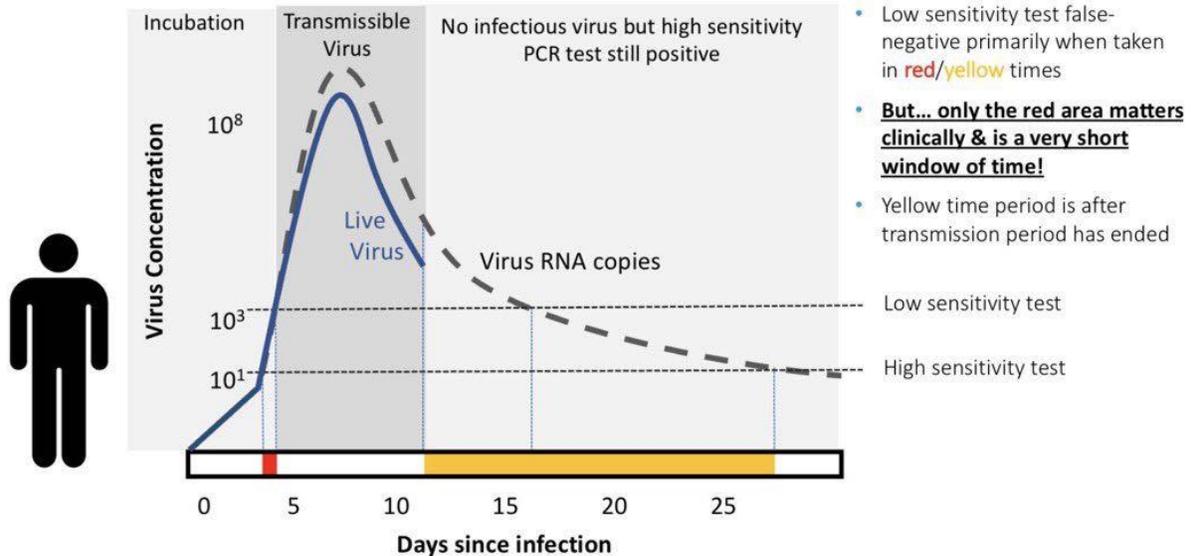


VIRUS KINETICS WITHIN THE INDIVIDUAL

TO ANSWER THE QUESTION...LOOK TO THE VIRUS KINETICS



To understand the difference between PCR and antigen tests, we have to understand “virus kinetics,” the model used to describe the lifecycle of the virus, particularly when and for how long an individual is infectious.

The above chart plots the virus kinetics for Sars-COV2, the 2019 coronavirus. Its life cycle has three periods. First, the virus incubation period is usually the first 4 days after contracting the virus. Second, the transmissible period occurs between around days 5-11 when the virus is live and the load is high. The third period is the post-recovery period at about and after day 11 when the virus is no longer transmissible.

PCR tests detect the RNA of the virus, which exists long after a person passes the transmissible period and is extremely sensitive when diagnosing infected individuals.

However, as virus kinetics show, “infected” does not mean “infectious.” Being infectious depends on the viral load. An infected individual is usually only infectious for 5-7 days when the viral load in the body is high.

Antigen tests detect infectious particles, which are present in large amounts when the person is infectious, making it less sensitive when it comes to determining if a person has COVID but is perfect for screening if a person is INFECTIOUS.

While PCR tests usually take 2 days or more to get results using a PCR machine, antigen tests show results within 30 minutes and don’t require the use of special equipment. During those 2 days while an asymptomatic patient waits for PCR test results, she/he could infect many more

people. Had that very patient taken an antigen test, he/she would have been removed from circulation immediately.

Because PCR tests detect RNA, PCR machines have to be re-collaborated for new mutations and variants of the virus. Antigen tests on the other hand, will for the most part detect new variants of the virus.

[link back to page about how Innova's antigen tests detect variants of the virus]

PCR tests determine if a person is infected (not necessarily infectious) and is a great diagnostic tool. Antigen tests determine if a person is infectious and is a great screening tool.

Antigen tests work best as a screening tool with frequent testing; every day or at least 3 times a week for several weeks. That way, infectious individuals can be quickly identified and removed from circulation.

With frequent antigen testing, infected individuals are removed from circulation before they can infect others. Antigen tests are a powerful tool to suppress the infectious rate without forcing people to self-isolate and entire cities to go into lockdown. With frequent antigen testing, businesses can stay open, students can go back to school, and everyone can have greater peace of mind.