COVID-19 Digest Issue 19
September 3, 2020

CLINICAL PEARL

- **Serology testing for COVID-19**: Clinicians and public health officials need to understand the performance of serology assays used in their settings in order to accurately interpret anti-SARS-CoV-2 antibody test results. Whenever possible, serologic assays with established high sensitivity and specificity (i.e., >99.5%) should be employed. IgG and total antibody tests appear to have better sensitivity and specificity than other immunoglobulin classes and perform best when used between three to four weeks after symptom onset. The clinical indications for antibody testing to support a diagnosis of COVID-19 are limited at this time. Testing can be considered for the evaluation of patients with a high clinical suspicion for SARS-CoV-2 infection despite repeatedly negative molecular diagnostic testing (especially those presenting late after symptom onset) and should be included in the assessment of multisystem inflammatory syndrome in children (MIS-C). Serologic tests also have potential utility for tracking the course of the SARS-CoV-2 pandemic in the community. The effectiveness and durability of anti-SARS-CoV-2 antibody responses, however, have not yet been defined. Thus, serologic testing cannot be used to determine immune status.

PUBLIC HEALTH UPDATES

- The FDA issued an Emergency Use Authorization to Yale School of Public Health for SalivaDirect, which uses a new method of saliva sample processing.

GUIDANCE

- Infectious Diseases Society of America (IDSA) Guidelines on the Diagnosis of COVID-19: [Serologic Testing](#)
- CDC Face Coverings Guidance: [Considerations for Wearing Masks](#)
- CDC Guidance on [Playing Sports](#)

RESOURCES/REPORTS

- [Quick COVID-19 Severity Index (qCSI) Calculator](#)
- [Cleveland Clinic - Predict Hospitalization Risk for COVID-19 Positive](#)
- [UCSF – Pediatric COVID-19 Risk Calculator](#)
- IDSA Podcasts:
  - [COVID-19: Is It Safe to Return to Fall Sports?](#)
  - [COVID-19: Traveling in the Midst of a Pandemic](#)
- [COVID-19 Healthcare Coalition](#)
  - [Planning for On-Campus K-12 Education During COVID-19](#)
- [Healthychildren.org](#)
  - [Return to School During COVID-19](#)
- [New tool: Maven partners with Emily Oster to help parents make child care decisions during COVID-19](#)
COVID-19 Digest Issue 19

ACADEMIC/RESEARCH PAPERS

- **Clinical Infectious Diseases**
  - COVID-19 re-infection by a phylogenetically distinct SARS-coronavirus-2 strain confirmed by whole genome sequencing
  - Household Transmission of SARS-CoV-2 in the United States
  - The risk of COVID-19 transmission in train passengers: an epidemiological and modelling study
  - Usability and acceptability of home-based self-testing for SARS-CoV-2 antibodies for population surveillance

- **Nature**
  - Sex differences in immune responses that underlie COVID-19 disease outcomes
  - Peripheral immunophenotypes in children with multisystem inflammatory syndrome associated with SARS-CoV-2 infection

- **International Journal of Infectious Diseases**
  - Inoculum at the time of SARS-CoV-2 exposure and risk of disease severity

- **The Journal of Pediatrics**
  - Pediatric SARS-CoV-2: Clinical Presentation, Infectivity, and Immune Responses

- **JAMA Pediatrics**
  - Prevalence of SARS-CoV-2 Infection in Children Without Symptoms of Coronavirus Disease 2019
  - Plans of US Parents Regarding School Attendance for Their Children in the Fall of 2020 - A National Survey

- **medRxiv**
  - SARS-CoV-2 Infections Among Children in the Biospecimens from Respiratory Virus-Exposed Kids (BRAVE Kids) Study
  - SalivaDirect: Simple and sensitive molecular diagnostic test for SARS-CoV-2 surveillance
  - Simply saliva: stability of SARS-CoV-2 detection negates the need for expensive collection devices
  - Effect of Convalescent Plasma on Mortality among Hospitalized Patients with COVID-19: Initial Three-Month Experience

- **The American Journal of Pathology**
  - Treatment of COVID-19 Patients with Convalescent Plasma Reveals a Signal of Significantly Decreased Mortality

- **Cell**
  - Robust T cell immunity in convalescent individuals with asymptomatic or mild COVID-19

- **bioRxiv**
  - Pre-existing and de novo humoral immunity to SARS-CoV-2 in humans

- **Annals of Internal Medicine**
  - Variation in False-Negative Rate of Reverse Transcriptase Polymerase Chain Reaction–Based SARS-CoV-2 Tests by Time Since Exposure
  - Myasthenia Gravis Associated With SARS-CoV-2 Infection
  - Cardiac Endotheliitis and Multisystem Inflammatory Syndrome After COVID-19
  - The Remote Misses of COVID-19

- **The Lancet**
  - Comparison of molecular testing strategies for COVID-19 control: a mathematical modelling study
COVID-19 Digest Issue 19

- COVID-19 and multisystem inflammatory syndrome in children and adolescents
- Associations of type 1 and type 2 diabetes with COVID-19-related mortality in England: a whole-population study
- Risk of COVID-19 among front-line health-care workers and the general community: a prospective cohort study

*Science Advances*
- Efficient high-throughput SARS-CoV-2 testing to detect asymptomatic carriers

*American Journal of Respiratory and Critical Care Medicine*
- Pulmonary Vascular Dilatation Detected by Automated Transcranial Doppler in COVID-19 Pneumonia

*Preprints*

*Radiology Society of North America*
- Automated Assessment of CO-RADS and Chest CT Severity Scores in Patients with Suspected COVID-19 Using Artificial Intelligence

*arXiv*
- An artificial intelligence system for predicting the deterioration of COVID-19 patients in the emergency department

*New England Journal of Medicine*
- Contact Tracing for Native Americans in Rural Arizona

*Journal of Adolescent Health*
- Association Between Youth Smoking, Electronic Cigarette Use, and Coronavirus Disease 2019

*JAMA*
- Periodic Oscillations in Daily Reported Infections and Deaths for Coronavirus Disease 2019

*JAMA Ophthalmology*
- Ocular Manifestations and Clinical Characteristics of Children With Laboratory-Confirmed COVID-19 in Wuhan, China
- Assessment of Simulated Respiratory Droplet Spread During an Ophthalmologic Slitlamp Examination

*American Heart Association Journal*
- Immunothrombotic Dysregulation in COVID-19 Pneumonia is Associated with Respiratory Failure and Coagulopathy

*Journal of Molecular and Cellular Cardiology*
- SARS-CoV-2 receptor ACE2-dependent implications on the cardiovascular system: From basic science to clinical implications

*Rhinology*
- Comparison of COVID-19 and common cold chemosensory dysfunction

*American Journal of Gastroenterology*
- Impact of Famotidine Use on Clinical Outcomes of Hospitalized Patients With COVID-19

*The American Journal of Tropical Medicine and Hygiene*
- COVID-19–Related Infodemic and Its Impact on Public Health: A Global Social Media Analysis

*Emerging Infectious Diseases*
- Multidrug-Resistant *Candida auris* Infections in Critically Ill Coronavirus Disease Patients, India, April–July 2020
- Antibody Profiles According to Mild or Severe SARS-CoV-2 Infection, Atlanta, Georgia, USA, 2020
COVID-19 Digest Issue 19

**MMWR**
- Trends in Number and Distribution of COVID-19 Hotspot Counties — United States, March 8–July 15, 2020
- Primary Indicators to Systematically Monitor COVID-19 Mitigation and Response — Kentucky, May 19–July 15, 2020
- Preventing and Mitigating SARS-CoV-2 Transmission — Four Overnight Camps, Maine, June–August 2020
- Limited Secondary Transmission of SARS-CoV-2 in Child Care Programs — Rhode Island, June 1–July 31, 2020

**HOT OFF THE (LAY) PRESS**
- University of Minnesota Center for Infectious Disease and Research Policy
  - Commentary: Public health’s share of the blame: US COVID-19 risk communication failures
- Politico
  - Trump administration limits FDA review of some coronavirus tests
- Yale News
  - Quick and affordable saliva-based COVID-19 test developed by Yale scientists receives FDA Emergency Use Authorization
- Physicians Weekly
  - Covid-19: FDA Approves New Saliva Test
  - Covid-19 Digest: FDA Halts EUA on Convalescent Plasma
- The New York Times
  - The F.D.A., which is facing pressure from President Trump to move faster to address the pandemic, authorized plasma as a treatment.
  - F.D.A., ‘Grossly Misrepresented’ Blood Plasma Data, Scientists Say
  - Clinical Trials of Coronavirus Drugs Are Taking Longer Than Expected
  - For Quick Coronavirus Testing, Israel Turns to a Clever Algorithm
  - New Measures Aim to Boost Vaccine Rates for Flu and Children’s Shots
  - Work by researchers in Hong Kong finds that re-infection may be possible in rare cases
  - Why Are Coronavirus Cases Decreasing? Experts Say Restrictions Are Working
  - A Novel Way to Combat Covid-19 in Nursing Homes: Strike Teams
  - Coronavirus Doctors Battle Another Scourge: Misinformation
  - ‘But I Saw It on Facebook’: Hoaxes Are Making Doctors’ Jobs Harder
  - The Nation Wanted to Eat Out Again. Everyone Has Paid the Price.
  - On Native American Land, Contact Tracing Is Saving Lives
  - Nurses Are on the Virus Front Lines. But Many Schools Don’t Have One.
- Medpage Today
  - Success Reported With HAE Tx in Severe COVID-19
- Bloomberg
  - Contact Tracing Is Having a Trust Crisis
  - Senators Ask HHS, CDC to Standardize Covid Campus Case Reporting
COVID-19 Digest Issue 19

- **University of Kentucky News**
  - Clinical Trial Looks at Antiseptic Nasal Spray and Gargle to Prevent COVID-19 Infections

- **The Conversation**
  - Ivermectin is still not a miracle cure for COVID-19, despite what you may have read

- **Reuters**
  - Exclusive: Fauci says rushing out a vaccine could jeopardize testing of others
  - Vanda’s experimental COVID-19 drug shows promise in interim trial data
  - South Korea battles worst coronavirus outbreak in months, warns of crisis
  - More infectious coronavirus mutation may be 'a good thing', says disease expert
  - Airlines, airports to push for COVID testing as quarantines hit traffic
  - Russia to begin COVID-19 vaccine trials on 40,000 people next week

- **JAMA News and Perspectives**
  - What Happens When COVID-19 Collides With Flu Season?

- **The Economist**
  - When covid-19 becomes a chronic illness

- **CNN Health**
  - Hundreds of Covid-19 cases reported as students return to college campuses
  - Almost 100 people in Ohio were infected with coronavirus after man attended church service

- **Propublica**
  - Cellphone Data Shows How Las Vegas Is “Gambling With Lives” Across the Country

- **WebMD**
  - COVID the Third-Leading Cause of Death in the U.S.

- **The Hill**
  - COVID-19 fatality rates fall as treatments improve
  - FDA creates first-ever medical supply shortage list including masks, swabs and ventilators

- **BBC**
  - Why a face shield alone may not protect you from coronavirus

- **Modern Healthcare**
  - Nurses and doctors sick with COVID feel pressured to get back to work

- **NPR/KQED**
  - As Pandemic Persists, Health Care Heroes Beginning To Crack Under The Strain
  - Another COVID-19 Medical Mystery: Patients Come Off Ventilator But Linger In A Coma
  - Half of All Detainees at Bakersfield ICE Facility Have Tested Positive For COVID-19
  - Yep, Masks And Protective Gear Are Still Hard To Get — Especially For Small Buyers

- **STAT News**
  - Instead of lockdowns, teach people how to socialize safely in the time of coronavirus

- **Hopkins Bloomberg Public Health Magazine**
  - COVID-19 and Suicide: A Crisis Within a Crisis

- **AP News**
  - Pandemic pushes expansion of ‘hospital-at-home’ treatment

- **The New Yorker**
  - Did Pangolin Trafficking Cause the Coronavirus Pandemic?

- **Science Magazine**
  - Wuhan coronavirus hunter Shi Zhengli speaks out
COVID-19 Digest Issue 19

- **DW**
  - Germany closes two schools due to fresh coronavirus outbreaks

- **The Washington Post**
  - First U.S. cases of coronavirus in minks found at Utah fur farms
  - The U.S. forced major manufacturers to build ventilators. Now they’re piling up unused in a strategic reserve.
  - Trump administration declared teachers essential workers. Here’s what that means.

- **The Wall Street Journal**
  - Covid-19 Data Will Once Again Be Collected by CDC, in Policy Reversal
  - Covid-19 Deaths Skew Younger Among Minorities
  - As Child Covid Cases Rise, Doctors Watch for Potential Long-Term Effects

- **Los Angeles Daily News**
  - Coronavirus: Hypertension, diabetes lead underlying conditions in LA County deaths

- **The Los Angeles Times**
  - Coronavirus: California’s case curve shrinks again. Is it for real this time?

- **The Mercury News**
  - California paid a price for mask shortage in dollars and lives, coronavirus study finds

- **San Francisco Chronicle**
  - Schools reopening: Santa Clara is first Bay Area county to approve some in-person learning
  - Coronavirus in the classroom? New UCSF study calculates the odds
  - T cells, the body’s antiviral snipers, look promising for a coronavirus vaccine

**EPIDEMIOLOGY UPDATES**

- **US Leads the World in Confirmed COVID-19 Cases** per Johns Hopkins University Center for Systems Science and Engineering Dashboard Website

- **Johns Hopkins COVID-19 in the USA** – daily summary of key data on COVID-19 in the U.S.

- **California COVID-19 by the numbers** are available on the CDPH Website and the NYT Map and Table (includes data by county)
  - California COVID-19 Statewide Update as of September 3, 2020

- **San Mateo County COVID-19 Dashboard**
- **Santa Clara County COVID-19 Dashboard**

**ADDITIONAL COVID-19 RESOURCES**

- Palo Alto Online tracking the coronavirus in San Mateo and Santa Clara counties
- California COVID-19 Data and Tools
- CDPH COVID-19 Assessment and Modeling Tool
- California Department of Corrections and Rehabilitations Population COVID-19 Tracking Dashboards
- COVID-19 Nursing Home Data
- CDC Interactive Serology Dashboard for Commercial Laboratory Surveys
- CDC COVID-19 Forecasts: Deaths
- HHS Coronavirus Data Hub