COVID-19 Clinical Update

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Disclosures

COVID-19 Transmission

- Transmission at Choir Practice Hammer et al, MMWR May 15, 2020
  - 122 choir members in Skagit County, WA met weekly through 3/10/202 for 2.5 hours
  - On March 16, 2020, 3 members tested positive (only 1 had been symptomatic 3/10)
  - 52 persons total developed COVIDS-19
  - Possible modes of transmission:
    - Fomites
    - Aerosolization by singing
    - Standing 6-10 inches apart
  - Choir practice may be a "Superspreader Event"

Clinical Presentation Update
GI Manifestations

- Prevalence of GI Manifestations of COVID-19 Infection (Adler at al, Gastro, May 11)
- Symptoms and labs of 10,890 patients with COVID in 47 study metanalysis
  - Abdominal pain 3.6%
  - Diarrhea 7.7%
  - Nausea/Vomiting 7.8%
  - Elevated ALT + ALT 15% each
  - Elevated Bilirubin 16.7%

Clinical Presentation Update
GI Manifestations

- Recommend:
  - New diarrhea: evaluate contact exposures and h/o COVID symptoms
  - New GI Symptoms: Consider COVID-19 symptoms
  - Hospitalized Patients: obtain GI history
  - Do not test stool for SARS-CoV-2
  - Follow LFTs in hospitalized patients with COVID-19
  - Treatments for COVID may cause GI symptoms and LFT abnormalities

COVID-19 and Multisystem Inflammatory Syndrome

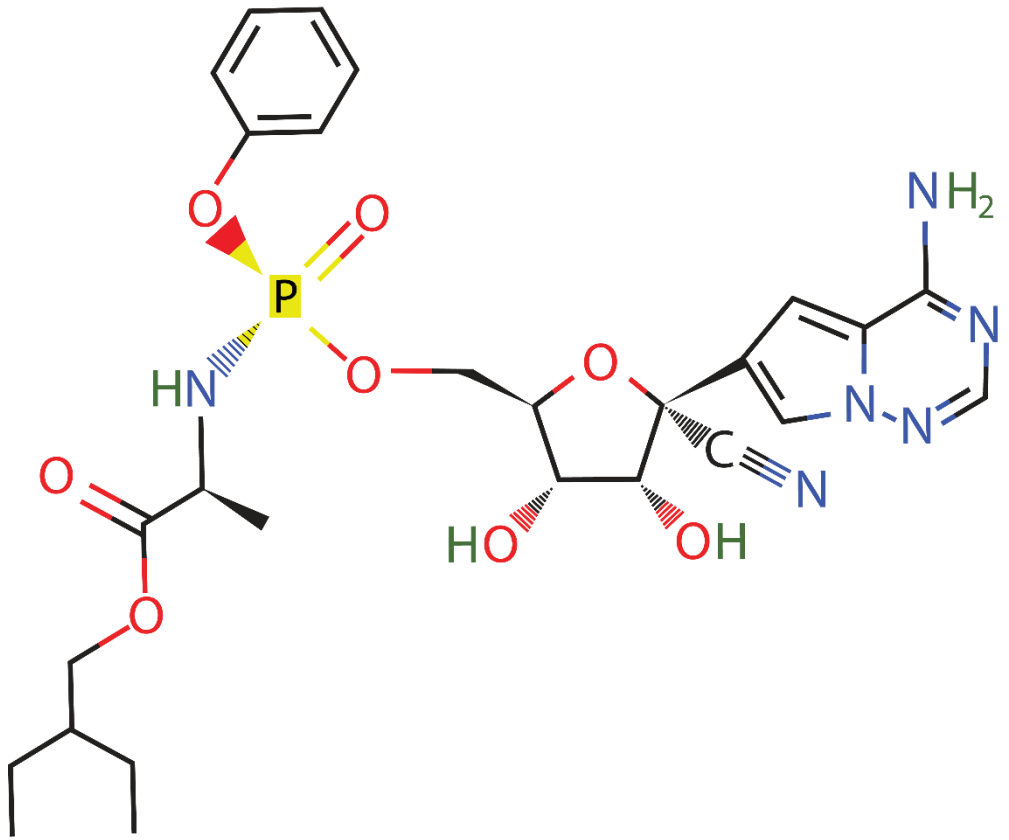
- CDC HAN Alert May 14, 2020
  - First described in UK on April 26, 2020: severe inflammatory syndrome
    - Fever
    - Hypotension
    - Cardiac, GI, renal, hematologic, dermatologic, neurologic manifestations not all with pulmonary
    - Elevated inflammatory markers
  - CDC Case Definition (all 3 required):
    - <21 years old with fever, lab evidence of inflammation, severe disease requiring hospitalization with multisystem organ involvement (cardiac, GI, renal, hematologic, dermatologic, neurologic)
    - No alternate plausible diagnosis
    - Positive for current or recent Sars-CoV-2 by PCR, Ag, or exposure history within 4 weeks

Testing update

- **Cepheid Xpert:**
- **Abbott ID NOW:**
  - **NYU Study Basu et al (not peer reviewed)**
    - **101 Emergency Dept patient aged 28-90 with suspect COVID tested by dry swab**
    - **Abbott picked up 16 out of 31 positive samples picked up by Cepheid (51.6%)**
  - **FDA: "The test may result in false results.** ***We are still evaluating the information about inaccurate results and are in direct communications with Abbott about this important issue".***
- **Sofia 2 SARS Ag FIA: New antigen test from Quidel Corporation received EUA**
  - **Rapid**
  - **May not be as accurate as PCR**

Remdesivir

Remdesivir



Chemical structure drawing by Kenton Unruh, Ph

Remdesivir distributed last week

- Criteria for Rx in IHS:
  - Confirmed COVID-19 diagnosis
  - RA Saturation ≤94% requiring supplemental oxygen, mechanical ventilation or ECMO
  - eGFR >30 and ALT < 5x Upper Limit of Normal

  >>> Consider rising O2 requirement and elevated inflammatory markers as high priority
- Dose: 200 mg IV loading dose then 100 mg IV daily (10d ICU, 5d floor)
- Monitor eGFR, LFTs and symptoms on Rx
- Look for: hypotension, Nausea, vomiting, LFT elevation

Vaccine news

- Moderna, Inc of Cambridge, MA
  - Phase 1 study of mRNA-1273, a messenger RNA vaccine against SARS-CoV-2
    - Gave 25mcg, 100 mcg and 250 mcg doses (n=15 at each dose)
    - Measured neutralizing antibody levels in the first 8 patients (25 and 100mcg)
    - Antibody levels were above or at levels found in COVID-19 convalescent sera
    - No major side effects noted: only one had redness around injection site
  - Animal studies in mice showed the vaccine prevented lung replication

From Moderna press release, May 18,2020

Updated CDC HCP Return to Work Criteria

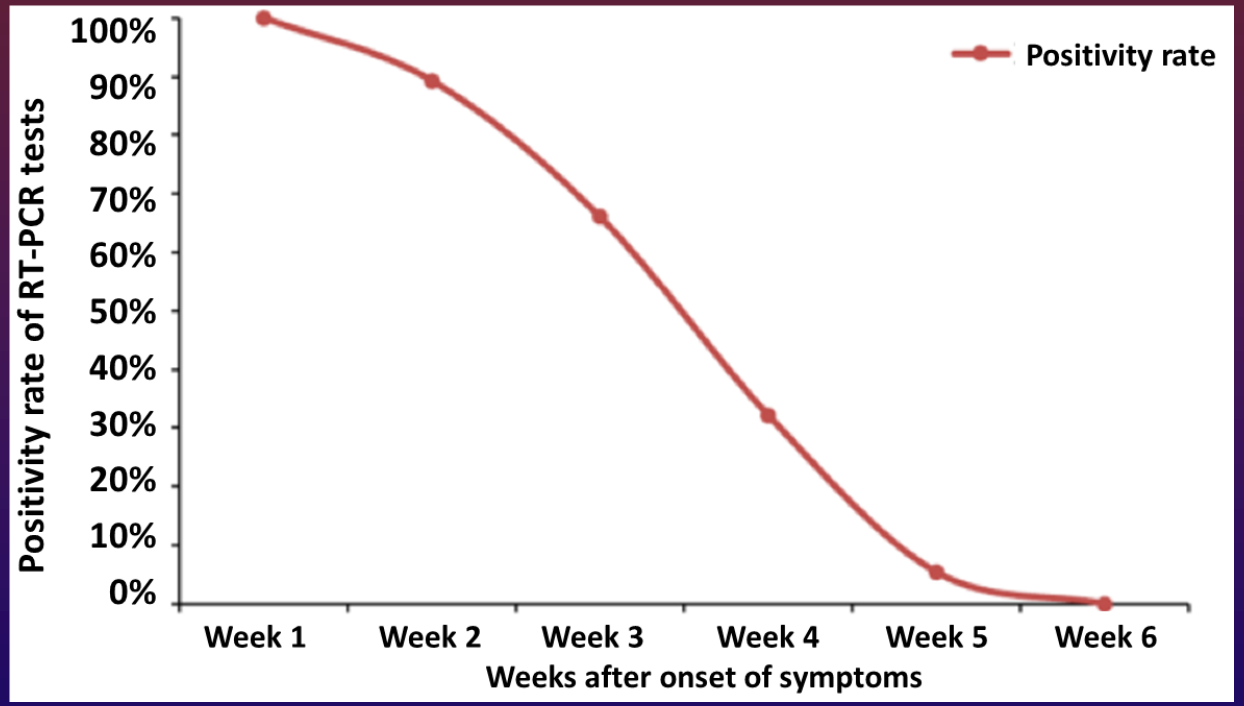
- No more preference for the two PCR return criterion

- Symptom and time-based strategy given equal billing
  - 10 days since symptom onset, 3 days no fever, 3 days improved symptoms
  - 10 days since positive PCR for asymptomatic HCP still with no symptoms

https://www.cdc.gov/coronavirus/2019-ncov/hcp/return-to-work.html

Updated CDC HCP Return to Work Criteria

- Viral burden declines after onset
- Living virus has never been cultured after 9 days since symptom onset
- IgG Abs detected same time
- Viral culture negative when PCR Cycle Threshold (Ct) > 33-35
- If still PCR positive 3 days after recovery, Ct is usually in this range



From CDC Decision Memo: https://www.cdc.gov/coronavirus/2019-ncov/community/strategy-discontinue-isolation.html

More COVID-19 Training

- CDC: https://www.cdc.gov/coronavirus/2019-ncov/hcp/index.html
- ACP Physician Handbook: https://www.acponline.org/clinical-information/clinical-resources-products/coronavirus-disease-2019-covid-19-information-for-internists
- UW Protocols: https://covid-19.uwmedicine.org/Pages/default.aspx
  - UW IDEA Program: https://covid.idea.medicine.uw.edu/
  - NIH Guidelines: https://covid19treatmentguidelines.nih.gov/
- Brigham and Women's Hospital: covidprotocols.org