THREE THINGS: GOOD (FAMILY) NEWS, BAD (COVID-19) NEWS

[*NB: Check the byline, thanks! / ~Rayne*]

It’s absurd that I’m happy my college student child tested positive for strep throat. Whew, what a freaking relief that they only had a bacterial infection which has killed humans throughout history! Thanks to science we have effective antibiotics to treat this kind of infection, one of which is already working away and making said student feel better. …

Literally just heard from my student that Michigan State University now has one confirmed case associated with its campus. I can’t find a published report yet, more details later; so much for the brief respite provided by streptococcus.

Brace yourself for the bad news which so far is the nature of COVID-19.

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Drugs. Let’s get into them.

Beleaguered Italy is using the rheumatoid arthritis medication tocilizumab off-label to treat patients in ICU. It may become their protocol for treatment of patients who develop acute respiratory distress syndrome (ARDS).

COVID-19 apparently spawns a “cytokine storm” the same way the 1918 Spanish flu virus did. Health care professionals say COVID-19 kills via fulminating viral cardiomyopathy, (inflamed heart tissue), not hypoxia (suffocation due to lung failure).

The onset of inflammation can be sudden with the cytokine action but at a later stage in the infection, which is different from the 1918 bug. The Spanish flu affected mostly younger people whose immune systems over-responded to the

virus, where COVID-19 affects older people whose bodies may already have inflammatory responses at work because of cardio vascular disease or diabetes.

(We don’t know yet why some young people without preexisting conditions have become very ill and in some cases have died. Some may be related to smoking, others could be related to an undiagnosed condition. More study will be necessary; in the mean time, young people should protect both themselves and the older and sicker people who could catch COVID-19 from them.)

China tried tocilizumab on roughly 20 patients and found this monoclonal antibody halted the storm, acting on interleukin 6. There’s a preprint unreviewed study online but I can’t open it now or would include it. An immunologist in Italy came to similar conclusion about the use of this med and consulted with Chinese docs. See this story in an Italian news outlet (open in Chrome and translate).

There are other meds being tested in China – antivirals remdesivir (mentioned in a previous post), favipiravir, lopinavir/ritonavir, umifenovir – but there I haven’t seen any information about their application treating COVID-19 cases as detailed as there is for tocilizumab.

Pharma manufacturer Roche has agreed to provide to Italy the tocilizumab which should not only help reduce burden on hospitals’ intensive care units but build a body of data about the drug’s success in short order. China has also approved the drug’s use on certain COVID-19 patients.

I want to emphasize here this is NOT a cure for COVID-19. It’s a treatment for patients whose heart and lungs are in distress, requiring intensive care and a ventilator. What this drug may do for many of these patients is prevent them from needing ICU and ventilation, while their bodies continue to fight off the virus.

And more drugs – this time, antivirals.

A number of existing drugs have been revisited for repurposing against COVID-19 instead of their original intended purpose. Antiviral remdesivir and antimalarial chloroquine are among them.

Chinese researchers posted a paper about *in vitro* results, not peer reviewed (at least I didn't see that it was).

There's a paper about chloroquine alone; *in vitro* studies suggest it may work against COVID-19. Chinese researchers have a number of *in vivo* studies in progress, but no data has been released.

Chloroquine by itself as an effective therapy would be a miracle in that it's an old drug now off patent and available as a generic, super cheap to produce. Can't imagine Big Pharma would like this. But we won't even face this conflict if we don't get data from *in vivo* studies.

What I haven't seen yet is adequate research related to the ACE2 receptor to which the COVID-19 binds itself to attack the body. There's a study under way about a decoy protein drug called APN01, but I haven't seen any details yet. A discussion about the ACE2 receptor can be found at this link.

I'd like to see more work done in related to ACE2 receptor mechanism. I'm worried we'll end up too focused on antiviral remdesivir because there may be some political hijinks behind this drug.

Gilead Sciences, the drug's manufacturer, shipped a bunch of this drug to China without federal approval, for tests which I assume mean human experimentation on actual COVID-19 patients.

About the same time this happened two weeks ago Gilead launched a merger/acquisition of Forty-Seven Inc, a clinical-stage immuno-oncology firm. It looks fishy yet likely to go unexamined

because of the mounting desperation to have a drug therapy in hand before the anticipated explosion of cases arrives at hospital doors. In short, it'd be too easy to extort the U.S. into using this drug.

What really takes the cake is that a former Gilead lobbyist, Joe Grogan, is now the director of White House Domestic Policy Council. Grogan has already undermined Trump's drug pricing initiative to the benefit of pharmaceutical companies. How do we know Grogan isn't still representing Gilead's interests, perhaps encouraging the government to turn a blind eye to corner-cutting on remdesivir?

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Now it's time for some more blunt talk with the family members.

I have a health care power of attorney or a health care directive prepared, signed, witnessed, copies distributed with one copy in my fire safe. If the worst should happen and the doctors need direction if I become incapacitated, my patient advocate is authorized to order what I want done. I have more than one advocate in a chain in case the primary advocate can't act on my behalf.

I also have a will prepared, signed, witnessed, etc. If I'm picked off this month my kids will be disappointed that I haven't yet finished Swedish Death Cleaning in the basement, but such is life and death. (Sorry, kids. You're stuck dealing with all of the grandmas' china sets and fragile antique lamps. Heh.)

I put the question to you now: are <u>you</u> ready? Have you done the legal legwork to help your loved ones whether family and/or friends if you're incapacitated or **knock-on-wood** die?

Get it done if you haven't. Stop putting it off because there's no more time for lollygagging. We'd all like to deny we could get very sick, lose control of our lives, even die, but nature has a way of having the very last word if you

don’t provide one.

Need a resource for that health care directive? See the folks at AARP — they have links to free resources for each state.

Just as important is establishing a plan for what friends/family should do if they can’t reach you. Trusted friends/family members should have current phone numbers, addresses, alternate key locations, emergency contacts, so on. They should also know who the patient advocates are and how to obtain access to the relevant documents if advocates don’t already have them.

This doesn’t have to be heavy; some of this effort we should have been doing all along as part of your disaster preparedness planning. Think about the families and friends affected by hurricanes Katrina and Maria, and imagine COVID-19 as a kind of hurricane which won’t flood your house but could certainly upend your life. You’d be prepared for a hurricane. Be ready for this one.

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Treat this as an open thread. Tell us what’s in your basement or closets you need to unload because no one in your family wants it.