doi:...</i>	Analysis of HCQ solutions suitable for nebulization for COVID-19.
Aug 10 2021	Shabani et al., <i>Pulmonary Pha...</i>	19% fewer symptomatic cases ($p=1$) and 6% more cases ($p=1$). Small PEP trial with 51 HCQ patients, not sho...
Aug 5 2021	Stricker et al., <i>Journal of Infec...</i>	75% lower mortality ($p<0.0001$). Meta analysis of 11 HCQ PrEP studies in India covering 7,616 healthcare work...
Aug 4 2021	Özuygur Ermiş et al., <i>Turkish ...</i>	Retrospective 370 hospitalized patients, 222 receiving HCQ+AZ and 148 receiving HCQ, showing mortality OR ...
Aug 4 2021	Bhatt et al., <i>medRxiv, doi:10.1...</i>	49% more cases ($p=0.02$). Observational study of 927 low-risk healthcare workers in India, 731 volunteering fo...
Aug 4 2021	Alghamdi et al., <i>Saudi Pharm...</i>	39% higher mortality ($p=0.52$). Retrospective 171 ICU patients in Saudi Arabia showing no significant differenc...

Jul 31 2021	Barra et al., medRxiv, doi:10.1... COVID-19 in hospitalized patients in 4 hospitals in San Isidro, Buenos Air... 11% lower mortality ($p=1$). Retrospective 668 hospitalized patients in Argentina, 18 treated with HCQ, not sho...
Jul 29 2021	Sobngwi et al., medRxiv, doi:1... Doxycycline is a safe alternative to Hydroxychloroquine + Azithromycin to... 52% improved recovery ($p=0.44$) and 3% improved viral clearance ($p=0.88$). RCT 194 mild/asymptomatic low-ri...
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 treatme...
Jul 16 2021	Alhamlan et al., medRxiv, doi:... Epidemiology and Clinical Characteristics in Individuals with Confirmed S... 52% higher mortality ($p=0.58$). Retrospective hospitalized patients in Saudi Arabia showing higher mortality wit...
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 no sig...
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 mortal...
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-ritona...
Jul 10 2021	Roger et al., Anaesthesia Criti... French Multicentre Observational Study on SARS-CoV-2 infections Intens... no change in mortality ($p=0.94$). Prospective study of 966 ICU patients in France, 289 treated with HCQ, showi...
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 in una...
Jul 1 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 COVID-...
Jun 30 2021	Granados-Montiel et al., BMJ ... New prophylaxis regimen for SARS-CoV-2 infection in health professiona... Estimated 214 participant HCQ + bromhexine prophylaxis RCT with results not reported over 2 years after esti...
Jun 30 2021	Taieb et al., J. Clin. Med. 202... Hydroxychloroquine and Azithromycin Treatment of Hospitalized Patient... 39% higher hospital discharge ($p=0.02$). Retrospective 926 patients in Senegal, 674 treated with HCQ+AZ, sho...
Jun 24 2021	Gerlovin et al., American Jour... Pharmacoepidemiology, Machine Learning and COVID-19: An intent-to-t... 22% higher mortality ($p=0.18$) and 55% higher ventilation ($p=0.02$). Retrospective 1,769 hospitalized patients i...
Jun 21 2021	Yadav et al., Research Square... Repurposing the Combination Drug of Favipiravir, Hydroxychloroquine an...

In Silico study showing stronger inhibition of SAR-CoV-2 for HCQ+favipiravir+oseltamivir compared to any of th...

Jun 18
2021

Schwartz et al., *CMAJ Open*, ... **Assessing the efficacy and safety of hydroxychloroquine as outpatient tr...**
37% improved recovery ($p=0.15$). Small early terminated late treatment RCT showing no significant differences...

Jun 18
2021

Purwati et al., *PLOS One*, doi:... **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 AZ, fa...

Jun 11
2021

Turrini et al., *Vaccines*, 10.33... **Clinical Course and Risk Factors for In-Hospital Mortality of 205 Patients ...**
10% lower mortality ($p=0.15$). Retrospective 205 patients in Italy, 160 treated with HCQ, showing lower mortali...

Jun 9
2021

Saib et al., *PLOS ONE*, doi:10... **Lack of efficacy of hydroxychloroquine and azithromycin in patients hosp...**
125% higher combined mortality/intubation ($p=0.23$). 203 hospitalized patients in France, not showing signific...

Jun 8
2021

Singh et al., *medRxiv*, doi:0.1... **Safety and efficacy of antiviral therapy alone or in combination in COVID-...**
48% lower mortality ($p=0.45$) and 14% improved recovery ($p=0.76$). Very small early terminated RCT in India, sh...

Jun 7
2021

Badyal et al., *Journal of the A...* **Hydroxychloroquine for SARS CoV2 Prophylaxis in Healthcare Workers – ...**
60% fewer cases ($p<0.0001$). Prophylaxis study with 12,089 Indian healthcare workers, showing lower risk of C...

Jun 4
2021

Lagier et al., *Therapeutics an...* **Outcomes of 2,111 COVID-19 hospitalised patients treated with 2 hydrox...**
32% lower mortality ($p=0.004$). Retrospective 2,011 hospitalized patients in France, median age 67, showing lo...

Jun 4
2021

Byakika-Kibwika et al., *Resear...* **Safety and Efficacy of Hydroxychloroquine for Treatment of Non-Severe ...**
no change in recovery ($p=0.91$) and **29% improved viral clearance ($p=0.47$)**. Small 105 patient RCT in Uganda s...

Jun 3
2021

Sivapalan et al., *European Re...* **Azithromycin and hydroxychloroquine in hospitalised patients with confir...**
92% lower mortality ($p=0.32$), 22% higher ICU admission ($p=1$), and 8% lower hospital discharge ($p=0.36$). Earl...

Jun 1
2021

Kara et al., *NCT04411433* **Efficacy and Safety of Hydroxychloroquine and Favipiravir in the Treatme...**
1,008 patient HCQ early treatment RCT with results not reported over 2 years after completion.

Jun 1
2021

Chauffe et al., *NCT04363450* **Hydroxychloroquine as Prophylaxis for COVID-19 in Healthcare Workers (...)**
Estimated 1,700 participant HCQ prophylaxis RCT with results not reported over 2 years after estimated compl...

Jun 1
2021

Korkmaz et al., *Authorea*, doi:... **The effect of Hydroxychloroquine use due to rheumatic disease on the ri...**
82% lower mortality ($p=0.19$) and 94% fewer cases ($p<0.0001$). Retrospective 683 patients in a rheumatology d...

Jun 1
2021

Kamstrup et al., *International ...* **Hydroxychloroquine as a primary prophylactic agent against sars-cov-2 i...**
44% higher hospitalization ($p=0.25$) and 10% fewer cases ($p=0.23$). Retrospective HCQ users in Denmark, not ...

May 31 2021 Ramírez-García et al., *Archivo...* **Hydroxychloroquine and Tocilizumab in the Treatment of COVID-19: A Lo...**
67% lower mortality ($p<0.0001$) and 6% higher ICU admission ($p=1$). Retrospective 403 hospitalized patients in...

May 31 2021 Smith et al., *medRxiv, doi:10...* **Observational Study on 255 Mechanically Ventilated Covid Patients at th...**
27% lower mortality ($p=0.002$). Retrospective 255 mechanical ventilation patients in USA, showing that weight...

May 29 2021 Ali et al., *Journal of Pharmace...* **Optimizing the Use of Hydroxychloroquine in the Management of COVID-...**
Review of the mechanisms of action, pharmacokinetics and toxicity of HCQ, recommending use as early as po...

May 27 2021 Million et al., *Reviews in Cardi...* **Early Treatment with Hydroxychloroquine and Azithromycin in 10,429 CO...**
83% lower mortality ($p=0.0007$), 44% lower ICU admission ($p=0.18$), and 4% lower hospitalization ($p=0.77$). Ret...

May 17 2021 Syed et al., *Cureus, doi:10.77...* **Pre-exposure Prophylaxis With Various Doses of Hydroxychloroquine Am...**
60% more symptomatic cases ($p=0.41$) and 92% more cases ($p=0.12$). Small PrEP RCT of low risk healthcare w...

May 16 2021 Rojas-Serrano et al., *PLOS O...* **Hydroxychloroquine for prophylaxis of COVID-19 in health workers: A ran...**
82% fewer symptomatic cases ($p=0.12$). Early terminated HCQ PrEP RCT with 62 HCQ and 65 placebo patients...

May 12 2021 Drancourt et al., *Viruses, doi:...* **SARS-CoV-2 Persistent Viral Shedding in the Context of Hydroxychloroqu...**
Retrospective 3,737 patients in France, showing lower risk of persistent viral shedding with HCQ+AZ treatment.

May 10 2021 Sammartino et al., *PLOS One,...* **Predictors for inpatient mortality during the first wave of the SARS-CoV-2...**
240% higher mortality ($p=0.002$). Retrospective 1,108 hospitalized patients in New York showing significantly h...

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 7 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 associated ...

Apr 30 2021 Moraes et al., *NCT04384458* **Comparative Study of Hydroxychloroquine and Ivermectin in COVID-19 P...**
Estimated 400 participant HCQ vs. ivermectin prophylaxis RCT with results not reported over 2 years after esti...

Apr 30 2021 Borrie et al., *NCT04397328* **COVID-19 PEP- High-risk Individuals in Long-term and Specialized Care -...**
Estimated 336 participant HCQ prophylaxis RCT with results not reported over 2 years after estimated complet...

Apr 30 2021 James et al., *NCT04352933* **PROLIFIC Chemoprophylaxis Trial (COVID-19)**
Estimated 500 participant HCQ prophylaxis RCT with results not reported over 2 years after estimated complet...

Apr 30 2021 Çiyiltepe et al., *South. Clin. Ist...* **The Effect of Pre-admission Hydroxychloroquine Treatment on COVID-19...**

		3% lower mortality ($p=0.85$). Retrospective 147 ICU patients in Turkey, showing no significant difference in out...
Apr 30 2021	Bosaeed et al., <i>Infect. Dis. Th...</i>	<i>Favipiravir and Hydroxychloroquine Combination Therapy in Patients wit...</i> 4% lower mortality ($p=0.91$), 8% higher ventilation ($p=0.78$), 31% higher ICU admission ($p=0.24$), and 29% slo...
Apr 29 2021	Haji Aghajani et al., <i>Journal o...</i>	<i>Decreased in-hospital mortality associated with aspirin administration in...</i> 19% lower mortality ($p=0.09$). Retrospective 991 hospitalized patients in Iran, showing lower mortality with HC...
Apr 29 2021	Aghajani et al., <i>Journal of Me...</i>	<i>Decreased In-Hospital Mortality Associated with Aspirin Administration i...</i> 19% lower mortality ($p=0.09$). Retrospective 991 hospitalized patients in Iran focusing on aspirin use but also s...
Apr 28 2021	Kokturk et al., <i>Respiratory Me...</i>	<i>The predictors of COVID-19 mortality in a nationwide cohort of Turkish p...</i> 4% higher mortality ($p=0.97$). Retrospective 1,500 hospitalized late stage (median SaO ₂ 87.7) patients in Turke...
Apr 27 2021	Réa-Neto et al., <i>Scientific Rep...</i>	<i>An open-label randomized controlled trial evaluating the efficacy of chlor...</i> 57% higher mortality ($p=0.2$), 115% higher ventilation ($p=0.03$), and 147% worse recovery ($p=0.02$). Early termi...
Apr 26 2021	Mohandas et al.,	<i>Clinical review of COVID-19 patients presenting to a quaternary care priv...</i> 81% higher mortality ($p=0.007$). Retrospective 3,345 hospitalized patients in India, 11.5% treated with HCQ, sh...
Apr 24 2021	Corradini et al., <i>Internal and E...</i>	<i>Clinical factors associated with death in 3044 COVID-19 patients manag...</i> 70% lower mortality ($p<0.0001$). Retrospective 3,044 hospitalized COVID-19 patients in Italy, showing HCQ sig...
Apr 23 2021	Toya et al., <i>SSRN</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	Reis et al., <i>JAMA Network Op...</i>	<i>Effect of Early Treatment With Hydroxychloroquine or Lopinavir and Riton...</i> 24% lower hospitalization ($p=0.57$) and 4% improved viral clearance ($p=0.1$). Early terminated RCT in Brazil sho...
Apr 15 2021	Alzahrani et al., <i>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 ($p=0.7$). Retrospective ...
Apr 15 2021	Alegiani et al., <i>Rheumatology,...</i>	<i>Risk of COVID-19 hospitalization and mortality in rheumatic patients trea...</i> 8% higher mortality ($p=0.64$) and 18% lower hospitalization ($p=0.03$). Retrospective database analysis case co...
Apr 14 2021	Seet et al., <i>International Jour...</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 with 3,0...
Apr 8 2021	Gadhiya et al., <i>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 treatmen...

Apr 7 2021	Mulhem et al., <i>BMJ Open</i> , doi:10.1136/bmjopen-2020-027111... 3219 hospitalised patients with COVID-19 in Southeast Michigan: a retrospective database analysis of 3,219 hospitalized patients in the USA. Very d... 28% higher mortality ($p=0.1$).
Apr 6 2021	Mokhtari et al., <i>International Journal of Infectious Diseases</i> , doi:10.1016/j.ijid.2021.03.041... Clinical outcomes of patients with mild COVID-19 following treatment with hydroxychloroquine... 70% lower mortality ($p<0.0001$) and 35% lower hospitalization ($p<0.0001$).
Apr 5 2021	Edington et al., <i>European Journal of Clinical Microbiology and Infectious Diseases</i> , doi:10.1007/s12250-021-00711-1... Safety of treatment with chloroquine and hydroxychloroquine: A ten-year retrospective analysis of 46 RCTs with 23,132 patients, showing no mortality attributed to CQ/H... Safety analysis of CQ and HCQ covering 46 RCTs with 23,132 patients, showing no mortality attributed to CQ/H...
Apr 1 2021	Morales-Asencio et al., <i>NCT04342542</i> , doi:10.1186/1745-6216-1-1... Prevention of COVID19 Infection in Nursing Homes by Chemoprophylaxis... Estimated 1,930 participant HCQ prophylaxis nursing home RCT with results not reported over 2 years after es...
Mar 31 2021	Alghamdi et al., <i>Antibiotics</i> , doi:10.3390/antib1003031... Clinical Efficacy of Hydroxychloroquine in Patients with COVID-19: Findings from a Retrospective Study... 7% higher mortality ($p=0.88$). Retrospective 775 hospitalized patients in Saudi Arabia showing no significant di...
Mar 26 2021	Faruqui et al., <i>Indian J. Med. Res.</i> , doi:10.4103/ijmr.ijmr202010000... Safety of hydroxychloroquine in healthcare workers for COVID-19 prophylaxis... Retrospective 1303 health care workers finding that HCQ prophylaxis was well tolerated. 20% reported an adv...
Mar 24 2021	Dev et al., <i>Transactions of The Royal Society of Open Health</i> , doi:10.1098/rsos.210000... Risk factors and frequency of COVID-19 among healthcare workers at a tertiary care hospital in India... 26% fewer cases ($p=0.003$). Retrospective case control study of 3,100 healthcare workers in India showing low...
Mar 23 2021	Barry et al., <i>International Journal of Infectious Diseases</i> , doi:10.1016/j.ijid.2021.03.041... Clinical Characteristics and Outcomes of Hospitalized COVID-19 Patients in Saudi Arabia... 99% lower mortality ($p=0.6$). 605 hospitalized patients in Saudi Arabia showing no mortality with HCQ (only 6 ...
Mar 17 2021	Stewart et al., <i>PLoS ONE</i> , doi:10.1371/journal.pone.0241111... COVID-19 Evidence Accelerator: A parallel analysis to describe the use of hydroxychloroquine... 18% higher mortality ($p=0.27$) and 29% higher ventilation ($p=0.09$). Collection of seven retrospective database ...
Mar 17 2021	Dang et al., <i>bioRxiv</i> , doi:10.1101/2021.03.15.450000... Structural basis of anti-SARS-CoV-2 activity of hydroxychloroquine: spectroscopy study... Microscopy/spectroscopy study showing that HCQ binds to both N-terminal domain and C-terminal domain of ...
Mar 12 2021	Roy et al., <i>medRxiv</i> , doi:10.1101/2021.03.10.21250000... Outcome of Different Therapeutic Interventions in Mild COVID-19 Patients... 2% faster recovery ($p=0.96$). Retrospective database analysis of 56 mild COVID-19 patients, all treated with vita...
Mar 9 2021	Vivanco-Hidalgo et al., <i>Eurosurveillance</i> , doi:10.2807/1564-5026.2021.26(3):2000000... Incidence of COVID-19 in patients exposed to chloroquine and hydroxychloroquine... 46% higher hospitalization ($p=0.1$) and 8% more cases ($p=0.5$). Retrospective database analysis of chronic HC...
Mar 8 2021	Martin-Vicente et al., <i>medRxiv</i> , doi:10.1101/2021.03.07.21240000... Absent or insufficient anti-SARS-CoV-2 S antibodies at ICU admission are associated with poor outcomes... 59% lower mortality ($p=0.41$). Retrospective 92 ICU patients with almost all treated with HCQ and only one non...
Mar 4 2021	Salvador et al., <i>Cureus</i> , doi:10.7755/cureus.10000000000000000000... Clinical Features and Prognostic Factors of 245 Portuguese Patients Hospitalized with COVID-19... Retrospective analysis of 245 Portuguese patients hospitalized with COVID-19. The study aimed to identify clinical features and prognostic factors. The study included 245 patients, with 100 (40.8%) being treated with HCQ. The study found that HCQ treatment was associated with a higher mortality rate (10.0% vs 4.0%, $p=0.001$).

33% lower mortality ($p=0.1$), 448% higher ventilation ($p=0.003$), and 17% lower combined mortality/intubation...

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Rubio-Sánchez et al., *Advanc...* *Prognostic factors for the severity of SARS-CoV-2 infection*
40% lower severe cases ($p=0.02$). Retrospective 197 hospitalized COVID-19 patients in Spain, showing lower p...

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Pham et al., *Rheumatology A...* *Failure of chronic hydroxychloroquine in preventing severe complications...*
20% lower mortality ($p=0.77$) and 35% higher ICU admission ($p=0.61$). Tiny retrospective database analysis of ...

Feb 28
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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 was s...

Feb 28
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Bhandari et al., *International J...* *A Preventive Study on Hydroxychloroquine Prophylaxis against COVID-19...*
Retrospective 4,239 healthcare workers using HCQ prophylaxis showing no mortality, 8 mild symptomatic cas...

Feb 27
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Shang et al., *Virology Journal,...* *Inhibitors of endosomal acidification suppress SARS-CoV-2 replication a...*
In Vitro study showing that endosomal acidification inhibitors including chloroquine reduce SARS-CoV-2 replic...

Feb 26
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Mordmüller et al., *NCT04342...* *Hydroxychloroquine for COVID-19 (COV-HCQ)*
30 patient HCQ late treatment RCT with results not reported over 2.5 years after completion.

Feb 26
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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 faster ...

Feb 26
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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 that th...

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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 treatment, c...

Feb 23
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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% SOFA...

Feb 20
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Bae et al., *Viruses 2021, doi:1...* *Recent Hydroxychloroquine Use Is Not Significantly Associated with Posi...*
30% fewer cases ($p=0.18$). Retrospective database analysis of prior HCQ usage in South Korea, showing non-s...

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Lamback et al., *The Brazilian ...* *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. Retrospecti...

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Awad et al., *American Journal...* *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 ($p<0.0001$). ...

Feb 16 2021	Gül et al., NCT04981379	<i>Clinical Trial For Early SARS-CoV-2 (COVID-19) Treatment</i> 1,120 patient HCQ early treatment RCT with results not reported over 2.5 years after completion.
Feb 15 2021	Mahto et al., American Journ...	<i>Seroprevalence of IgG against SARS-CoV-2 and its determinants among ...</i> 27% lower IgG positivity ($p=0.38$) . Retrospective 689 healthcare workers in India, showing no significant difference...
Feb 11 2021	Lora-Tamayo et al., J. Infectio...	<i>Early Lopinavir/ritonavir does not reduce mortality in COVID-19 patients: ...</i> 50% lower mortality ($p<0.0001$) . Lopinavir/ritonavir retrospective study also showing univariate results for HCQ...
Feb 10 2021	Desai et al., J. Clinical Medici...	<i>The Use of Antiviral Agents against SARS-CoV-2: Ineffective or Time and ...</i> Retrospective 143 COVID-19 hospitalized patients >65yo, showing adjusted OR for antiviral treatment starting ...
Feb 9 2021	Lounnas e al., Archives of Mic...	<i>Revisiting a Meta-analysis Shows that Hydroxychloroquine with Azithrom...</i> Analysis of the Fiolet meta analysis and correction of bias evaluation, showing HCQ RR 0.45 [0.31-0.59], and H...
Feb 9 2021	Purwati et al., Biochemistry R...	<i>A Randomized, Double-Blind, Multicenter Clinical Study Comparing the E...</i> 66% improved viral clearance ($p<0.0001$) . RCT 754 patients comparing HCQ+AZ along with other treatment gr...
Feb 5 2021	Fitzgerald et al., medRxiv, doi:...	<i>Risk Factors for Infection and Health Impacts of the COVID-19 Pandemic...</i> 9% fewer cases ($p=0.54$) . Retrospective 4666 people with autoimmune or inflammatory conditions, showing H...
Feb 5 2021	Hernandez-Cardenas et al., ...	<i>Hydroxychloroquine for the treatment of severe respiratory infection by C...</i> 12% lower mortality ($p=0.66$) . Very late stage RCT with 214 patients, mean SpO ₂ 65%, 162 on mechanical vent...
Feb 5 2021	Ouedraogo et al., Revue des ...	<i>Factors associated with the occurrence of acute respiratory distress and ...</i> 33% lower mortality ($p=0.38$) and 68% lower severe cases ($p=0.001$) . Retrospective 456 patients in Burkina Fas...
Feb 1 2021	Alexander et al., medRxiv, doi:...	<i>Early Multidrug Outpatient Treatment of SARS-CoV-2 Infection (COVID-1...</i> Review of studies on treatment of COVID-19 for nursing home residents, concluding that there is a large >60% ...
Feb 1 2021	Ubaldo et al., Critical Care Re...	<i>COVID-19: A Single-Center ICU Experience of the First Wave in the Philip...</i> 18% lower mortality ($p=0.64$) . Retrospective ICU patients in the Philippines showing unadjusted HCQ RR 0.82, ...
Jan 31 2021	Abu-Helalah et al., NCT04597...	<i>Chemoprevention Clinical Trial of COVID-19: Hydroxychloroquine Post Ex...</i> Estimated 93 participant HCQ prophylaxis RCT with results not reported over 2.5 years after estimated comple...
Jan 31 2021	Naderi et al., Immunopatholo...	<i>Prophylactic effects of hydroxychloroquine on the incidence of COVID-19...</i> Prospective observational study of 215 RA patients treated with HCQ showing 9 cases, 1 hospitalization (witho...
Jan 31 2021	Roig et al., Revista Espanola d...	<i>Clinical and pharmacological data in COVID-19 hospitalized nonagenaria...</i>

		16% lower mortality ($p=0.76$). Retrospective 79 hospitalized nonagenarian patients showing unadjusted HCQ ...
Jan 29 2021	Di Castelnuovo et al., <i>Journal ...</i>	Disentangling the Association of Hydroxychloroquine Treatment with Mo... 40% lower mortality ($p<0.0001$). Retrospective 4,396 hospitalized patients in Italy showing significantly lower ...
Jan 27 2021	Strangfeld et al., <i>Annals of the...</i>	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 mortalit...
Jan 27 2021	Trefond et al., <i>Revue du Rhum...</i>	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 hospiti...
Jan 26 2021	Eftekhari et al., <i>medRxiv, doi:1...</i>	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 significan...
Jan 25 2021	Dabbous et al., <i>Archives of Vir...</i>	Efficacy of favipiravir in COVID-19 treatment: a multi-center randomized ... This study was retracted.
Jan 25 2021	Hussein et al., <i>Journal of Mol...</i>	Molecular Docking Identification for the efficacy of Some Zinc Complex... Molecular dynamics analysis recommending Zn (CQ) Cl ₂ (H ₂ O) and Zn (HCQ) Cl ₂ (H ₂ O) as potential inhibitors f...
Jan 24 2021	Zelenko, Z., <i>Preprint</i>	Nebulized Hydroxychloroquine for COVID-19 Treatment: 80x Improveme... Report on the use of nebulized HCQ showing much more rapid improvement compared to tablets, with 95% of...
Jan 23 2021	Cifuentes et al., <i>Medicina Clín...</i>	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 no co...
Jan 18 2021	Li et al., <i>Science China Life Sc...</i>	Evaluation of the efficacy and safety of hydroxychloroquine in compariso... 50% higher hospital discharge ($p=0.09$). Small RCT comparing HCQ and CQ in China with 88 very late stage (1...
Jan 13 2021	Khoubnasabjafari et al., <i>Post...</i>	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 in ca...
Jan 12 2021	Li et al., <i>Research Square, doi...</i>	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 hospitalize...
Jan 10 2021	Rangel et al., <i>Journal of the A...</i>	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 patients that...
Jan 8 2021	Yegerov et al., <i>medRxiv, doi:1...</i>	Epidemiological and Clinical Characteristics, and Virologic Features of C... 95% lower mortality ($p=1$). Retrospective 1,072 hospitalized patients in Kazakhstan showing no mortality for H...

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 molecular dy...

Jan 6 2021 *Noureddine et al., Journal of ...* **Quantum chemical studies on molecular structure, AIM, ELF, RDG and a...**
In silico analysis of hydroxychloroquine and hydroxychloroquine sulfate predicting that hydroxychloroquine sulf...

Jan 4 2021 *Gautret et al., International Jo...* **Safety profile of hydroxychloroquine and azithromycin combined treatme...**
Report on the safety of HCQ+AZ with 3,737 COVID-19 patients. 138 had contraindications and treatment was ...

Jan 2 2021 *Sarfaraz et al., medRxiv, doi:1...* **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 HCQ m...

Jan 1 2021 *Lotfy et al., Turk. Thorac. J., d...* **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 ($p=0.53$). Retro...

Jan 1 2021 *Sands et al., International Jou...* **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 1.81, p ...

Dec 31 2020 *Okasha et al., NCT04361318* **Hydroxychloroquine and Nitazoxanide Combination Therapy for COVID-19**
Estimated 100 patient HCQ early treatment RCT with results not reported over 2.5 years after estimated compl...

Dec 31 2020 *Mahale et al., Indian Journal ...* **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 signifi...

Dec 31 2020 *Matada et al., Bioorganic & M...* **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 *Pseudos et al., Open Forum In...* **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-statistically signi...

Dec 31 2020 *Texeira et al., Open Forum Inf...* **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-statistically sign...

Dec 31 2020 *Vernaz et al., Swiss Medical ...* **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 patient...

Dec 30 2020 *McCullough et al., Reviews in ...* **Multifaceted highly targeted sequential multidrug treatment of early amb...**
Review urging early treatment of COVID-19 with sequential multidrug treatment that has been shown to be saf...

Dec 30 2020 *Procter et al., Reviews in Card...* **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% hospitali...
Dec 29 2020	Güner et al., <i>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 admi...
Dec 28 2020	Cordtz et al., <i>Rheumatology, ...</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 risk of C...
Dec 24 2020	Chari et al., <i>Blood, doi:10.118...</i> Clinical features associated with COVID-19 outcome in multiple myelom... 33% lower mortality ($p=0.17$). Retrospective multiple myeloma patients showing lower mortality with HCQ trea...
Dec 23 2020	Su et al., <i>BioScience Trends, ...</i> Efficacy of early hydroxychloroquine treatment in preventing COVID-19 p... 85% lower progression ($p=0.006$), 24% faster improvement ($p=0.02$), and 36% improved viral clearance ($p=0.0...$
Dec 23 2020	Taccone et al., <i>The Lancet Re...</i> The role of organizational characteristics on the outcome of COVID-19 p... 25% lower mortality ($p=0.02$). Retrospective 1,747 ICU patients in Belgium showing lower mortality with HCQ, ...
Dec 22 2020	Cangiano et al., <i>Aging, doi:10...</i> Mortality in an Italian nursing home during COVID-19 pandemic: correlati... 73% lower mortality ($p=0.03$). 73% lower mortality with HCQ. Analysis of 98 PCR+ nursing home residents in It...
Dec 19 2020	Huh et al., <i>International Journ...</i> Association of prescribed medications with the risk of COVID-19 infectio... 251% higher progression ($p=0.11$) and 6% fewer cases ($p=0.82$). Retrospective database analysis with 17 case...
Dec 18 2020	Matangila et al., <i>PLoS ONE, d...</i> Clinical characteristics of COVID-19 patients hospitalized at Clinique Ng... 55% lower mortality ($p=0.21$). 55% lower death with HCQ+AZ. Retrospective 160 hospitalized patients in the D...
Dec 16 2020	Signes-Costa et al., <i>Archivos ...</i> Prevalence and 30-day mortality in hospitalized patients with COVID-19 ... 47% lower mortality ($p=0.0005$). 47% lower mortality with HCQ/CQ. Retrospective 1,271 patients with lung dis...
Dec 16 2020	Gönenli et al., <i>Infectious Dise...</i> Analysis of the Prophylactic use of Hydroxychloroquine at the Beginning ... 30% lower progression ($p=0.77$) and 19% more cases ($p=0.58$). Small prophylaxis survey showing lower, but n...
Dec 14 2020	De Luna et al., <i>medRxiv, doi:1...</i> Clinical and Demographic Characteristics of COVID-19 Patients Admitte... 105% higher mortality ($p=0.69$). Retrospective 150 patients in the Dominican Republic, 132 treated with HCQ, ...
Dec 14 2020	Sofian et al., <i>Wiener Medizinis...</i> SARS-CoV-2, a virus with many faces: a series of cases with prolonged p... Report on a series of 10 patients experiencing prolonged COVID-19 symptoms that were given HCQ 250mg bi...
Dec 14 2020	Orioli et al., <i>Diabetes & Metab...</i> Clinical characteristics and short-term prognosis of in-patients with diab... 13% lower mortality ($p=1$). Small retrospective study of 73 diabetic patients in Belgium, 55 HCQ patients, sho...

Dec 14 2020 Naseem et al., medRxiv, doi:1... *Predicting mortality in SARS-COV-2 (COVID-19) positive patients in the in...*
33% lower mortality ($p=0.34$). Retrospective 1,214 hospitalized patients in Pakistan, 77 HCQ patients, showing...

Dec 14 2020 Tan et al., Virus Research, doi... *A retrospective comparison of drugs against COVID-19*
35% shorter hospitalization ($p=0.04$). Retrospective 333 patients in China, with only 8 HCQ patients, showing s...

Dec 11 2020 Levi et al., NCT04355052 *Open Label Study to Compare Efficacy, Safety and Tolerability of Hydroxy...*
 Estimated 250 patient HCQ late treatment RCT with results not reported over 2.5 years after estimated comple...

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 HCQ tre...

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 not ass...

Dec 11 2020 Jung et al., Clinical Microbiol... *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 patients n...

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, sho...

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 Jordan, sho...

Dec 10 2020 Italian Council of State *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 suspended ...

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 earl...

Dec 9 2020 Agusti et al., Enfermedades In... *Efficacy and safety of hydroxychloroquine in healthcare professionals wit...*
68% lower progression ($p=0.21$) and **32% faster viral clearance**. Small trial of low dose HCQ for healthcare wor...

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 signific...

Dec 7 2020 WellStar, NCT04429867 *Hydroxychloroquine Use in Hospitalized Patients With COVID-19: Impact ...*
 Estimated 700 patient HCQ late treatment RCT with results not reported over 2.5 years after estimated comple...

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 patients ...
Dec 4 2020	Ozturk et al., <i>Nephrology Dial...</i>	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 kidney dis...
Dec 4 2020	Modrak et al., <i>medRxiv, doi:1...</i>	Detailed disease progression of 213 patients hospitalized with Covid-19 i... 59% lower mortality ($p=0.04$). Retrospective 213 hospitalized patients in Czech Republic showing lower mortal...
Dec 4 2020	Peng et al., <i>Nephrology Dialys...</i>	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-statistically si...
Dec 2 2020	Wiseman et al., <i>medRxiv, doi:...</i>	Effective post-exposure prophylaxis of Covid-19 is associated with use of... 42% fewer cases ($p=0.04$). 6th independent analysis showing efficacy from the Boulware PEP trial. This prospe...
Dec 1 2020	Capsoni et al., <i>Research Squa...</i>	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 failure sh...
Nov 30 2020	Aboulenain et al., <i>HCA Health...</i>	The Effect of Hydroxychloroquine on In-Hospital Mortality in COVID-19 15% higher mortality ($p=0.72$). Retrospective 175 hospitalized COVID-19 patients in the USA, showing no signi...
Nov 30 2020	Abdulrahman et al., <i>medRxiv, ...</i>	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 analysis of a...
Nov 29 2020	Abd-Elsalam et al., <i>Biological ...</i>	Do Zinc Supplements Enhance the Clinical Efficacy of Hydroxychloroquin... 191 patient RCT in Egypt comparing the addition of zinc to HCQ, not showing a significant difference. No infor...
Nov 28 2020	Lambermont et al., <i>Critical Ca...</i>	Predictors of Mortality and Effect of Drug Therapies in Mechanically Vent... 32% lower mortality ($p=0.46$). Retrospective 247 mechanically ventilated patients showing lower mortality with...
Nov 28 2020	Ruiz et al., <i>International Journ...</i>	Hydroxychloroquine lung pharmacokinetics in critically ill patients infecte... HCQ lung pharmacokinetic study confirming that lung concentrations can be much higher than plasma and ex...
Nov 28 2020	Rodriguez-Gonzalez et al., <i>Int...</i>	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. Subject...
Nov 27 2020	van Halem et al., <i>BMC Infect ...</i>	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 mortality with ...
Nov 26 2020	Burdick et al., <i>Journal of Clini...</i>	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 difference ...

- 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 mortali...
- 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 treatment, un...
- Nov 22
2020 Akram et al., *Trials, doi:10.11...* **Pakistan Randomized and Observational Trial to Evaluate Coronavirus Tr...**
550 patient HCQ early treatment RCT with results not reported over 2.5 years after completion.
- 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 418 cont...
- 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). Lo...
- Nov 19
2020 Falcone et al., *Open Forum In...* **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 showing 65%...
- Nov 18
2020 Budhiraja et al., *medRxiv, doi:...* **Clinical Profile of First 1000 COVID-19 Cases Admitted at Tertiary Care H...**
65% lower mortality (p<0.0001). Retrospective 976 hospitalized patients with 834 treated with HCQ+AZ showi...
- Nov 17
2020 Boari et al, *Biosci. Rep., doi:1...* **Prognostic factors and predictors of outcome in patients with COVID-19 ...**
55% lower mortality (p=0.001). Retrospective 258 hospitalized patients in Italy showing lower mortality with H...
- Nov 13
2020 Sheshah et al., *Diabetes Rese...* **Prevalence of Diabetes, Management and Outcomes among Covid-19 A...**
80% lower mortality (p=0.001). Retrospective 300 hospitalized patients in Saudi Arabia showing HCQ adjusted ...
- Nov 12
2020 Simova et al., *New Microbes ...* **Hydroxychloroquine for prophylaxis and treatment of COVID-19 in health ...**
94% lower hospitalization (p=0.01) and 96% improved viral clearance (p=0.001). 100% reduction in hospitaliza...
- Nov 12
2020 Simova et al., *New Microbes ...* **Hydroxychloroquine for prophylaxis and treatment of COVID-19 in health ...**
93% fewer cases (p=0.01). 100% reduction in cases with HCQ+zinc post-exposure prophylaxis. Brief report for ...
- Nov 12
2020 Tchounga et al., *Journal of Ph...* **Composition analysis of falsified chloroquine phosphate samples seized ...**
Analysis of fake CQ tablets finding: - no CQ in six samples, substituted with metronidazole (at sub-therapeutic l...
- Nov 11
2020 Águila-Gordo et al., *Revista E...* **Mortality and associated prognostic factors in elderly and very elderly ho...**
67% lower mortality (p=0.1). 67% lower mortality with HCQ. Retrospective 416 elderly patients in Spain showin...
- Nov 9
2020 Khamis et al., *International Jo...* **Randomized Controlled Open Label Trial on the Use of Favipiravir Combi...**

Small 89 patient RCT comparing favipiravir and inhaled interferon with HCQ for moderate to severe COVID-19 ...

Nov 9
2020

Rodriguez et al., *Medicina Int...* **Severe infection due to the SARS-CoV-2 coronavirus: Experience of a tert...**
59% lower mortality ($p=0.23$). Small prospective study of 43 hospitalized patients with 39 taking HCQ, showin...

Nov 9
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Self et al., *JAMA, doi:10.1001...* **Effect of Hydroxychloroquine on Clinical Status at 14 Days in Hospitalize...**
6% higher mortality ($p=0.85$) and **3% worse 7-point scale results** ($p=0.87$). Early terminated very late stage (65...

Nov 9
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Brown et al., *Annals of the A...* **Hydroxychloroquine vs. Azithromycin for Hospitalized Patients with COVI...**
Small early terminated very late stage (86% on oxygen, 44% enrolled in the ICU) RCT comparing HCQ vs. AZ, n...

Nov 9
2020

Núñez-Gil et al., *Intern. Emer...* **Mortality risk assessment in Spain and Italy, insights of the HOPE COVID-...**
8% lower mortality ($p=0.005$). Retrospective database study of 1,021 patients in Ecuador, Germany, Italy, and S...

Nov 6
2020

Mathai et al., *J. Marine Medic...* **Hydroxychloroquine as pre-exposure prophylaxis against COVID-19 in he...**
90% fewer cases ($p<0.0001$). 90% reduction in cases with HCQ pre-exposure prophylaxis. Retrospective 604 h...

Nov 6
2020

Datta et al., *Journal of Vaccin...* **No Role of HCQ in COVID-19 Prophylaxis: A Survey amongst Indian Doct...**
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 Jo...* **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 with 1...

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 HCQ a...

Nov 5
2020

Rodriguez-Nava et al., *Mayo ...* **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 respiratory...

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 treatment, u...

Nov 4
2020

Cadegiani et al., *New Microb...* **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** ($p<0.0001$). Co...

Nov 3
2020

Behera et al., *PLoS ONE, doi:...* **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, and vita...

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 shorter d...

Nov 7 2020	Niwas et al., <i>Advances in Res...</i> <i>Clinical outcome, viral response and safety profile of chloroquine in COVI...</i> 29% faster recovery ($p=0.008$). Retrospective 12 hospitalized patients in India treated with CQ and 17 controls,...
Oct 31 2020	Szente Fonseca et al., <i>Travel ...</i> <i>Risk of Hospitalization for Covid-19 Outpatients Treated with Various Dru...</i> 64% lower hospitalization ($p=0.0008$). 64% lower hospitalization with HCQ. Retrospective 717 patients in Brazi...
Oct 30 2020	Tehrani et al., <i>International Jo...</i> <i>Risk factors for mortality in adult COVID-19 patients: frailty predicts fatal ...</i> 13% lower mortality ($p=0.63$). Retrospective 255 hospitalized patients, 65 treated with HCQ, showing unadjust...
Oct 27 2020	Arleo et al., <i>medRxiv, doi:10.1...</i> <i>Clinical Course and Outcomes of coronavirus disease 2019 (COVID-19) i...</i> 50% lower mortality ($p=0.67$). Retrospective hospitalized rheumatic disease patients showing 50% lower mort...
Oct 27 2020	Choi et al., <i>International Jour...</i> <i>Comparison of antiviral effect for mild-to-moderate COVID-19 cases bet...</i> 22% slower viral clearance ($p=0.0001$). Health insurance database analysis failing to adjust for disease severity...
Oct 26 2020	Frontera et al., <i>Research Squ...</i> <i>Treatment with Zinc is Associated with Reduced In-Hospital Mortality A...</i> 37% lower mortality ($p=0.02$). Retrospective 3,473 hospitalized patients showing lower mortality with HCQ+zinc.
Oct 24 2020	Goenka et al., <i>SSRN, doi:10.2...</i> <i>Seroprevalence of COVID-19 Amongst Health Care Workers in a Tertiary ...</i> 87% lower IgG positivity ($p=0.03$). Study of SARS-CoV-2-IgG antibodies in 1122 health care workers in India fin...
Oct 23 2020	Coll et al., <i>American Journal ...</i> <i>Covid-19 in transplant recipients: the spanish experience</i> 46% lower mortality ($p<0.0001$). Retrospective 652 transplant recipient patients in Spain showing 46% lower m...
Oct 21 2020	Lano et al., <i>Clinical Kidney Jo...</i> <i>Risk factors for severity of COVID-19 in chronic dialysis patients from a ...</i> 33% lower mortality ($p=0.28$) and 39% lower combined mortality/ICU admission ($p=0.23$). 33% lower mortality...
Oct 21 2020	Dubee et al., <i>Clinical Microbio...</i> <i>Hydroxychloroquine in mild-to-moderate COVID-19: a placebo-controlle...</i> 46% lower mortality ($p=0.21$) and 26% lower combined mortality/intubation ($p=0.48$). Small early terminated la...
Oct 21 2020	Ñamendys-Silva et al., <i>Heart ...</i> <i>Outcomes of patients with COVID-19 in the Intensive Care Unit in Mexico...</i> 32% lower mortality ($p=0.19$). Retrospective 164 ICU patients in Mexico showing 32% lower mortality with HC...
Oct 20 2020	IHU Marseille <i>Meta-analysis on chloroquine derivatives and COVID-19 mortality</i> Updated meta analysis of 41 studies showing CQ/HCQ OR 0.57, $p<0.0001$ from clinical studies. For big data st...
Oct 20 2020	Solh et al., <i>medRxiv, doi:10.1...</i> <i>Clinical course and outcome of COVID-19 acute respiratory distress synd...</i> 18% higher mortality ($p=0.17$). Retrospective database analysis of 7,816 Veterans Affairs hospitalized patients ...
Oct 17 2020	Mohana et al., <i>International J...</i> <i>Hydroxychloroquine Safety Outcome within Approved Therapeutic Proto...</i>

Safety study of 2,733 patients in Saudi Arabia showing HCQ in mild to moderate cases in an outpatient setting...

Oct 15
2020

Burney et al., NCT04370015 *Hydroxychloroquine Chemoprophylaxis for COVID-19 Infection in High-ri...*
Estimated 374 participant HCQ prophylaxis RCT with results not reported over 2.5 years after estimated compli...

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 with m...

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 oxygen/vent...

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, findin...

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 incidence of c...

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 lipoprotein chol...

Oct 8
2020

Soto-Becerra et al., *medRxiv, ...* *Real-World Effectiveness of hydroxychloroquine, azithromycin, and iverm...*
18% lower mortality ($p<0.0001$). Retrospective database study of 5683 patients, 692 received HCQ/CQ+AZ, 20...

Oct 6
2020

Ader et al., *medRxiv, doi:10.1...* *An open-label randomized, controlled trial of the effect of lopinavir/ritona...*
15% higher mortality ($p=0.7$) and **24% improved viral clearance ($p=0.68$)**. Early terminated very late stage (95%...

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 Covid...*
Meta analysis of 43 studies reporting: "HCQ was found consistently effective against COVID-19 when used earl...

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 patients i...

Oct 1
2020

Almazrou et al., *Saudi Pharm...* *Comparing the impact of Hydroxychloroquine based regimens and stand...*
65% lower ventilation ($p=0.16$) and **21% lower ICU admission ($p=0.78$)**. Retrospective 161 hospitalized patients...

Sep 30
2020

Sow et al., NCT04501965 *Phytomedicines Versus Hydroxychloroquine as an Add on Therapy to Az...*
231 patient HCQ vs. phytomedicines early treatment RCT with results not reported over 2.5 years after comple...

- Sep 30 2020 Yadav et al., ResearchGate, d... Sero-survey for health-care workers provides corroborative evidence for t...
82% lower hospitalization ($p=0.01$) and 42% fewer cases ($p=0.05$). ICMR seroprevalence survey of 500 healthc...
- 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 risk exp...
- 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%, odds rati...
- Sep 30 2020 Ladapo et al., medRxiv, doi:1... Randomized Controlled Trials of Early Ambulatory Hydroxychloroquine in...
24% lower combined death/hospitalization/cases ($p=0.03$). Meta analysis of prophylactic and early treatment ...
- Sep 30 2020 Abella et al., JAMA Internal M... Efficacy and Safety of Hydroxychloroquine vs Placebo for Pre-exposure S...
5% fewer cases ($p=1$). Very small early-terminated underpowered PrEP RCT with 64/61 HCQ/control patients a...
- 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 in the ...
- 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... 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 differ...
Safety study of 649 patients finding that HCQ administration is safe for short-term treatment for patients with ...
- Sep 24 2020 Shoaibi et al., medRxiv, doi:1... Comparative Effectiveness of Famotidine in Hospitalized COVID-19 Patie...
15% lower mortality ($p=0.001$). Retrospective database analysis focused on Famotidine but also showing resul...
- Sep 23 2020 Ulrich et al., Open Forum Infe... Treating Covid-19 With Hydroxychloroquine (TEACH): A Multicenter, Dou...
6% higher mortality ($p=1$) and 173% higher ICU admission ($p=0.13$). Small RCT on very late stage use of HCQ, ...
- 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+AZ, s...
- 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 conditio...
- 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, $p < 0.05$ will...
Sep 21 2020	Grau-Pujol et al., <i>Trials</i> , doi:10... Pre-exposure prophylaxis with hydroxychloroquine for COVID-19: a doub... 11% fewer cases ($p=1$). Small PrEP RCT showing that PrEP with HCQ is safe at the dosage used. There were no...
Sep 21 2020	Lofgren et al., <i>Open Forum Inf...</i> Safety of Hydroxychloroquine among Outpatient Clinical Trial Participant... Analysis of 2,795 outpatients not showing significant safety concerns with HCQ. No deaths were related to HC...
Sep 18 2020	Axfors et al., <i>Nature</i> , doi:10.1... Mortality outcomes with hydroxychloroquine and chloroquine in COVID-... Meta analysis assigning 89% weight to the RECOVERY and SOLIDARITY trials, producing the same result. Thes...
Sep 16 2020	Karatza et al., <i>Xenobiotica</i> 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 signific...
Sep 15 2020	Ashinyo et al., <i>Pan African Me...</i> Clinical characteristics, treatment regimen and duration of hospitalizatio... 33% shorter hospitalization ($p=0.03$). Retrospective 307 hospital patients in Ghana showing 33% reduction in ...
Sep 14 2020	Lauriola et al., <i>Clinical and Tra...</i> 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, adjusted ...
Sep 13 2020	Sulaiman et al., <i>medRxiv</i> , doi:... The Effect of Early Hydroxychloroquine-based Therapy in COVID-19 Patie... 64% lower mortality ($p=0.01$) and 39% lower hospitalization ($p=0.001$). Observational prospective 5,541 patien...
Sep 12 2020	Pellegrini et al., <i>COVID-SHIEL...</i> Effectiveness of Prophylactic Hydroxychloroquine on incidence of COVID... Estimated 2,250 participant HCQ prophylaxis RCT with results not reported over 2.5 years after estimated com...
Sep 12 2020	Heberto et al., <i>IJC Heart & Va...</i> 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 hospitalized ...
Sep 9 2020	Alamdari et al., <i>Tohoku J. Exp...</i> Mortality Risk Factors among Hospitalized COVID-19 Patients in a Major ... 55% lower mortality ($p=0.03$). Retrospective 459 patients in Iran with 93% treated with HCQ, showing HCQ mo...
Sep 9 2020	Kirenga et al., <i>BMJ Open Res...</i> Characteristics and outcomes of admitted patients infected with SARS-C... 26% faster recovery ($p=0.2$). Prospective 56 patients in Uganda, 29 HCQ and 27 control, showing 25.6% faster...
Sep 9 2020	Rentsch et al., <i>The Lancet Rh...</i> Effect of pre-exposure use of hydroxychloroquine on COVID-19 mortality:... 3% higher mortality ($p=0.83$). Observational database study of RA/SLE patients in the UK, 194,637 RA/SLE pati...
Sep 9 2020	Laplana et al., <i>PLOS ONE</i> , doi... Lack of protective effect of chloroquine derivatives on COVID-19 disease ... 56% more cases ($p=0.24$). Survey of 319 autoimmune disease patients taking CQ/HCQ with 5.3% COVID-19 in...

Sep 7 2020	IHU, <i>Expert Review of Clinical ...</i> Natural history and therapeutic options for COVID-19 Review of the current state of knowledge regarding the natural history of and therapeutic options for COVID-19...
Sep 5 2020	Synolaki et al., <i>medRxiv, doi:1...</i> The Activin/Follistatin-axis is severely deregulated in COVID-19 and inde... 24% lower mortality (p=0.27) . Retrospective 117 patients, 58 HCQ showing lower mortality for HCQ patients. V...
Sep 4 2020	Furtado et al., <i>The Lancet, doi...</i> Azithromycin in addition to standard of care versus standard of care alon... Small RCT comparing the addition of AZ for very late stage patients on ventilation or oxygen. No significant diff...
Sep 2 2020	Wang et al., <i>Phytomedicine, d...</i> Chloroquine and hydroxychloroquine as ACE2 blockers to inhibit viropexi... <i>In Vitro</i> study providing novel insights into the molecular mechanism of CQ/HCQ treatment, showing that CQ a...
Sep 2 2020	Heras et al., <i>European Geriatri...</i> COVID-19 mortality risk factors in older people in a long-term care center 96% lower mortality (p=0.004) . Retrospective 100 COVID+ elderly nursing home patients, HCQ+AZ mortality 11...
Sep 2 2020	de la Iglesia et al., <i>medRxiv, d...</i> Hydroxicloroquine for pre-exposure prophylaxis for SARS-CoV-2 43% more cases (p=0.15) . Analysis of autoimmune disease patients on HCQ, compared to a control group fro...
Sep 7 2020	HeceI et al., <i>Pharmaceuticals,...</i> Zinc(II)—The Overlooked Éminence Grise of Chloroquine's Fight against ... Review of zinc as an inhibitor of SARS-CoV-2's RNA-dependent RNA polymerase, and zinc ionophores includin...
Sep 7 2020	Elbazidi et al., <i>New Microbes ...</i> Pandemic and social changes, political fate Analysis of US states and countries. Country analysis shows a significant correlation between the dates of deci...
Aug 30 2020	Sarwar et al., <i>NCT04346667</i> Post-Exposure Prophylaxis for Asymptomatic SARS-CoV-2 COVID-19 Pat... 125 participant HCQ prophylaxis RCT with results not reported over 3 years after completion.
Aug 30 2020	Sarwar et al., <i>NCT04351191</i> PRophylaxis of Exposed COVID-19 Individuals With Mild Symptoms Usin... 137 patient HCQ early treatment RCT with results not reported over 3 years after completion.
Aug 30 2020	Albani et al., <i>J, Clinical Medici...</i> Impact of Azithromycin and/or Hydroxychloroquine on Hospital Mortality ... 18% lower mortality (p=0.15) and 9% higher ICU admission (p=0.7) . Retrospective 1376 hospitalized patients i...
Aug 29 2020	Castillo et al., <i>Journal of Ster...</i> Effect of calcifediol treatment and best available therapy versus best avai... RCT on calcifediol (25-hydroxyvitamin D) treatment for hospitalized COVID-19 patients showing significantly re...
Aug 28 2020	Fried et al., <i>Clinical Infectious ...</i> 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 evid...
Aug 27 2020	Ferri et al., <i>Clinical Rheumatol...</i> 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 (HCQ e...
Aug 26 2020	Fiolet et al., <i>Clinical Microbiol...</i>	Effect of hydroxychloroquine with or without azithromycin on the mortalit... Meta analysis of late stage studies (and one early treatment study with only 2 deaths), showing HCQ RR 0.83 [...
Aug 25 2020	Ip et al., <i>BMC Infectious Disea...</i>	Hydroxychloroquine in the treatment of outpatients with mildly symptom... 55% lower mortality ($p=0.43$) and 37% lower hospitalization ($p=0.04$). Retrospective 1,274 outpatients, 47% re...
Aug 25 2020	Di Castelnuovo et al., <i>Europe...</i>	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 with HC...
Aug 24 2020	Connor et al., <i>NCT04352946</i>	HEalth Care Worker pROphylaxis Against COVID-19: The HERO Trial (HE... Estimated 374 participant HCQ prophylaxis RCT with results not reported over 3 years after estimated complet...
Aug 24 2020	Catteau et al., <i>Int. J. Antimicr...</i>	Low-dose Hydroxychloroquine Therapy and Mortality in Hospitalized Pati... 32% lower mortality ($p<0.0001$). Retrospective 8,075 hospitalized patients, 4,542 low-dose HCQ, 3,533 control...
Aug 23 2020	Pasquini et al., <i>Journal of Anti...</i>	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 with HC...
Aug 21 2020	Ly et al., <i>International Journal ...</i>	Pattern of SARS-CoV-2 infection among dependant elderly residents livin... 56% lower mortality ($p=0.02$). Retrospective analysis of retirement homes, HCQ+AZ \geq 3 days mortality OR 0.3...
Aug 21 2020	Lane et al., <i>The Lancet Rheu...</i>	Risk of hydroxychloroquine alone and in combination with azithromycin i... Retrospective study of RA patients using HCQ vs. sulfasalazine (another DMARD). HCQ treatment showed no i...
Aug 21 2020	Gonzalez et al., <i>medRxiv, doi:...</i>	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 hospitalized pati...
Aug 20 2020	Dubernet et al., <i>J. Global Anti...</i>	A comprehensive strategy for the early treatment of COVID-19 with azithr... 88% lower ICU admission ($p=0.008$). Retrospective analysis of 36 hospitalized patients showing HCQ/AZ assoc...
Aug 20 2020	Prodromos, C., <i>New Microbe...</i>	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 cardiac ...
Aug 18 2020	Pinato et al., <i>Cancer Discover...</i>	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 HR for ...
Aug 15 2020	El-Sherbiny et al., <i>NCT04477...</i>	Development and Validation of "Ready-to-Use" Inhalable Forms of Hydro... Estimated 40 patient HCQ inhaled late treatment RCT with results not reported over 3 years after estimated co...

- Aug 15
2020 Peters et al., *Clinical Microbio...* *Outcomes of Persons With COVID-19 in Hospitals With and Without Stan...*
9% higher mortality ($p=0.57$). Retrospective study of HCQ use in 9 hospitals in the Netherlands, showing no sig...
- Aug 14
2020 Abd-Elsalam et al., *American ...* *Hydroxychloroquine in the Treatment of COVID-19: A Multicenter Rando...*
This study was retracted.
- Aug 13
2020 Roomi et al., *J. Medical Intern...* *Efficacy of hydroxychloroquine and tocilizumab in patients with COVID-1...*
38% higher mortality ($p=0.54$). Retrospective 176 hospitalized patients (144 HCQ, 32 control) showing no signi...
- Aug 12
2020 Pablos et al., *Annals of the Rh...* *Clinical outcomes of hospitalised patients with COVID-19 and chronic in...*
126% higher severe cases ($p=0.002$). Retrospective 228 rheumatic disease and 228 non-rheumatic disease ho...
- Aug 11
2020 Tarek et al., *European Journal...* *Pharmacokinetic Basis of the Hydroxychloroquine Response in COVID-1...*
In Silico analysis of HCQ treatment showing concluding that HCQ may affect viral clearance if administered ear...
- Aug 11
2020 Bakhshaliyev et al., *J. Electro...* *The effect of 5-day course of hydroxychloroquine and azithromycin com...*
Safety study of 109 patients showing 5 days of HCQ+AZ did not lead to clinically significant QT prolongation or...
- Aug 11
2020 Saleemi et al., *medRxiv, doi:1...* *Time to negative PCR from symptom onset in COVID-19 patients on Hydr...*
21% slower viral clearance ($p=0.05$). Retrospective 65 HCQ+AZ, 20 control patients, showing median time to n...
- Aug 8
2020 Lopez et al., *Int. J. Antimicrob...* *Effects of Hydroxychloroquine on Covid-19 in Intensive Care Unit Patient...*
Small retrospective study of 29 ICU patients comparing those with HCQ plasma concentration within target to ...
- Aug 6
2020 Salvarani et al., *Arthritis & Rh...* *Susceptibility to COVID-19 in Patients Treated With Antimalarials: A Popu...*
6% fewer cases ($p=0.75$). Comparison of CQ/HCQ users with the general population in a region of Italy, showin...
- Aug 6
2020 McCullough et al., *The Ameri...* *Pathophysiological Basis and Rationale for Early Outpatient Treatment of...*
Review of pathophysiological principles related to early outpatient treatment and therapeutic approaches inclu...
- Aug 6
2020 Watanabe et al., *Open Letter* *Concerns regarding the misinterpretation of statistical hypothesis testin...*
Open letter signed by 38 professors and doctors regarding misinterpretation of statistics in HCQ RCTs. Author...
- Aug 5
2020 Singer et al., *Annals of the Rh...* *Hydroxychloroquine ineffective for COVID-19 prophylaxis in lupus and rh...*
9% more cases ($p=0.62$). Comparison of the percentage of SLE/RA patients on immunosuppressants that were...
- Aug 5
2020 Kalligeros et al., *Journal of Gl...* *Hydroxychloroquine use in hospitalised patients with COVID-19: An obse...*
67% higher mortality ($p=0.57$). Small retrospective database analysis of 36 patients receiving HCQ not showin...
- Aug 4
2020 Kamran et al., *medRxiv, doi:1...* *Clearing the fog: Is HCQ effective in reducing COVID-19 progression: A r...*

		5% lower progression ($p=1$) and 26% improved viral clearance ($p=0.001$). Study of 349 low-risk hospitalized pa...
Aug 3 2020	Berenguer et al., <i>Clinical Micr...</i>	Characteristics and predictors of death among 4035 consecutively hospi... 18% lower mortality ($p=0.0001$). Retrospective 4035 hospitalized patients in Spain showing reduced mortality ...
Aug 3 2020	Yu et al., <i>Science China Life S...</i>	Beneficial effects exerted by hydroxychloroquine in treating COVID-19 pa... 83% lower progression ($p=0.05$) and 85% lower mortality ($p=0.02$). Retrospective 2,882 patients in China, medi...
Aug 2 2020	Davido et al., <i>Int. J. Antimicro...</i>	Impact of medical care including anti-infective agents use on the progno... 55% lower combined intubation/hospitalization ($p=0.04$). Retrospective of 132 hospitalized patients. HCQ+AZ(...
Aug 2 2020	Sheaff, R., <i>bioRxiv, doi:10.110...</i>	A New Model of SARS-CoV-2 Infection Based on (Hydroxy)Chloroquine A... <i>In Vitro</i> study presenting a new theory on SARS-CoV-2 infection and why HCQ/CQ provides benefits, which pot...
Aug 1 2020	Bernabeu-Wittel et al., <i>J. Gero...</i>	Effectiveness of a On-Site Medicalization Program for Nursing Homes wi... 59% lower mortality ($p=0.03$). Retrospective 272 nursing home residents showing significantly improved surviv...
Jul 31 2020	Ajili et al., <i>NCT04377646</i>	A Study of Hydroxychloroquine and Zinc in the Prevention of COVID-19 In... Estimated 660 participant HCQ prophylaxis RCT with results not reported over 3 years after estimated complet...
Jul 31 2020	Mežnar et al., <i>NCT04355026</i>	Use of Bromhexine and Hydroxychloroquine for Treatment of COVID-19 P... Estimated 90 patient HCQ late treatment RCT with results not reported over 3 years after estimated completion.
Jul 31 2020	Mazzitelli et al., <i>Travel Medici...</i>	Apparent inefficacy of hydroxychloroquine combined with azithromycin o... Report on HCQ+AZ use in 41 elderly high-risk patients. 29 of 30 patients with treatment ≥ 5 days survived. On...
Jul 29 2020	D'Arminio Monforte et al., <i>Int. ...</i>	Effectiveness of Hydroxychloroquine in COVID-19 disease: A done and d... 34% lower mortality ($p=0.12$). HCQ+AZ adjusted death HR 0.44, $p=0.009$. Propensity scores include baseline C...
Jul 28 2020	Başaran et al., <i>Turk. J. Med. S...</i>	Outcome of Non-Critical COVID-19 Patients with Early Hospitalization an... Observational study of 174 hospitalized patients in Turkey, median age 45.4, 23 treated with HCQ, 113 with H...
Jul 27 2020	Novartis, <i>NCT04358081</i>	Hydroxychloroquine Monotherapy and in Combination With Azithromyci... 71% higher hospital discharge ($p=0.42$), 71% greater improvement ($p=0.42$), and 79% worse viral clearance ($p...$
Jul 27 2020	Santos et al., <i>Clinical Rheuma...</i>	Determinants of COVID-19 disease severity in patients with underlying rh... 92% lower mortality ($p=0.19$). Prospective study of 38 hospitalized rheumatic disease patients with COVID-19 i...
Jul 26 2020	Mitjà et al., <i>NEJM, doi:10.105...</i>	A Cluster-Randomized Trial of Hydroxychloroquine as Prevention of Covi... 46% lower mortality ($p=0.39$), 17% lower hospitalization ($p=0.71$), and 32% fewer cases ($p=0.27$). For positive s...

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2020
Khurana et al., medRxiv, doi:1... **Prevalence and clinical correlates of COVID-19 outbreak among healthca...**
51% fewer cases ($p=0.02$). Study of hospital health care workers showing HCQ prophylaxis reduces COVID-19 ...
- Jul 23
2020
Cavalcanti et al., NEJM, doi:1... **Hydroxychloroquine with or without Azithromycin in Mild-to-Moderate C...**
16% lower mortality ($p=0.77$) and **28% higher hospitalization** ($p=0.3$). Late stage RCT of 667 hospitalized patie...
- Jul 22
2020
Kadnur et al., Journal of Famil... **Hydroxychloroquine pre-exposure prophylaxis for COVID-19 among heal...**
62% fewer cases ($p=0.01$). Prophylaxis study with 334 low-risk healthcare workers in India, showing significant...
- Jul 22
2020
Ou et al., PLOS Pathogens, do... **Hydroxychloroquine-mediated inhibition of SARS-CoV-2 entry is attenuat...**
In Vitro analysis showing that HCQ efficiently blocks viral entry mediated by cathepsin L, but not by TMPRSS2, ...
- Jul 22
2020
Hoffmann et al., Nature, (202... **Chloroquine does not inhibit infection of human lung cells with SARS-Co...**
The title of this paper does not appear to match the results. Fig. 1b @100uM shows CQ results in a ~4.5 fold ...
- Jul 22
2020
Rivera et al., Cancer Discover... **Utilization of COVID-19 Treatments and Clinical Outcomes among Patien...**
2% higher mortality ($p=0.92$). Retrospective cancer patients, showing adjusted OR 1.03 [0.62-1.73] for HCQ. T...
- Jul 22
2020
Kelly et al., British Journal of ... **Clinical outcomes and adverse events in patients hospitalised with COVI...**
143% higher mortality ($p=0.03$). Retrospective 82 hospitalized patients HCQ/AZ, 52 SOC, not finding statistica...
- Jul 21
2020
Bernaola et al., medRxiv, doi:... **Observational Study of the Efficiency of Treatments in Patients Hospitaliz...**
17% lower mortality ($p<0.0001$). HCQ HR 0.83 [0.77-0.89] based on propensity score matched retrospective a...
- Jul 20
2020
Krishnan et al., J Clin Anesth,... **Clinical comorbidities, characteristics, and outcomes of mechanically ve...**
20% lower mortality ($p=0.48$). Retrospective 152 mechanically ventilated patients in the USA showing unadjust...
- Jul 20
2020
Desbois et al., Research Squa... **Prevalence and clinical features of COVID-19 in a large cohort of 199 pati...**
17% fewer cases ($p=1$). Retrospective 199 sarcoidosis patients showing non-statistically significant HCQ RR 0...
- Jul 20
2020
Risch, H., American Journal o... **Response to: "Early Outpatient Treatment of Symptomatic, High-Risk Co...**
Updated meta analysis including 7 new studies of high-risk outpatients, for a total of 12 studies, all showing si...
- Jul 18
2020
Watanabe, M., arXiv.org, arXiv... **Efficacy of Hydroxychloroquine as Prophylaxis for Covid-19**
Secondary analysis of Boulware et al.'s PEP trial and treatment delay-response data, confirming that HCQ is eff...
- Jul 19
2020
McGrail et al., medRxiv, doi:1... **COVID-19 Case Series at UnityPoint Health St. Luke's Hospital in Cedar R...**
70% higher mortality ($p=0.69$). HCQ+AZ early in the epidemic had a fairly good success rate with few complica...
- Jul 17
2020
Lyngbakken et al., Nature Co... **A pragmatic randomized controlled trial reports lack of efficacy of hydrox...**

		4% lower mortality ($p=1$) and 71% improved viral reduction rate ($p=0.51$). Small RCT of nasopharyngeal viral lo...
Jul 16 2020	Hong et al., <i>Infect. Chemother...</i>	Early Hydroxychloroquine Administration for Rapid Severe Acute Respirat... 65% improved viral clearance ($p=0.001$). HCQ 1-4 days from diagnosis was the only protective factor against p...
Jul 16 2020	Skipper et al., <i>Annals of Intern...</i>	Hydroxychloroquine in Nonhospitalized Adults With Early COVID-19: A R... 37% lower combined mortality/hospitalization ($p=0.58$), 49% lower hospitalization ($p=0.38$), and 20% improve...
Jul 16 2020	Mitjà et al., <i>Clinical Infectious ...</i>	Hydroxychloroquine for Early Treatment of Adults with Mild Covid-19: A R... 16% lower hospitalization ($p=0.64$), 34% improved recovery ($p=0.38$), and 2% improved viral clearance. This p...
Jul 15 2020	Gupta et al., <i>JAMA Intern. Me...</i>	Factors Associated With Death in Critically Ill Patients With Coronavirus ... 6% higher mortality ($p=0.41$). Analysis of 2215 intensive care unit patients showing no significant differences w...
Jul 15 2020	Kavanagh et al., <i>Med. Hypoth...</i>	Inhaled hydroxychloroquine to improve efficacy and reduce harm in the t... Proposal to use an inhaled formulation of HCQ which has passed safety studies in clinical trials for the treatme...
Jul 14 2020	Trullàs et al., <i>Research Squar...</i>	High in-hospital mortality due to COVID-19 in a community hospital in Sp... 36% lower mortality ($p=0.12$). Retrospective 100 hospitalized patients in Spain showing lower mortality with H...
Jul 14 2020	Chowdhury et al., <i>Eurasian Jo...</i>	A Randomized Trial of Ivermectin-Doxycycline and Hydroxychloroquine-A... Small 116 patient RCT comparing ivermectin+doxycycline and HCQ+AZ, not showing a significant difference in...
Jul 11 2020	Leconier et al., <i>Critical Care, ...</i>	Comparison of hydroxychloroquine, lopinavir/ritonavir, and standard of c... 42% lower mortality ($p=0.24$), 6% lower treatment escalation ($p=0.73$), and 15% improved viral clearance ($p=0...$
Jul 10 2020	Cravedi et al., <i>American Jour...</i>	COVID-19 and kidney transplantation: Results from the TANGO Internatio... 53% higher mortality ($p=0.17$). Analysis of 144 hospitalized kidney transplant patients showing HCQ mortality ...
Jul 10 2020	Chen et al., <i>PLoS ONE, doi:10...</i>	A Multicenter, randomized, open-label, controlled trial to evaluate the effi... 24% improved viral clearance ($p=0.71$). 2 very small studies with hospitalized patients in Taiwan. RCT with 21 t...
Jul 9 2020	Rivera-Izquierdo et al., <i>Medici...</i>	Agentes terapéuticos utilizados en 238 pacientes hospitalizados por CO... 19% lower mortality ($p=0.75$). Retrospective 238 hospitalized patients in Spain showing lower mortality with H...
Jul 9 2020	Raoult et al., <i>Preprint</i>	Hydroxychloroquine and Azithromycin as a Treatment of COVID-19: Resu... Updated meta analysis showing significant reductions in mortality and viral shedding. Mortality OR 0.53 [0.4-0...
Jul 8 2020	Smith et al., <i>NCT04358068</i>	Evaluating the Efficacy of Hydroxychloroquine and Azithromycin to Preve... 64% lower hospitalization ($p=1$) and 10% slower recovery. Early terminated NIAID RCT for HCQ. Patients >60 ...

Jul 8 2020 Marzolini et al., *Antimicrobial ...* *Effect of Systemic Inflammatory Response to SARS-CoV-2 on Lopinavir a...*
Study of Lopinivav and HCQ plasma concentrations and CRP levels in late stage (treatment initiation median 8 ...

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 may...

Jul 7 2020 Goldstein, L., *Preprint, July 7, ...* *Hydroxychloroquine-based COVID-19 Treatment, A Systematic Review of...*
85% of globally surveyed physicians recognized HCQ as at least partially effective in treating COVID-19, accor...

Jul 7 2020 An et al., *medRxiv, doi:10.110...* *Treatment Response to Hydroxychloroquine and Antibiotics for mild to m...*
3% faster viral clearance ($p=0.92$). Retrospective of hospitalized patients with 31 HCQ patients and 195 standa...

Jul 3 2020 Niriella et al., *Trials, doi:10.11...* *Hydroxychloroquine for post-exposure prophylaxis of COVID-19 among ...*
402 participant HCQ prophylaxis RCT with results not reported over 3 years after completion. Authors note 28...

Jul 3 2020 Derwand et al., *International J...* *COVID-19 Outpatients – Early Risk-Stratified Treatment with Zinc Plus Lo...*
79% lower mortality ($p=0.12$) and **82% lower hospitalization** ($p=0.001$). 79% lower mortality and 82% lower ho...

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 on ot...

Jul 1 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). Pro...

Jul 1 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, but oc...

Jun 30 2020 Martinez-Lopez et al., *Blood ...* *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 significant diff...

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 does not ...

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 with 12 c...

Jun 29 2020 Sosa-García et al., *Cir Cir. 20...* *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, $p = 1.0$.

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 0.51 (...)
Jun 29 2020	Mfeukeu-Kuate et al.	Electrocardiographic safety of daily Hydroxychloroquine 400mg plus Azit...	No life-threatening modifications of the QT interval was observed in non-severe COVID-19 patients treated am...
Jun 28 2020	Farooq et al., NCT04328272	Effectiveness of Hydroxychloroquine in Covid-19 Patients (Covid)	Estimated 75 patient HCQ late treatment RCT with results not reported over 3 years after estimated completion.
Jun 25 2020	Gendebien et al., Annals of th...	Systematic analysis of COVID-19 infection and symptoms in a systemic l...	4% fewer cases ($p=0.93$). Small study of SLE patients taking HCQ with a phone survey for COVID-19 suggestive...
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 viral load...
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 HCQ ...
Jun 22 2020	Butler et al., PRINCIPLE	PRINCIPLE: A clinical trial evaluating treatments for suspected and confir...	Estimated 400 patient HCQ early treatment RCT with results not reported over 3 years after estimated complet...
Jun 22 2020	Isaksen et al., medRxiv, doi:1...	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, but no...
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 mortality RR ...
Jun 22 2020	Chen et al., medRxiv, doi:10.1...	Efficacy and safety of chloroquine or hydroxychloroquine in moderate typ...	20% faster recovery ($p=0.51$) and 71% faster viral clearance ($p=0.0004$). RCT 48 hospitalized patients in China ...
Jun 21 2020	Faíco-Filho et al., Braz J Micr...	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 hospitaliz...
Jun 19 2020	SMSH Sawai Man Singh Hos...	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, only ...
Jun 19 2020	NIH, study not available yet	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:1...	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 hospitalized...

- Jun 19 2020 Kaptein et al., *bioRxiv*, doi:10... Favipiravir at high doses has potent antiviral activity in SARS-CoV-2-infec...
Animal study with Syrian hamsters, showing treatment of SARS-CoV-2-infected hamsters with favipiravir or HC...
- Jun 18 2020 Treluyer et al., *PREP-COVID*, N... Prevention of SARS-CoV-2 in Hospital Workers s Exposed to the Virus (P...
122 participant HCQ prophylaxis RCT with results not reported over 3 years after completion.
- 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 statis...
- 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), showing low h...
- Jun 17 2020 Xue et al., *J. Med. Virology*, J... Hydroxychloroquine treatment in COVID-19: a descriptive observational ...
30 hospitalized patients. Early use of HCQ is more effective, 43% reduction in progression from moderate to s...
- 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, mortality ...
- Jun 16 2020 Kim et al., *Korean J Intern Me...* Lopinavir-ritonavir versus hydroxychloroquine for viral clearance and clini...
Small retrospective study of hospitalized patients with 31 lopinavir-ritonavir and 34 HCQ patients, HCQ 400mg...
- 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 finding 0.6...
- Jun 12 2020 Scherrmann, *AAPS J* 22, 86 (... Intracellular ABCB1 as a Possible Mechanism to Explain the Synergistic E...
Proposes a new mechanism supporting the synergistic interaction between HCQ+AZ.
- Jun 12 2020 Giacomelli et al., *Journal of M...* Early administration of lopinavir/ritonavir plus hydroxychloroquine does n...
Late stage study of hospitalized patients comparing treatment starting within 5 days versus later. Note that "ea...
- Jun 10 2020 Wang et al., *medRxiv*, doi:10... Comorbidity and Sociodemographic determinants in COVID-19 Mortality...
6% lower mortality (p=0.63). Database analysis of 7,592 patients in NYC, showing adjusted HCQ mortality odd...
- Jun 10 2020 Otea et al., *medRxiv*, doi:10.1... A short therapeutic regimen based on hydroxychloroquine plus azithrom...
80 moderate cases, HCQ+AZ appears to reduce serious complications and death. Moderate treated cases res...
- Jun 9 2020 Pirnay et al., *Hosp. Pharm. an...* Beneficial effect of Hydroxychloroquine-Azithromycin combination in the ...
68 very high risk nursing home residents, median age 86, HCQ+AZ early treatment within 2.5 days onset, 2 sto...
- Jun 9 2020 Bhattacharya et al., *medRxiv*, ... Pre exposure Hydroxychloroquine use is associated with reduced COVID...

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 ...* *Influence of conflicts of interest on public positions in the COVID-19 era, ...*
Shows a correlation (Spearman test, $p = 0.017$) between the amount received from Gilead Sciences and public...

Jun 6
2020

Million et al., *New Microbes a...* *Clinical Efficacy of Chloroquine derivatives in COVID-19 Infection: Compa...*
[H]CQ effective and reduces mortality by a factor 3. Meta analysis of 20 studies.

Jun 5
2020

RECOVERY Collaborative Gro... *Effect of Hydroxychloroquine in Hospitalized Patients with COVID-19: Pre...*
9% higher mortality ($p=0.15$) and **15% higher ventilation** ($p=0.19$). RECOVERY trial finds no significant benefit fo...

Jun 3
2020

Boulware et al., *NEJM, June ...* *A Randomized Trial of Hydroxychloroquine as Postexposure Prophylaxis f...*
17% fewer cases ($p=0.35$). Remote post-exposure prophylaxis RCT reporting "[HCQ] did not prevent illness co...

Jun 1
2020

Al-Kofahi et al., *Clin. Pharmac...* *Finding the Dose for Hydroxychloroquine Prophylaxis for COVID-19: The ...*
Analysis of HCQ dosing regimens, recommending: PrEP: 800mg loading dose followed by 400mg 2 or 3 times ...

May 31
2020

Guérin et al., *Asian J. Medicin...* *Azithromycin and Hydroxychloroquine Accelerate Recovery of Outpatient...*
65% faster recovery ($p=0.0001$). Mean clinical recovery time reduced from 26 days (SOC) to 9 days, $p<0.0001$ (...)

May 29
2020

Rogado et al., *Lung Cancer, d...* *Covid-19 and lung cancer: A greater fatality rate?*
92% lower mortality ($p=0.02$). Retrospective 17 hospitalized lung cancer patients showing lower mortality with ...

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 infect...

May 28
2020

Huang et al., *National Scienc...* *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 RNA and ...

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 supplementary appe...

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]. HCQ...

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 association b...

- 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 efficacy.
- May 25 2020 Ip et al., *PLoS ONE*, doi:10.13... **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 showing no s...
- May 24 2020 Hraiech et al., *Ann. Intensive ...* **Lack of viral clearance by the combination of hydroxychloroquine and azi...**
65% lower mortality (p=0.21) and **3% worse viral clearance (p=1)**. Retrospective 45 ICU patients, 17 treated wit...
- May 22 2020 ICMR, *Indian Council of Medi...* **Revised advisory on the use of Hydroxychloroquine (HCQ) as prophylaxis...**
Healthcare workers on HCQ prophylaxis less likely to get COVID. Significant dose-response relationship. Exten...
- 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-statistica...
- May 19 2020 Singh et al., *medRxiv*, doi:10... **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 COVID-19 ...
- May 18 2020 Kim et al., *medRxiv*, doi:10.11... **Treatment Response to Hydroxychloroquine, Lopinavir/Ritonavir, and Ant...**
51% shorter hospitalization (p=0.01) and **56% faster viral clearance (p=0.005)**. Retrospective of 97 moderate c...
- May 18 2020 Ahmad et al., doi:10.1101/20... **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 compa...
- May 16 2020 Macias et al., *medRxiv*, 10.11... **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 rheumatic dis...
- May 15 2020 Yu et al., *Science China Life S...* **Low Dose of Hydroxychloroquine Reduces Fatality of Critically Ill Patients...**
60% lower mortality (p=0.002). Retrospective, 550 critically ill patients. 19% fatality for HCQ versus 47% for no...
- May 14 2020 Mahévas et al., *BMJ* 2020, 36... **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 oxygen sh...
- May 13 2020 Okour et al., *Journal of Pharm...* **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 odds de...
- May 12 2020 Cassione et al., *Annals of the ...* **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 and 4...
May 11 2020	Shabrawishi et al., medRxiv, d...	15% improved viral clearance ($p=0.66$). Retrospective 93 hospitalized patients in Saudi Arabia showing a non-s...
May 11 2020	Rosenberg et al., JAMA, May ...	35% higher mortality ($p=0.31$). Restrospective observational late stage study showing no significant difference...
May 10 2020	Alberici et al., Kidney Int., 98:...	43% lower mortality ($p=0.12$). Analysis of 94 hemodialysis COVID-19 positive patients, showing lower mortality...
May 8 2020	Grassin-Delyle et al., Clinical I...	Chloroquine Inhibits the Release of Inflammatory Cytokines by Human Lu... On human lung parenchymal explants, CQ concentration clinically achievable in the lung ($100\mu\text{M}$) inhibited the...
May 8 2020	Carlucci et al., J. Med. Microb...	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 hospic...
May 7 2020	Konig et al., Annals of the Rhe...	3% lower hospitalization ($p=0.88$). Analysis of 80 SLE patients diagnosed with COVID-19, showing the frequen...
May 7 2020	Derendorf, H., Int. J. Antimicr...	Excessive lysosomal ion-trapping of hydroxychloroquine and azithromycin Discusses pharmacokinetic properties of HCQ+AZ as a potential underlying mechanism of the observed antivir...
May 7 2020	Geleris et al., NEJM, May 7, 2...	4% higher combined mortality/intubation ($p=0.76$). Before propensity matching, 38 control patients had hypert...
May 7 2020	Sermo	Sermo reports: COVID-19 treatment trends over 6 weeks and 33,700 inte... HCQ used by 55% of physicians worldwide for COVID. Survey of 6,150 physicians.
May 6 2020	Maisonnette et al., Nature, 2...	Hydroxychloroquine use against SARS-CoV-2 infection in non-human pri... Monkey study which reports no effect of HCQ or HCQ+AZ. However, there are several signs of effectiveness de...
May 5 2020	Membrillo de Novales et al., P...	55% lower mortality ($p=0.002$). 166 patients hospitalised with COVID-19, HCQ increased survival 1.4 - 1.8 time...
May 5 2020	Million et al., Travel Med Infec...	Early Treatment of COVID-19 Patients With Hydroxychloroquine and Azit... Retrospective 1061 patients. HCQ+AZ safe and results in a low fatality rate.
May 5 2020	Gendelman et al., Autoimmun...	8% fewer cases ($p=0.88$). Very small study of rheumatic disease/autoimmune disorder patients showing no sig...

May 5 2020	Mitchell et al., SSRN, doi:10.2... Markedly Lower Rates of Coronavirus Infection and Fatality in Malaria-En... 99% lower mortality ($p=0.0001$). Analysis of COVID-19 amongst 2.4B people shows a wide counterintuitive dis...
May 2 2020	Mallat et al., <i>Medicine (Baltim...</i> Hydroxychloroquine is associated with slower viral clearance in clinical C... 203% slower viral clearance ($p=0.02$). Very small retrospective analysis of 34 patients finding slower binary PC...
May 7 2020	Mercuro et al., <i>JAMA Cardiol.,...</i> Risk of QT Interval Prolongation Associated With Use of Hydroxychloroqu... Study of 90 hospitalized patients given HCQ, 53 also receiving AZ, 53% hypertension, 29% diabetes mellitus, b...
May 7 2020	Bessière et al., <i>JAMA Cardiol...</i> Assessment of QT Intervals in a Case Series of Patients With Coronavirus... Study of 40 very serious condition ICU patients, 75% required invasive mechanical ventilation, 63% received va...
May 2 2020	Seydi Coronavirus: a study in Senegal confirms the effectiveness of hydroxychl... Preliminary results of Senegal trial with 181 patients showing faster recovery with HCQ, and even faster recove...
Apr 30 2020	Kim et al., NCT04307693 Comparison of Lopinavir/Ritonavir or Hydroxychloroquine in Patients Wit... 65 patient HCQ early treatment RCT with results not reported over 3 years after completion. This trial was term...
Apr 30 2020	Meo et al., <i>Eur. Rev. Med. Pha...</i> Efficacy of chloroquine and hydroxychloroquine in the treatment of COVI... Analysis of COVID-19 and malaria, finding that COVID-19 is highly pandemic in countries where malaria is least...
Apr 27 2020	Sánchez-Álvarez et al., <i>Nefrol...</i> Status of SARS-CoV-2 infection in patients on renal replacement therapy... 46% lower mortality ($p=0.005$). Analysis of 868 patients on renal replacement therapy. Statistically significant r...
Apr 29 2020	Saleh et al., <i>Circulation: Arrhy...</i> The Effect of Chloroquine, Hydroxychloroquine and Azithromycin on the ... 201 hospitalized patients. No serious side effects of HCQ. No instances of Torsade de pointes, or arrhythmoge...
Apr 27 2020	Klimke et al., <i>Med. Hypothese...</i> 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 cells. ...
Apr 26 2020	Auld et al., <i>Critical Care Medi...</i> 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 significant di...
Apr 25 2020	Andreani et al., <i>Microbial Path...</i> In vitro testing of combined hydroxychloroquine and azithromycin on SA... <i>In Vitro</i> study showing that HCQ and AZ have a synergistic effect on SARS-CoV-2 at concentrations compatible...
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 outco...
Apr 21 2020	Izoulet M., SSRN, doi:10.2139... Countries which Primarily Use Antimalarial Drugs As COVID-19 Treatmen...

85% lower mortality ($p=0.001$). Compares the dynamics of daily deaths in the 10 days following the 3rd death i...

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 reduction in ...

Apr 17
2020

Lee et 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 hospital, sho...

Apr 16
2020

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Comparison of typical CQ dosage with high dosage CQ (600mg CQ twice daily for 10 days), showing higher m...

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Apr 12
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147% higher mortality ($p=0.58$). Small retrospective study with 63 patients (32 treated with HCQ), showing no ...

Apr 11
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92% improved recovery ($p=0.02$) and **83% lower pneumonia** ($p=0.22$). 22 patients. All CQ patients discharged b...

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	Review of six articles and 23 ongoing clinical trials in China recommending research and clinical use adhering ...
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Jan 7 1901	Yeo, B., 1901	<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	Mossé, <i>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 and tre...
Jan 7 1890	Le Grelot	<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 1889-1890 (aro...
Jan 7 1889	Edwin Wiley Grove	<i>Laxative Bromo Quinine</i> 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. Studies with preprints and journal versions are listed under the earlier preprint date.

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