**Supplementary data**

e-Table 1. Search strategy in PUBMED (Search date: 2021/08/06)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PICO | Search | Query | Items Found | Time |
| P | 1 | Coronavirus Infections | 111259 | 12:16:39 |
|  | 2 | Covid-19 | 163748 | 00:17:09 |
|  | 3 | Corona Virus Disease 2019 | 1232 | 00:18:02 |
|  | 4 | Sars-Cov-2 | 100691 | 00:18:36 |
|  | 5 | #4 And (#1 Or #2 Or #3) | 174957 | 00:19:50 |
| I | 6 | Remdesivir | 1847 | 00:20:22 |
|  | 7 | Gs-5734 | 1852 | 00:20:47 |
| O | 8 | Viral Load | 54051 | 00:21:03 |
|  | 9 | Viral Kinetic | 24577 | 00:21:42 |
|  | 10 | #8 And #4 | 1819 | 00:22:28 |
|  | 11 | #9 And #4 | 451 | 00:22:52 |
| PIO | 12 | #2 And #6 And #11 | 14 | 00:23:33 |
|  | 13 | #2 And #6 And #10 | 44 | 00:26:21 |
|  | 14 | #2 (Or #1 Or #3) And Remdesivir Safety Or Remdesivir Adverse Event Or Remdesivir Adverse Effect Or Remdesivir Adverse Reaction | 312 | 00:27:25 |
|  | 15 | #14 Or Viral Load Sars-Cov-2 Or Viral Kinetic Sars-Cov-2 | 2185 | 00:30:05 |

e-Table 2. Search strategy in SPRINGERLINK (Search date: 2021/08/05)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PICO | No. | Query | Results | Time |
| P | #1 | COVID-19 | 32480 | 16:13:09 |
|  | #2 | Coronavirus Disease 2019 | 12592 | 16:14:22 |
|  | #3 | Sars-Cov-2 | 13203 | 16:15:37 |
|  | #4 | #1 Or #2 Or #3 | 12698 | 16:18:19 |
|  | #5 | Remdesivir | 1513 | 16:20:46 |
|  | #6 | GS-5734 | 88 | 16:22:20 |
|  | #7 | #5 Or #6 | 1527 | 16:23:24 |
| O | #8 | Viral Load | 58387 | 16:24:12 |
|  | #9 | Viral Kinetic | 8257 | 16:24:33 |
|  | #10 | #3 And #9 | 115 | 16:25:30 |
|  | #11 | #3 And #8 | 2242 | 16:26:36 |
|  | #12 | #5 Or #6 And Safety Or Adverse Effect | 490803 | 16:27:02 |
|  | #13 | #5 Or #6 And Adverse Event | 453 | 16:27:55 |
| PIO | #14 | #1 And #5 And #11 | 412 | 16:28:22 |
|  | #15 | #1 And #5 And #10 | 18 | 16:29:50 |
|  | #16 | #1 And #5 Or #6 And Safety Or Adverse Effect | 490799 | 16:32:00 |
|  | #17 | #1 And #5 Or #6 And Adverse Event | 376 | 16:33:40 |
|  | #18 | #1 And #5 Or #6 And Remdesivir Adverse Event Or Remdesivir Safety Or Remdesivir Adverse Effect Or Remdesivir Adverse Reaction | 372 | 16:40:03 |

e-Table 3. Search strategy in PROQUEST (Search date: 2021/08/05)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PICO | Search | Query | RESULT | TIME |
| P | #1 | Coronavirus Infections | 497164 | 02:32:45 |
|  | #2 | Coronavirus Disease 2019 | 300512 | 02:35:08 |
|  | #3 | Covid-19 | 5400615 | 02:35:54 |
|  | #4 | Sars-Cov-2 | 255.287 | 02:36:26 |
| I | #5 | Remdesivir | 30.085 | 02:36:50 |
|  | #6 | Gs-5734 | 761 | 02:37:15 |
| O | #7 | Viral Load | 211.377 | 02:37:40 |
|  | #8 | Viral Kinetic | 65.189 | 02:38:11 |
|  | #9 | #7 And #4 | 13.923 | 02:39:16 |
|  | #10 | #8 And #4 | 977 | 02:38:50 |
|  | #11 | #5 Or #6 AND Safety OR Adverse Effect | 173063 | 02:39:27 |
|  | #12 | #5 OR #6 AND Adverse Event | 4541 | 02:40:31 |
| PIO | #13 | #2 Or #3 And #5 And #9 | 300.929 | 02:41:08 |
|  | #14 | #2 Or #3 And #5 And #10 | 300.524 | 02:41:53 |
|  | #15 | #3 And #5 And #10 | 103 | 02:42:36 |
|  | #16 | #3 And #5 And #9 | 979 | 02:43:11 |
|  | #17 | #3 And #5 And #9 Or #10 | 1.054 | 02:45:00 |
|  | #18 | #3 AND #5 OR #6 AND Safety OR Adverse Effect | 172.939 | 02:45:58 |
|  | #19 | #3 AND #5 OR #6 AND Adverse Event | 4404 | 02:48:03 |
|  | #20 | #1 And #5 Or #6 And Adverse Event And Safety And Adverse Effect | 4.402 | 02:49:13 |
|  | #21 | #1 And #5 Or #6 And Remdesivir Adverse Event Or Remdesivir Safety Or Remdesivir Adverse Effect Or Remdesivir Adverse Reaction | 2149 | 02:51:22 |

e-Table 4. Registered clinical trials to investigate the efficacy of remdesivir in adult patients with COVID-19 (unpublished)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Registration Number | Official Title | Study Design | Patients | Intervention | Comparison | Primary Outcome | Status | Estimated Study Completion Date |
| NCT04745351 | A Phase 3 Randomized, Double-Blind, Placebo-Controlled, Parallel Group, Multicenter Study Evaluating the Efficacy and Safety of Remdesivir in Participants With Severely Reduced Kidney Function Who Are Hospitalized for COVID-19 | Randomized trial, blinded | 1116  Hospitalized patients with SpO2 ≦ 94% on room air, BB >= 40 kg  eGFR <30 ml/min/1,73m2 | Intravenous remdesivir  +  Standard of care | RDV Placebo  +  Standard of care | Composite of All-Cause Mortality or Invasive Mechanical Ventilation (IMV) Through Day 29 | Recruiting | February 2023 |
| NCT04596839 | Antiviral Activity and Safety of Remdesivir in Bangladeshi Patients With Severe Coronavirus Disease (COVID-19): An Open Label, Multi-Center, Randomized Controlled Trial | Interventional study, Phase 2, Randomized | 60  Hospitalized patients with SpO2 ≦ 93% at rest, respiratory distress (>= 30 nafas/min)  PaO2/FiO2 <= 300 mmhg | Intravenous remdesivir 5 days  +  Standard of care | Standard of care | Duration of hospital stay (Days) | Recruiting | July 31, 2021 |
| NCT04257656 | A Phase 3 Randomized, Double-blind, Placebo-controlled, Multicenter Study to Evaluate the Efficacy and Safety of Remdesivir in Hospitalized Adult Patients With Severe COVID-19. | Randomized, Parallel Assignment, Quadruple (Participant, Care Provider, Investigator, Outcomes Assessor) | 237  Hospitalized with a SaO2/SPO2≤94% on room air or Pa02/Fi02 ratio <300mgHg | Remdesivir iv 10 days | Remdesivir placebo iv 10 days | Time to Clinical Improvement | Terminated | April 10, 2020 |
| NCT04575064 | An International Randomized Trial of Additional Treatments for COVID-19 in Hospitalized Patients Who Are All Receiving the Local Standard of Care - WHO-SOLIDARITY-GERMANY | Interventional study, randomized, open label | 400  Hospitalized patients with SpO2 <= 94% on room air OR oxygen demand OR breathing support | Remdesivir iv 10 days  + SoC | SoC | Improvement of clinical status on the ordinal 7-point severity-scale at day 15. | Active, not recruiting | November 2022 |
| NCT04315948 | Multi-centre, Adaptive, Randomized Trial of the Safety and Efficacy of Treatments of COVID-19 in Hospitalized Adults | Randomized trial, open-label, 5-arms study | Hospitalized patients with SpO2 ≦ 94% or mechanical ventilated | Intravenous remdesivir for up to 10 days | Standard of care Lopinavir/ritonavir Lopinavir/ritonavir plus Interferon ß-1a Hydroxychloroquine | Improvement of clinical status at Day 15 | Recruiting | March 2023 |
| NCT04321616 | The (Norwegian) NOR Solidarity Multicenter Trial on the Efficacy of Different Anti-viral Drugs in SARS-CoV-2 Infected Patients | Randomized trial, open-label, 3-arms study | Hospitalized or ICU patients | Intravenous remdesivir for 10 days | Standard of care Hydroxychloroquine | In-hospital mortality | Recruiting | November 2020 |
| NCT04330690 | A Multi-centre, Adaptive, Randomized, Open-label, Controlled Clinical Trial of the Safety and Efficacy of Investigational Therapeutics for the Treatment of COVID-19 in Hospitalized Patients (CATCO: Canadian Treatments for COVID-19), in Conjunction With the Public Health Emergency SOLIDARITY Trial (World Health Organization) | Randomized trial, open Label, 4-arms study | Hospitalized patients | Intravenous remdesivir for 10 days | Standard of care Lopinavir/ritonavir Hydroxychloroquine | All-cause mortality | Recruiting | May 18, 2022 |
| NCT04575064 | An International Randomized Trial of Additional Treatments for COVID-19 in Hospitalized Patients Who Are All Receiving the Local Standard of Care - WHO-SOLIDARITY-GERMANY | Randomized trial, open-label | Hospitalized patients with SpO2 ≦ 94% or ICU patients | Intravenous remdesivir for 10 days | Standard of care | Improvement of clinical status at Day 15 | Active, not recruiting | November 2022 |