**Frequently Asked Questions About COVID-19**

**Antibody Testing (Serology Testing)**

**Version: 27 April 2020**

1. **What is an antibody?**
   * An antibody is protein that is a normal part of the immune response to many types of infections.
   * Our bodies develop antibodies in the days and weeks after being infected.
   * Antibodies are specific for different infections – as part of the immune response, the antibody attaches to specific parts of the germ. For example, there are antibodies for influenza and different antibodies for hepatitis C.
2. **What is an antibody test?**
   * An antibody test is a type of blood test to see if you have:
     + Any antibodies for an infection (yes/no result also known as a “qualitative” test) or
     + How much antibody (a “quantitative” test)
   * These tests are also referred to as “serological” tests
3. **Does UW Medicine have an antibody test for COVID-19?**
   * Yes, UW Medicine has a test that looks for antibodies to SARS-CoV-2, the virus that causes COVID-19
   * The test is a “qualitative” test, it only can tell you if it detects antibodies to SARS-CoV-2 or not. It doesn’t provide information on how much antibody there may be.
4. **How accurate is the antibody test?**
   * It is very sensitive- by 25 days after infection, almost 100% of people have a positive test
   * It is very specific – it will be negative in >99% of people who did not have an infection
   * One challenge with this test is that due to the overall low number of people with COVID-19 in the community, it is possible to have a “false positive” result. This means the test will be positive when the person never was infected. This is true for all antibody tests, including a very good one like the one used at UW Medicine.
   * In some cases, immunocompromised patients may have a negative test result despite prior COVID-19 infection due to lack of or delay in development of detectable antibodies.
5. **I have symptoms that I think might be COVID-19. Should I get this test?**
   * **No. The antibody test is not used to diagnose acute infections**. If you have any symptoms concerning for COVID-19 (fever, feeling short of breath, cough, muscle pain, sore throat, loss of taste or smell, new diarrhea) you should talk to your provider about getting a different test (usually a PCR) that looks for the virus itself.
   * Because antibodies don’t develop days to weeks after infection, we cannot depend on them for diagnosis
6. **I want to get tested to see if I had COVID-19. Can I just go to a hospital or clinic and get tested?**
   * No. You should talk to your provider to learn about the test and to determine whether you should get this test. The test requires an order from your provider and then a blood draw by a qualified healthcare professional.
7. **If not used for diagnosis of COVID-19, why would I get an antibody test?**
   * It remains unclear how this test should be used in individual patients.
   * If your test is negative (and you have no symptoms), it means you likely have not had a COVID-19 infection and lets you know that you have no immunity to SARS-CoV-2
   * If your test is positive, it is likely that you were infected at some point in the last several months, but the result may also be a “false positive” (discussed above).
   * This type of test will help public health departments and researchers learn more about how many people in a population have been exposed or infected.
   * If you are interested in getting tested, you should discuss with your provider.
8. **Does a positive antibody test result mean I am immune?**
   * Unknown. We do not yet know if a positive test result means that a person is immune or if it does, for how long immunity might last. We hope to learn more these questions in the coming months.
   * If your test is positive, you should continue to follow public health recommendations on social/physical distancing, hand hygiene, environmental cleaning, staying home when ill and mask use.
9. **I think I had COVID-19 and want to be a plasma donor or participate in a clinical trial, should I get this antibody test?**
   * No. For more information, please visit: <https://newsroom.uw.edu/news/plasma-donors-sought-among-those-recovered-covid-19>

**Technical information on the UW Medicine antibody test:**

* + UW Virology is performing the Abbott SARS-CoV-2 IgG immunoassay on the ARCHITECT instrument. This is a chemiluminescent microparticle immunoassay (CMIA) used for the qualitative detection of IgG antibodies to SARS-CoV-2 nucleocapsid protein in human serum and plasma. This is a high-throughput automated system allowing for the testing of many samples each day.
  + The Abbott SARS-CoV-2 IgG immunoassay detects antibodies to the viral nucleocapsid protein (NP).
  + The results are either “positive” or “negative” based on the manufacturer-indicated cutoff.
  + A negative result indicates that either a person has not been infected with SARS-CoV-2 or there is not a detectable level of antibody present. Explanations for this may include a very recent exposure such that not enough time has elapsed to generate an immune response, or the immune response has decreased below the detectable level. A negative result does not rule out current or past infection with SARS-CoV-2.
  + A positive result likely indicates previous or current infection. Recent studies examining serial plasma samples in hospitalized patients with SARS-CoV-2 infection suggest that the median time to seroconversion is about 10 days in moderately ill patients, and 14 days in severely ill patients.1,2 It is important to note that a positive serology test cannot distinguish between active or past COVID-19. If there is concern for active infection, molecular testing (PCR) with a nasopharyngeal swab is recommended.
  + Due to an overall low absolute prevalence of SARS-CoV-2 infection locally, false positives will occur.
  + At this time, it is not known whether the presence of antibodies confers protection from reinfection with SARS-CoV-2, how long the antibody response lasts, or the association between antibody response and clinical outcomes of individuals with COVID-19.