PREOPERATIVE TESTING AND SCREENING FOR ELECTIVE SURGERY DURING THE PANDEMIC COVID-19 TO RE-START SURGERY

To minimize the spread and to plan appropriate protective measures for patients and operating room staff, all patients should ideally be tested prior to surgery. The type and timing of testing, however, is highly dependent on local resources. In Spain, for instance, when antibody testing and PCR are readily available, the protocol in Figure A is recommended (1). However, if PCR is not available (Figure B) antibody testing confirms previous exposure and immunity to Coronavirus, but may not be specific for SARS-CoV-2. Antibody testing can be positive while the patient is still infectious, however. Because of this, surgery should be delayed at least 14 days from a positive antibody test, or PCR can be performed to validate no active infection.

In the US today, where RNA testing is more readily available and antibody testing limited, for elective surgery, triage should begin with a virtual/phone contact for initial screening (Figure C). For any patient with potential COVID-19 symptoms, triage is delayed another two weeks. Only after negative screening does the patient proceed with testing. Anyone who tests positive should not have surgery if possible until they have been asymptomatic for 1 week following testing if never ill, or after 72 hours with no fever or other symptoms off antipyretics if the staff member developed symptoms.

For testing considerations, PCR may remain positive for as long as 6 weeks in a patient with SARS-CoV-2 infection. Pharyngeal virus shedding is highest during the first week of symptoms, peaking on day four. [2] People will test positive by PCR 1-2 days prior to symptom onset. These exposures may account for 6% of overall transmissions. [3] Negative PCR tests may result from improper sampling techniques, low viral load in area sampled, or mutations in viral genome. [4]

References:

1. https://www.aecirujanos.es/-Recomendaciones-para-el-desescalado--COVID19_es_1_162.html
2. Wolfel, R., et al., Virological assessment of hospitalized patients with COVID-2019. Nature, 2020.
3. Wei, W., Li, Z, Chiew C, Yong S, Toh M, Lee VJ. , Presymptomatic Transmission of SARS-CV-2- Singapore, January 23-March 16, 2020. MMWR Morb Mortal Wkly Rep, 2020. 69.
4. Wang, W., et al., Detection of SARS-CoV-2 in Different Types of Clinical Specimens. JAMA, 2020.