

Joyce Niblack Memorial Conference

SARS-CoV2, COVID 19 and You

Susan J. Leclair, Ph.D., CLS(NCA)
Chancellor Professor Emerita
University of Massachusetts

SARS-CoV2

- ✦ Real name of the virus
- ✦ Coronavirus is a large collection of viruses, some of which can cause the common cold
- ✦ Generates a poor immune response
 - ◆ Usually less than 6 months

SARS-CoV2

big issue - inflammatory response

- ✦ Overwhelming -damages more than it heals
- ✦ The very interventions we use can cause even more damage
- ✦ If there are more fragile cells due to age, illness, past life experiences, etc. then these cells are at greater risk.

SARS-CoV2

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SARS-CoV2



What tests do we watch?

Test	Result	Comment
CBC	Decrease in all cell lines	Marrow can't keep up with need
Coagulation	Abnormal	Increase in inappropriate clotting
Liver function	Within range to Increased	Difficulty in keeping up with detoxification
Inflammatory markers (ESR, CRP, IL_6, etc.)	Increased	The inflammatory response is in overdrive
Kidney Function	Decreased	Combination of cardiac and renal failure
Ferritin	Increased	Difficult to make RBC and ia significant increase in inflammatory process

SARS-CoV2

DNA or antigen Testing

PCR	Rapid
Most sensitive 0-4 days after symptoms <i>*important if you are trying to limit contagion (ex., airplanes) but most people want fast so this is not used)</i>	More susceptible to error, i.e. false negatives
Not good after 10 days	
Requires sophisticated equipment and personnel	Still requires sophisticated techniques and personnel although some places have tried to use lesser trained personnel - issues
History of supply issues	History of supply issues
Tests for the actual genes	Tests for the antigen made by the genes

Antibody Testing

- ✧ 10 – 18 days after symptoms (2-3 weeks after exposure)
 - ◆ Should have two different tests
 - ✧ The first immediately or as soon as one knows about exposure
 - ✧ The second 7-10 days later.
 - ◆ Antibodies to spike protein: 14-20 days after exposure
 - ◆ Antibodies to nucleocapsid: 10-18 days after exposure
 - ◆ Difficulties with false negatives and false positives

SARS-CoV2



So?????

- ✧ The best defense is still social distancing with masking.
- ✧ Testing is time dependent. A rapid antigen test will not tell if you were infectious 4 days ago.
 - ◆ Do you really want to test every day before you go into work to find out that you were infectious yesterday? Best to test if and when you become symptomatic or test twice after an exposure?
- ✧ Antibody testing is also time dependent. You need time to develop adequate numbers of antibodies to make the test show positive results but most folks want to test once (fast and go).