ALBERTA PRECISION LABORATORIES

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Information Sheet: Diagnosis of COVID-19 Infection by Serology

Background

On March 11, 2020, the World Health Organisation declared the spread of COVID-19 a pandemic, caused by a virus named SARS-CoV-2.

Diagnostic testing for COVID-19 infection means performing a molecular test on a nasopharyngeal swab which requires a series of complex procedures before a result is available. Presently there is a shortage of both swabs and reagents which limits how many people can be tested. As the numbers of cases rises, more testing will be needed and alternatives to molecular tests are being explored as a complement.

Antibody tests are another option but these depend upon the detection of various types of antibodies (IgM, IgA & IgG) that would indicate a recent infection (presence of IgM and/or IgA) or past exposure (IgG). These tests are becoming available both as rapid tests and on high volume analysers. However, there is very limited information of how accurate these tests are in making a diagnosis of COVID-19 infection.

Study Design

The aim of this study is to collect blood samples at various time points after a patient has been diagnosed with a COVID-19 infection and test these bloods on the various test kits. The results will show how soon the different IgA/IgM and IgG antibodies are detected which will allow a comparison to determine which are suitable for diagnostic testing. As well this information will also allow us to determine if these tests can be used in other hospital laboratories or community sites and make it faster to get a result available to the healthcare provider for patient diagnosis. A group of participants with negative testing for COVID-19 infection will also be evaluated to evaluate the utility of the antibody tests.

What will happen to the patient?

The patient will have blood collected at day 0, 3, 6, 9, 12 and 15. The study team will obtain oral consent from the patient and ensure the proper orders for blood collection are in SCM. The study team will try and time the blood collection with other routine lab tests as much as possible (to avoid multiple pokes).

What am I, as the most responsible physician, required to do?

The study team will contact the most responsible physician for approval prior to seeking consent from the patient. If you agree, the study team will take care of the rest.

Contact William Stokes at William.Stokes@ahs.ca for additional information