

Testing, Treatment, and a Way Out

Caveat – Not a doctor, not your doctor, never played one on TV. Background is in IT, information gathering, pattern recognition.

1) Why So Positive?

- a) Three things we have now that we didn't have a week ago
 - i) 45 minute "no lab" test - <https://www.cepheid.com/coronavirus>
 - ii) FDA "approved" treatment - <https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-continues-facilitate-development-treatments>
 - iii) General acceptance of social distancing – Public approval in media/social media and scorn for those who ignore it. Stats will show if it worked or not AFTER this is over and the stats can be compiled.

2) What is different now as compared to March 6, 2020? ("wait, this might be serious")

- a) "The coronavirus panic is dumb" – Elon Musk, March 6, 2020
- b) Limited testing in the US
- c) No widely known treatment
- d) No end in sight

3) Rapid Testing

- a) March 6th Testing Process
 - i) Nasal Swab
 - ii) Sent to lab
 - iii) Process to test takes six hours
 - iv) Summary – slow, centralized, process intensive

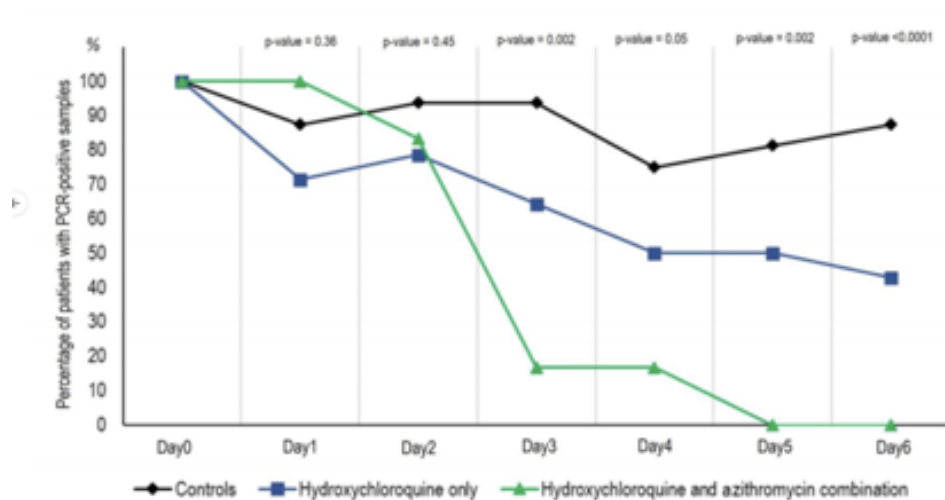
Cepheid said in a statement that there are 5,000 GeneXpert systems in the country. There are about 120 Roche cobas 6800/8800 units in the U.S.

- b) March 22nd Approved Testing Process
 - i) Nasal Swab
 - ii) Kept Local
 - iii) Answers in 45 minutes
 - iv) Summary – fast, decentralized, not process intensive

4) Rapid Treatment

- a) March 14, 2020 “There are pros and cons to taking Chloroquine as a prophylactic. It might slow the pandemic and give extra time to develop a vaccine. The downside is it might result in COVID-19 mutating to become drug resistant if taken as a prophylactic.” <https://twitter.com/JamesTodaroMD/status/1238562950610378754>
- b) March 15, 2020 “There is growing evidence of Chloroquine as a highly effective treatment for COVID-19. In a collaborative effort, @RiganoESQ (Johns Hopkins), Thomas Broker, PhD (Stanford) & I explore Chloroquine as a treatment/prophylactic to treat & prevent coronavirus.” <https://twitter.com/JamesTodaroMD/status/1238553266369318914>
- c) March 16, 2020 “Covid-19: Patients in Australia respond ‘well’ to Chloroquine”
- d) This chart

Figure 2. Percentage of patients with PCR-positive nasopharyngeal samples from inclusion to day6 post-inclusion in COVID-19 patients treated with hydroxychloroquine only, in COVID-19 patients treated with hydroxychloroquine and azithromycin combination, and in COVID-19 control patients.



Rapid Treatment Summary

- Instead of palliative/symptomatic care, we have a (still unconfirmed on large scale) treatment that is being used currently on the most sick as is healing them.
- A treatment that will cut down on the amount of time that someone is contagious
- A treatment that provides protection to health care workers
- DON'T SELF MEDICATE -

<http://bannerhealth.mediaroom.com/trending-now-at-banner?item=122999>

5) Rapid Removal

- a) Rapid testing – knowing if you are positive within an hour, wherever you are tested.
- b) If positive, treatment prescribed along with quarantine/isolation which in six days “should” have you virus free.
- c) Rapid re-testing – knowing if the treatment worked and if you can come out of quarantine, if you have antibodies for the virus. -

https://www.sciencemag.org/news/2020/03/new-blood-tests-antibodies-could-show-tr-ue-scale-coronavirus-pandemic?fbclid=IwAR243_w5RvB910IijVcP2lhIfuIJoo2K8rWhch3GaY354rUwApw-EaGgYiE

Could things be better? Of course...

We need better numbers.

1. How many people are hospitalized with COVID-19?
2. How many people are home with COVID-19?
3. Where are these new tests?
4. Who is doing chloroquine testing?
5. Where are we on supplies from both?

We need two channels of communication (sort of like SpaceX launches)

- main channel has happy people explaining the basics
- secondary channel which just gives technical updates