

## American Society of Anesthesiologists and Anesthesia Patient Safety Foundation Joint Statement on Elective Surgery/Procedures and Anesthesia for Patients After COVID-19 Infection

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Determining the optimal timing of procedures for patients who have recovered from COVID-19 and the appropriate level of preoperative evaluation are challenging, given limited research and multiple contingencies for anesthesiologists and others to consider. Since most US residents have received at least one vaccine dose and a majority have likely been infected by SARS-CoV-2, there will be continued ambiguity in studies and patient outcomes, especially when understanding the complexity of individual patient characteristics, surgical procedures, and possible virus mutations.

These revised recommendations recognize extensive public vaccination, less virulent variants in the post-Omicron phase, and recent evidence to allow anesthesiologists and others to critically and objectively assess whether surgery or procedure can occur before seven weeks after SARS-CoV-2 infection.<sup>1,2</sup> We recognize the contributions of US and international partners to address continued patient access to perioperative care and treatment. These recommendations are similar to, and aligned with, recent publications in the United Kingdom.<sup>3</sup>

These revised recommendations do not diminish the significance of a SARS-CoV-2 infection or the effects that an infection may have on individual patients.<sup>4,5,6,7,8,9,10</sup> Clinical decision-makers, including patients, should discuss the risks and benefits of proceeding with a procedure before seven weeks. Anesthesiologists must maintain their vigilance and focus on ensuring patient safety, reducing the risk of perioperative complications, and improving surgical outcomes.

Elective surgeries should be performed for patients who have recovered from COVID-19 only when the anesthesiologist, surgeon or proceduralist, and patient jointly agree to proceed. Ideally, surgical patients should be up to date with their vaccinations at least two weeks before their surgical procedure.<sup>11</sup> The decision for surgery/procedure depends on two factors: 1. Is the patient infectious? and 2. For patients that are no longer infectious, what is the appropriate time to wait between recovery from COVID-19 and surgery/procedure in terms of risk to the patient?

We offer the following recommendations to assist in that decision-making process.

## RECOMMENDATIONS

1. Patients who demonstrate symptoms consistent with COVID-19 should be screened and, if appropriate, tested for SARS-CoV-2 before their elective procedure. Physicians should use a time- and symptom-based strategy to decide when patients with COVID-19 are no longer infectious.<sup>12</sup>
2. Elective surgery should not occur within two weeks of a SARS-CoV-2 infection. Such a delay allows anesthesiologists and surgeons to assess the severity of a patient's COVID-19 symptoms and to mitigate the risk of transmitting COVID-19 from patient to clinical staff.
3. Between two and seven weeks after SARS-CoV-2 infection, anesthesiologists with surgeons or proceduralists should conduct a risk assessment on their patient. Such risk assessments should ideally use a validated tool and consider these patient factors:
  - Age, comorbidities, and functional or frailty status of the patient
  - Severity of the patient's recent SARS-CoV-2 infection, ongoing symptoms, and vaccination status
  - Complexity of surgery or surgical risk
  - Potential deleterious effect of delayed surgery upon the patient's health.
4. If the patient and surgery are determined to be low risk, anesthesiologists and surgeons may, with the informed consent of, and shared decision-making with the patient, schedule the procedure between two and seven weeks after SARS-CoV-2 infection. Such a decision should consider whether the risk of proceeding exceeds the risk of delay.
5. Further delaying surgery after seven weeks should be considered if the patient has continued COVID-19 symptomatology or other factors that may result in the risk of proceeding exceeding the risk of delay.
6. Facilities, surgeons, and anesthesiologists should track patient outcomes, including complications and mortality, on elective surgery cases after SARS-CoV-2 infection.

### **What determines when a patient confirmed to have COVID-19 is no longer infectious?**

The Centers for Disease Control and Prevention (CDC) provides guidance for physicians to decide when transmission-based precautions (e.g., isolation, use of personal protective equipment, and engineering controls) may be discontinued for hospitalized patients, or home isolation may be discontinued for outpatients.<sup>13</sup>

Maintaining transmission-based precautions and repeat testing may be appropriate if clinical suspicion of ongoing infection exists. The treating physician should determine the degree of immunocompromise of the patient and preventive actions should be tailored to each individual and situation. Factors such as advanced age, diabetes mellitus, or end-stage renal disease may pose a much lower degree of immunocompromise, and their effect on the duration of infectivity for a given patient is not known. Clinical judgment ultimately prevails when deciding whether a patient remains infectious.

Consultation with infection control experts is advised before discontinuing precautions for patients with severe to critical illness or who are moderately to severely immunocompromised. Physicians should also be aware of residual COVID-19 symptoms, include post-COVID conditions (PCCs) that patients may encounter. PCCs have many etiologies, and symptoms may last from four to 12 weeks after infection. The CDC estimates that 5-30% of infected patients experience PCCs.<sup>14,15,16,17</sup>

### **What is the appropriate length of time between recovery from COVID-19 and surgery/procedure with respect to minimizing postoperative complications?**

These revised recommendations encourage continued vigilance and study of surgical and procedural care after SARS-CoV-2 infection. The preoperative preparation of a surgical patient who is recovering from COVID-19 involves evaluation and optimization of the patient's medical conditions and physiologic status. Since COVID-19 can impact virtually all major organ systems, the timing of surgery after a COVID-19 diagnosis is important when considering the risk of postoperative complications. Heretofore, protocols have been based on limited data specific to SARS-CoV-2, expert opinion, and previous data from other post-viral syndromes.

These revised recommendations support facilities, surgeons, and anesthesiologists conducting risk assessments on patients who may benefit from surgeries or procedures between two and seven weeks after COVID-19 infection. Such risk assessments should take into consideration patient factors, infection factors, and surgical factors. Risk assessments should be completed using a validated tool such as the Surgical Outcome Risk Tool v2 (SORT-2) or ACS-NSQIP Surgical Risk Calculator. Ideally, risk assessments should occur at the time of scheduling to ensure appropriate prehabilitation of the patient.<sup>3</sup> Only low-risk patients undergoing a low-risk surgery or procedure should be eligible for scheduling within two to seven weeks after SARS-CoV-2 infection.

## References:

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