COVID-19 Update June 5, 2020

Jorge Mera, MD

Whitney Essex, APRN

Outline

Close Contact Definition

Symptoms

CDC Definition

PCP evaluation

Test or no Test?

Clinical Manifestations

Treatment

CDC UPDATES

Close Contact Definition (Exposure without PPE)

- **Distance**
  - Being within 6 feet of a person with confirmed COVID 19 **OR**
  - Having unprotected direct contact with infectious secretions or excretions of the person with confirmed COVID-19.
- **Duration** of the contact should be 15 minutes or more

Cloth face coverings are not considered PPE

Fever is either measured temperature ≥100.0°F or subjective

- Fever may be intermittent or absent in some patients, such as the elderly, immunosuppressed, or taking certain medications (e.g., NSAIDs).
- Clinical judgement should be used to guide testing of patients in such situations.
- Occupational health programs should have a low threshold for evaluating symptoms and testing HCP.

Symptoms:

CDC Definitions

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

95% of patients with COVID-19 like symptoms do not have COVID-19 and need to be evaluated for other conditions

Interim U.S. Guidance for Risk Assessment and Work Restrictions for Healthcare Personnel with Potential Exposure to COVID-19

Exposure	Personal Protective Equipment Used	Work Restrictions
HCP who had prolonged[1] close contact[2] with a patient, visitor, or HCP with confirmed COVID-19[3]	• HCP not wearing a respirator or facemask[4] • HCP not wearing eye protection if the person with COVID-19 was not wearing a cloth face covering or facemask • HCP not wearing all recommended PPE (i.e., gown, gloves, eye protection, respirator) while performing an aerosol-generating procedure[1]	• Exclude from work for 14 days after last exposure[5] • Advise HCP to monitor themselves for fever or symptoms consistent with COVID-19[6] • Any HCP who develop fever or symptoms consistent with COVID-19[6] should immediately contact their established point of contact (e.g., occupational health program) to arrange for medical evaluation and testing.

To Test or Not to Test?

Discontinuation of Transmission-Based Precautions for patients with COVID-19:

The decision to discontinue Transmission-Based Precautions for patients with confirmed COVID-19 should be made using either a test-based strategy or a symptom-based (i.e., time-since-illness-onset and time-since-recovery strategy) or time-based strategy as described below. **Meeting criteria for discontinuation of Transmission-Based Precautions is not a prerequisite for discharge.**

Symptomatic patients with COVID-19 should remain in Transmission-Based Precautions until **either**:

- *Symptom-based strategy*
  - At least 3 days (72 hours) have passed *since recovery* defined as resolution of fever without the use of fever-reducing medications **and** improvement in respiratory symptoms (e.g., cough, shortness of breath); **and**,
  - At least 10 days have passed *since symptoms first appeared*
- *Test-based strategy*
  - Resolution of fever without the use of fever-reducing medications **and**
  - Improvement in respiratory symptoms (e.g., cough, shortness of breath), **and**
  - Negative results of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA from at least two consecutive respiratory specimens collected ≥24 hours apart (total of two negative specimens) [1]. See Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens for 2019 Novel Coronavirus (2019-nCoV). Of note, there have been reports of prolonged detection of RNA without direct correlation to viral culture.

Patients with laboratory-confirmed COVID-19 who have not had any symptoms should remain in Transmission-Based Precautions until **either**:

Same as above

South Korea CDC: Findings from Investigation and Analysis of Re-Positive Cases

- In response to multiple cases (N=447) testing positive for SARS-CoV-2 after being discharged from isolation, KCDC began managing such cases as “infectious”
  - Two hundred eighty-five cases were investigated
    - 59.6% were tested as a screening measure
    - 37.5% were tested because of symptoms
- Close contacts (790) traced and followed
  - 351=family / 439=others
- Outcomes:
  - Number of infectious virus from “Re-positive” cases determined
  - Number of contacts that the “Re-positive” cases infected evaluated

○ Depending on the group, 25.9-48.9% of cases tested positive again after discharge.

Region	Group	Tested (n)		Re-positive (n)	(%)
Sejong City	All confirmed cases	27		7	25.9%
Daegu City	Confirmed cases related to schools (school staff, students)	Total	195	53	27.2%
		School staff	47	6	12.8%
		Students	148	47	31.8%
Gyeongbuk Province	Confirmed cases of Pureun Nursing Home	47		23	48.9%

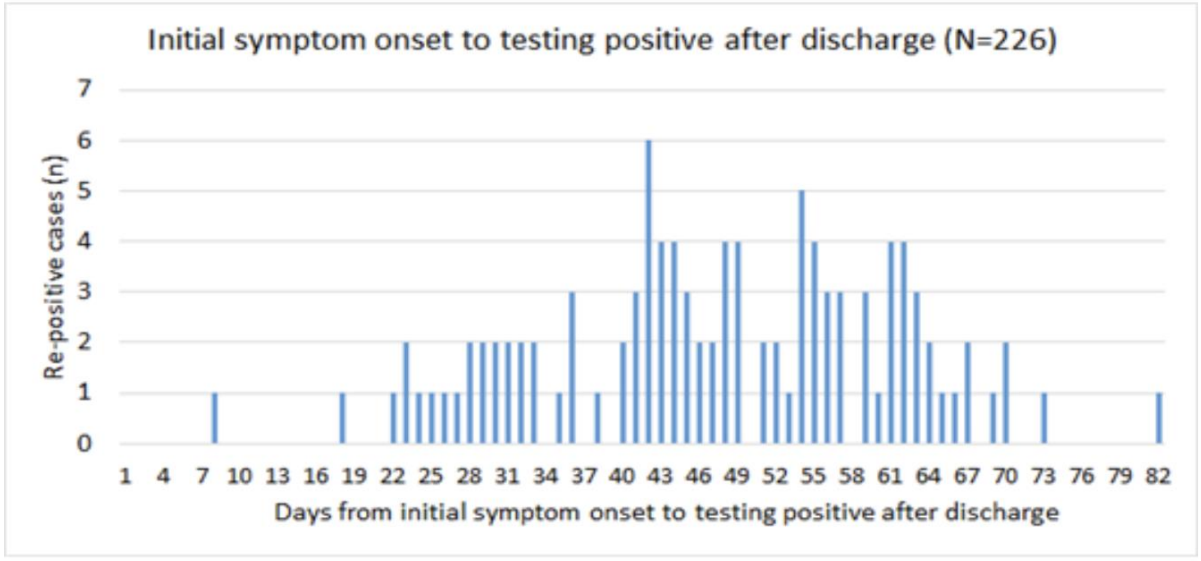
South Korea CDC: Findings form Investigation and Analysis of Re-Positive Cases

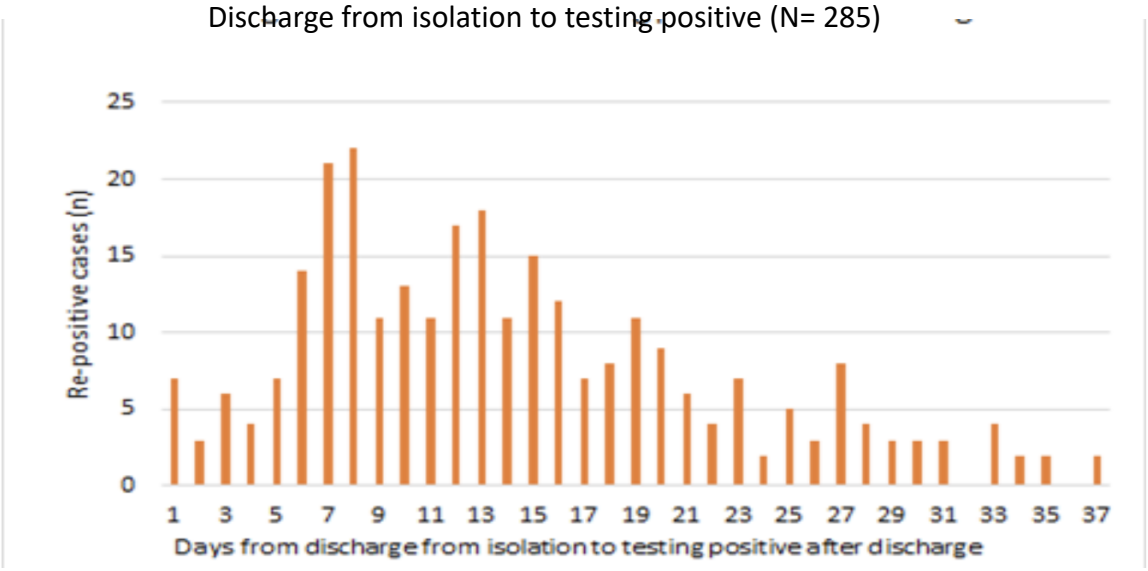
- Avg days from initial symptom onset to testing positive after discharge:

  44.9 (range 0-82)

- Avg days from discharge to testing positive:

  14.3 days (range 1-37)





Findings

- From monitoring of 790 contacts of the 285 re-positive cases, no case was found that was newly infected solely from contact with re-positive cases during re-positive period
- Virus isolation in cell culture of respiratory samples of 108 re-positive cases, all result was negative (i.e. virus not isolated).
- Of 23 re-positive cases from which the first and the second serum samples were obtained, 96% were positive for neutralizing antibodies.

No evidence was found that indicated infectivity of re-positive cases

COVID-19: LOSS OF SMELL & TASTE

Loss of smell and taste in COVID-19 patients may be more common than previously reported

- ~ 2000 European patients with mild-to-moderate COVID-19 answered questionnaires about their symptoms
- 87% reported experiencing loss of smell; most said it developed at the same time as, or after, other COVID-19 symptoms
- Subset of 90 patients underwent objective olfactory testing confirming smell dysfunction in over 60%

Loss of smell not associated with nasal obstruction, rhinorrhea, or postnasal drip

One-third of patients recovered their sense of smell by the time of the questionnaire; loss of smell lasted, on average, 8 days

Additionally, 56% of patients reported impaired taste

Annals of Internal Medicine. Published online: 26 May 2020doi:10.7326/M20-2428

REMDESIVIR TRIAL RESULTS

Preliminary results regarding the use of remdesivir against COVID-19

Over 1000 hospitalized patients with COVID-19 randomized to receive either 10 days of remdesivir or placebo

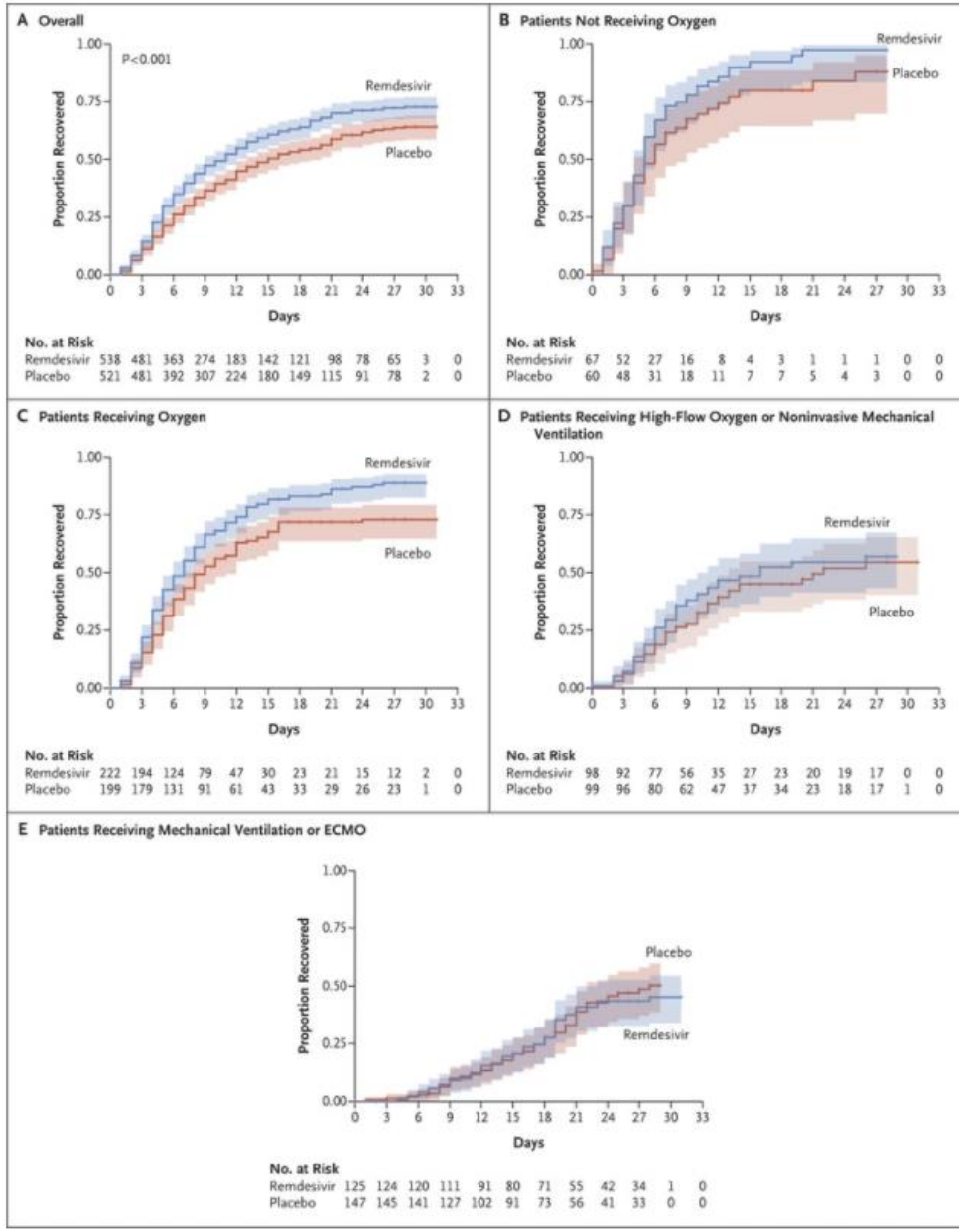
Mean time to recovery (primary outcome) — shorter in the remdesivir group than placebo group (11 vs. 15 days)

Recovery defined as a patient no longer requiring hospitalization or hospitalization no longer requiring supplemental oxygen or ongoing medical care

John H. Beigel, M.D. et al, Remdesivir for the Treatment of Covid-19 — Preliminary Report *NEJM* May 22, 2020

Remdesivir RCT Results

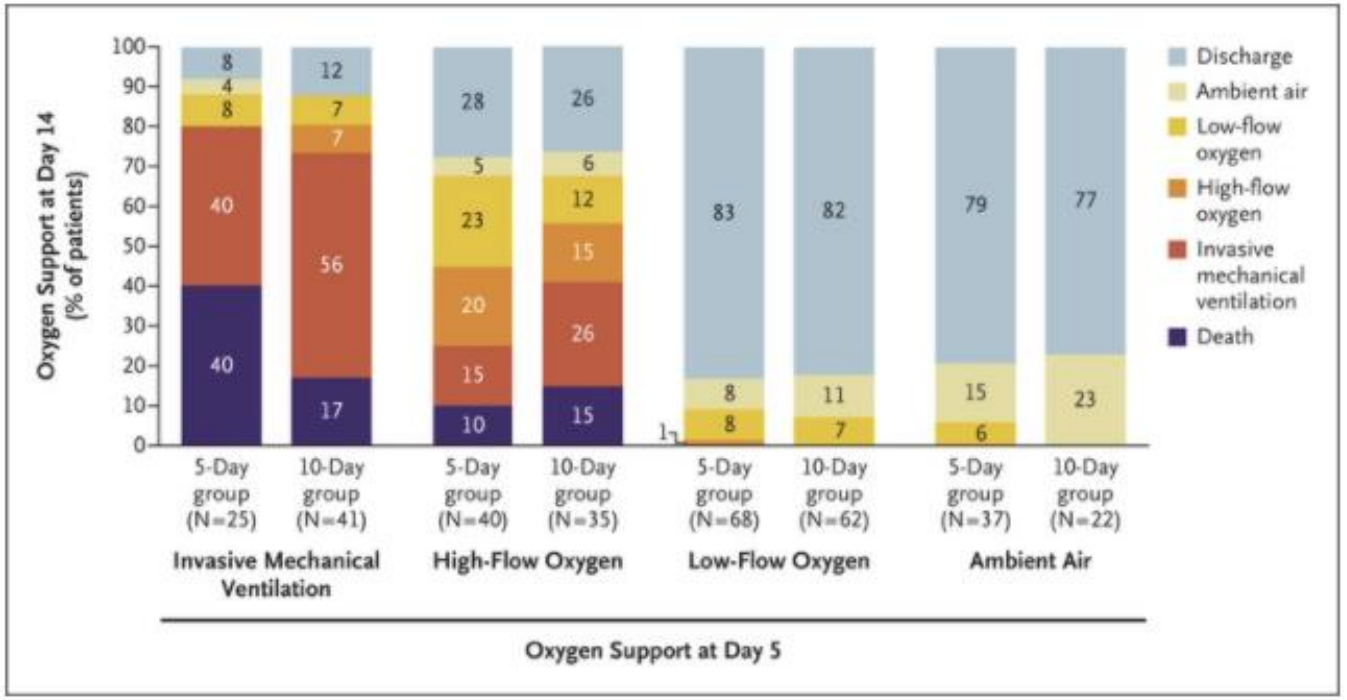
- Results significant only among those receiving oxygen — but not more intensive support
- At 14 days, mortality 7.1% in the remdesivir group and 11.9% in the placebo group, but difference not statistically significant
- Need to identify COVID-19 cases and start antiviral treatment before the pulmonary disease progresses to require mechanical ventilation
- High mortality despite the use of remdesivir, treatment with an antiviral drug alone is not likely to be sufficient



Kaplan–Meier Estimates of Cumulative Recoveries.

Remdesivir for 5 or 10 Days in Patients with Severe Covid-19

- No significant difference in efficacy between a 5-day course and a 10-day course of intravenous remdesivir treatment in patients with severe Covid-19 due to SARS-CoV-2 who did not require mechanical ventilation at baseline.
- Patients who progress to mechanical ventilation may benefit from 10 days of remdesivir treatment



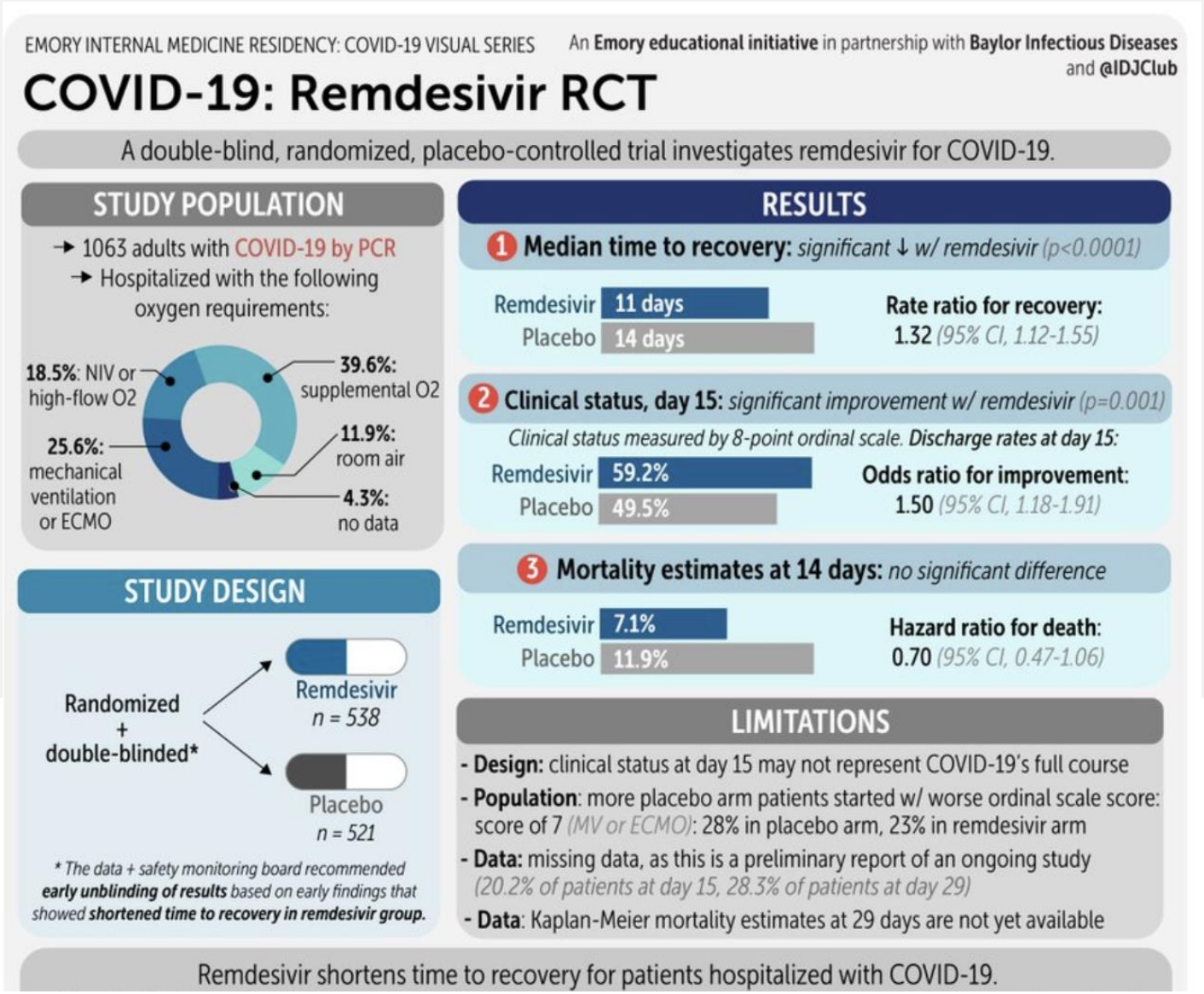
Oxygen Support on Day 14 According to Oxygen Support on Day 5.

NEJM May 27, 2020
DOI: 10.1056/NEJMoa2015301

Remdesivir in Patients with Pneumonia but Without Oxygen Requirements

- The second SIMPLE trial evaluates 5-day and 10-day in hospitalized patients with moderate manifestations of COVID-19, compared with standard of care.
- The initial phase of the study randomized 600 patients in a 1:1:1 ratio to receive either a 5-day or a 10-day treatment course of remdesivir in addition to standard of care, compared with standard of care alone.
- An expansion phase of the study was added to enroll up to 1,000 additional patients with moderate disease.

- **Today's SIMPLE-Moderate study results showed that when treating patients with moderate disease – those with pneumonia who do not require supplemental oxygen – a 5-day course of remdesivir led to greater clinical improvement than standard of care alone.**
- At Day 11, a higher proportion of patients in the 5-day treatment group achieved improvement in clinical status versus the standard of care group, achieving statistical significance for a ≥ 1-point improvement in ordinal scale (p=0.026).
- In addition, **non-statistically significant increases in clinical worsening or death were observed in the standard of care only group compared with the remdesivir groups.**



Remdesivir Summary

John H. Beigel, M.D. et al, Remdesivir for the Treatment of Covid-19 — Preliminary Report *NEJM* May 22, 2020

COVID-19: HYDROXYCHLOROQUINE & CHLOROQUINE

Registry study in the *Lancet*

Hazards associated with use of HCQ and CQ for COVID-19.

15,000 hospitalized for COVID-19 given HCQ or CQ with or without a second-generation macrolide with 81,000 who weren't given these treatments

All of the HCQ and CQ groups had

- higher rates of in-hospital mortality (16-24%) than the control group (9%)
- higher rates of ventricular arrhythmia during hospitalization (4-8%) versus controls (0.3%)

WHO announced that it had temporarily halted a hydroxychloroquine trial owing to safety concerns

www.thelancet.com **Published online May 22, 2020 https://doi.org/10.1016/S0140-6736(20)31180-6**