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#### Covid-19 Clinical Update 5/7/2020

George Washington University

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# COVID-19 UPDATE

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GW DIVISION OF INFECTIOUS DISEASES

5/7/2020

- 1. EPIDEMIOLOGY
- 2. PUBLICATIONS
- 3. GW UPDATES

## Known coronavirus deaths and cases in D.C., Maryland and Virginia

There are a total of **2,557 deaths** and **56,598 cases** confirmed in the region.

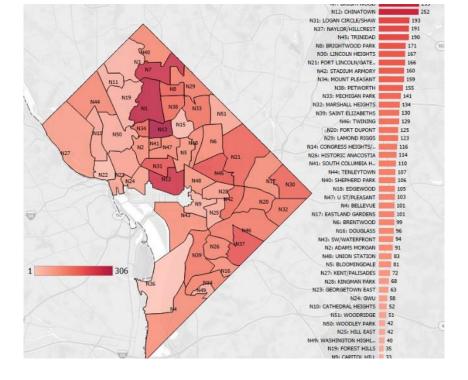
District of Columbia
285
5,654 cases



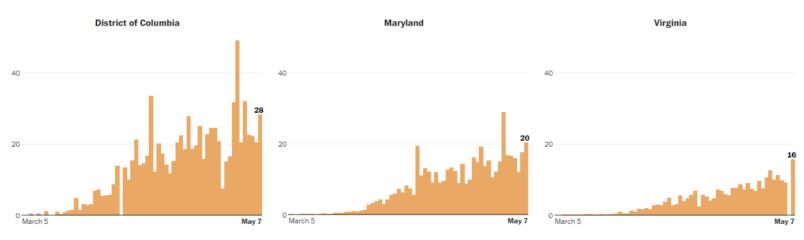


By Rebecca Tan, Fenit Nirappil, Kevin Uhrmacher, Gabriel Florit and Danielle Rindler

Updated May 7 at 11:19 a.m.



#### New daily cases per 100,000 residents



RESEARCH Open Access

# Emerging SARS-CoV-2 mutation hot spots include a novel RNA-dependent-RNA polymerase variant



Maria Pachetti <sup>1,2†</sup>, Bruna Marini<sup>4†</sup>, Francesca Benedetti <sup>5</sup>, Fabiola Giudici <sup>3</sup>, Elisabetta Mauro <sup>4</sup>, Paola Storici <sup>1</sup>, Claudio Masciovecchio <sup>1</sup>, Silvia Angeletti <sup>6</sup>, Massimo Ciccozzi <sup>6</sup>, Robert C. Gallo <sup>7,8</sup>, Davide Zella <sup>5,9\*</sup> and Rudy Ippodrino <sup>4\*</sup>

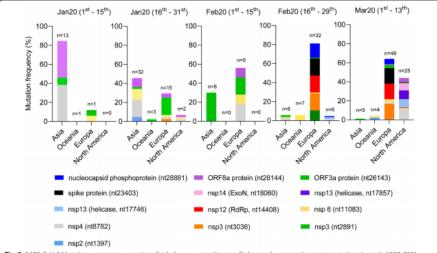


Fig. 2 SARS-CoV-2 Mutation occurrence over time divided per geographic area. Eight novel recurrent hotspots mutations (namely 1397, 2891, 14408, 17746, 17857, 18060, 23403 and 28881) and 5 hotspots already reported in literature (namely 3036, 8782, 11083, 28144 and 26143) were subdivided first into 5 period subgroups: December 2019 (n = 15), 181-15th Jan. 2020 (n = 15), 1616-13ts Jan 2020 (n = 52), 181-15th Feb 2020 (n = 15), 181-15th Peb 2020 (n

#### ACCEPTED MANUSCRIPT

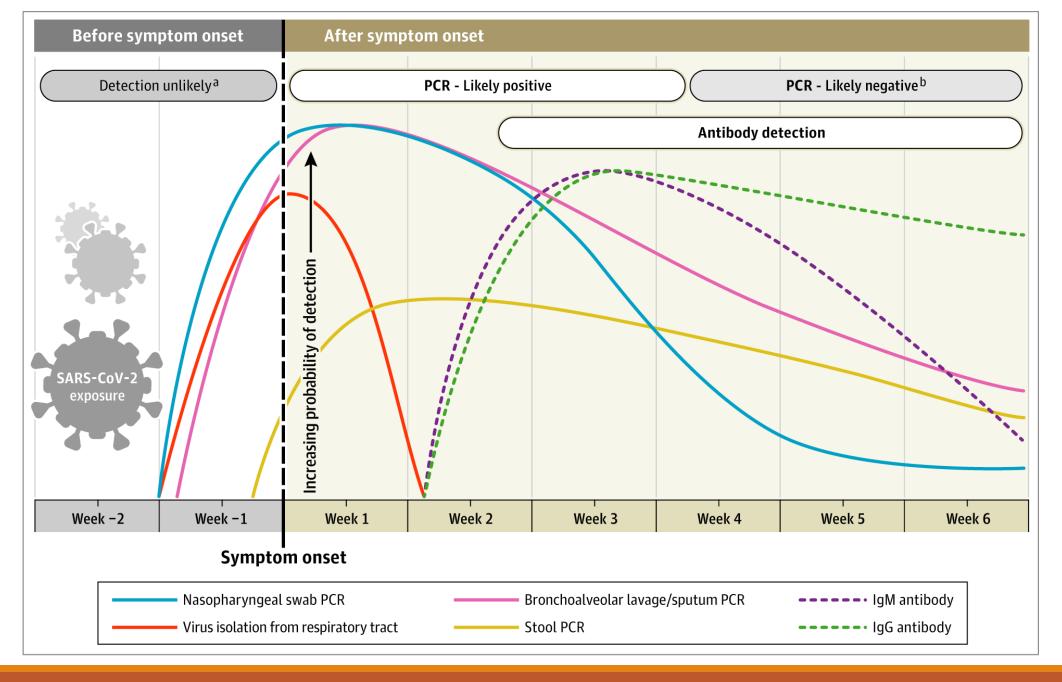
# Effect of Convalescent Plasma Therapy on Viral Shedding and Survival in COVID-19 Patients

Qing-Lei Zeng ▼, Zu-Jiang Yu, Jian-Jun Gou, Guang-Ming Li, Shu-Huan Ma, Guo-Fan Zhang, Jiang-Hai Xu, Wan-Bao Lin, Guang-Lin Cui, Min-Min Zhang ... Show more Author Notes

The Journal of Infectious Diseases, jiaa228, https://doi.org/10.1093/infdis/jiaa228

Published: 29 April 2020 Article history ▼

- 21 critically ill patients with COVID-19 respiratory failure
- 6 received convalescent plasma at a median of 21.5 days after first detection of viral shedding
  - All tested negative for SARS-CoV-2 RNA by 3 days after infusion (vs. 21% in comparison arm; p = 0.005)
  - In spite of viral clearance, 5 died (vs. 15/16 died in comparison arm; p = 0.184)
- Comparison arm: 15 pts who received standard of care without convalescent plasma
- Only one patient per arm survived
- "Convalescent plasma treatment can discontinue SARS-CoV-2 shedding but cannot reduce mortality in critically end-stage COVID-19 patients, and treatment should be initiated earlier."
  - Earlier = viremic/seronegative stage, estimated to be day 1-14 of illness





- Available from Gilead under Expanded Access ("Compassionate Use") protocol
- Eligibility Criteria:
  - On ventilator support
  - Minimal vasopressor support
  - eGFR > 30
  - No multi-organ failure
  - Consent
- Unfortunately currently we do NOT have access to this drug under any other protocol including EUA

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Hoping for updates under federal distribution mechanism and increase in production





Coronavirus (COVID-19) Update: FDA Issues **Emergency Use Authorization for Potential COVID-19 Treatment** f Share V Tweet in Linkedin Email A Print For Immediate Release: May 01, 2020









### Convalescent Plasma at GW

- Enrolling patients in American Red Cross / Mayo Clinic registry
- Facilitated by Blood Bank
- Matched from national program or directed donation
- Given 7 or 8 units to date
- Give earlier in disease course

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- · Laboratory confirmed COVID-19
- · Severe or immediately life-threatening COVID-19, for example,
  - o Severe disease is defined as one or more of the following:
    - shortness of breath (dyspnea),
    - respiratory frequency ≥ 30/min,
    - blood oxygen saturation ≤ 93%,
    - partial pressure of arterial oxygen to fraction of inspired oxygen ratio < 300,</li>
    - lung infiltrates > 50% within 24 to 48 hours
  - o Life-threatening disease is defined as one or more of the following:
    - respiratory failure,
    - septic shock,
    - multiple organ dysfunction or failure
- · Informed consent provided by the patient or healthcare proxy.