

COVID-19 vaccine initial thoughts

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Version 1

Vaccine for COVID-19: Expectation management

- Harder challenge than Everest. There is no vaccine for any coronaviruses
- Even if we find a vaccine, we don't know how long immunity will last
- Vaccination may cause worse symptoms than the disease itself (ADE, cytokine storms)
- Poor immuno-response in older people, who are at the highest risk from COVID-19

No more than 15% likelihood of success for vaccines in the clinic; <10% for preclinical candidates

Expect a very high attrition rate, so need multiple different shots on goal

We should expect more corona viruses to emerge, so we need a flexible, permanent vaccine capability to respond to future pandemics

- Immunity to one corona strain may not confer immunity to others
- Three novel coronaviruses have infected humans in the past 20 years and more are expected. Nine new bat coronaviruses identified with the potential to infect humans