COLLEGE of AMERICAN PATHOLOGISTS

Topic: **You've Been Asked to Implement SARS-CoV-2 Antibody Testing: What You need to Know**
Date: June 4, 2020
Subject: Questions and Answers

Result Reporting

1. **How do you treat an equivocal result? Most platforms only have a positive or negative result, but a few have an equivocal.**

   Equivocal results may indicate that the patient is in the process of seroconverting, or may be the result of false-reactivity. Re-testing of a new samples in 7 to 14 days is typically recommended to help determine whether seroconversion occurs.

2. **Are there recommendations or guidelines on how to verify borderline results? Should we report results as borderline?**

   Laboratories using serologic assays with FDA EUA must adhere to and report results as indicated in the manufacturer instructions for use. Many of these EUA's have recommendations regarding how borderline or equivocal results showed be handled, which should also be followed.

Verification/Validation

1. **Should specificity and cross-reactivity be assessed using known coronavirus positive serum; as well as SARS-CoV-1, MERS CoV positive serum specimens?**

   If serum with antibodies against the above viruses is readily available, performing specificity studies using these samples would be beneficial for assay validation purposes. However, given that serologic tests for detection of antibodies to the commonly circulating coronaviruses are not routinely available, and that samples from patients with SARS-CoV-1 and MERS are not common, testing such samples is not required for validation for anti-SARS-CoV-2 serologic tests. Laboratories should utilize samples collected prior to the pandemic and/or serum samples from patients with RT-PCR confirmed coronavirus infections. Laboratories may also consider testing serum from patients with known recent seasonal coronavirus infection determined by molecular testing (if this is routinely performed at their institution).

2. **Does the CAP require the laboratory to perform sensitivity and specificity verification studies or do analytical interference, precision, and accuracy records suffice?**

   Laboratories using serologic assays with FDA emergency use authorization are required to validate the assay prior to implementation for clinical use. As part of those validation studies, precision/reproducibility, accuracy and interference studies are required.

3. **Do validation requirements apply to the lateral flow antibody strips?**

   Yes.

4. **Do you have any suggestions on how to verify the cut-off for qualitative tests?**

   There are a couple of possible approaches. First, if the calibrators are close to the cut-off as determined by the laboratory director, they may be used to fulfill this CAP requirement. Alternatively, either third-party vended material or pooled patient samples with index or signal-to-cut off ratios near the cut-off may be used either on every run or tested at least twice per year to fulfill the cut-off verification requirement.

5. **If bridging studies are done to validate additional sample types for EUA assays, will these be considered LDT's by the CAP?**

   Please check the most recent FDA guidance regarding validation of additional specimen types. Typically, if bridging studies are performed to show specimen type equivalence and if a Right of Reference letter is provided by the manufacturer, testing of a different specimen type is still covered by the FDA EUA and would not be considered an LDT.

General

1. **Where can I find the list of serology tests that should no longer be distributed?**
   The FDA includes a list on their website that they are updating.

   https://www.fda.gov/medical-devices/emergency-situations-medical-devices/faqs-testing-sars-cov-2

2. **If patients have been treated with convalescent plasma, is it possible that the antibody detected is passive from the donor?**

   Yes.

3. **Is it preferable to measure IgG or Total Antibody (IgG & IgM)? Are there any guideline recommendations?**

   The CDC indicates that there is no advantage to using serologic tests which test for IgG alone, IgM and IgG, or total antibodies.

4. **Can serology tests be used in the diagnosis of MIS-C?**

   Serologic tests should not be the sole basis of any COVID-19 related diagnosis. However, they can be used as an aid alongside other clinical and laboratory findings.