**Therapeutics Landscape for COVID-19**

Presented by: Natasha Chida, M.D., M.S.P.H., Johns Hopkins Department of Medicine

Summary by: Giorgio Caturegli, Johns Hopkins School of Medicine

**Summary/Key Points:**

- **Remdesivir**
  - Mechanism: adenosine nucleoside analog
  - Basis: cell/animal model in MERS-CoV, SARS-CoV, etc.
  - Clinical trial: over 18 days, 68% improvement in oxygen support & 57% extubation. 23% serious adverse events & 13% death

- **Lopinavir/ritonavir**
  - Mechanism: protease inhibitor
  - Basis: cell model in MERS-CoV, SARS-CoV, etc.
  - Clinical trial: faster resolution of fever but no difference in time to clinical improvement, mortality, viral clearance

- **Hydroxychloroquine**
  - Mechanism: inhibits viral fusion by alkalining endosome, interferes with receptor glycosylation
  - Basis: cell model in SARS-CoV
  - Clinical trial: faster resolution of fever and cough, but no difference in viral clearance or other clinical outcomes
    - Chen Z. medRxiv preprint doi: https://doi.org/10.1101/2020.03.22.20040758

- **Hydroxychloroquine + azithromycin**
  - Clinical trial: faster viral clearance

- **Observational cohort**
  - tocilizumab: 19% discharge by time of paper submission
  - siltuximab: 33% improvement