Coronavirus disease 2019 (COVID-19) remains an ongoing public health crisis. As of April 19, 749,666 cases and 35,012 deaths have been confirmed in the United States. In response, hospitals have implemented significant changes to normal operating procedures to address anticipated needs of infected patients. One key example is cancellation of non-time-sensitive elective surgery. Because the majority of plastic surgical procedures fall under this classification, the current pandemic has profound effects on plastic surgery.

Due to effective social distancing, recent models report reduced COVID-19-related death estimates and flattening of the curve. In response, hospitals have started preparing for a return to normal operations. Several institutions, including ours, recently relaxed restrictions on surgery, permitting some elective procedures to proceed. It is, therefore, critical that both surgeons and patients understand additional risks present in the setting of the COVID-19 pandemic.

A recent report by Bryan et al highlighted several considerations for surgical patients during the pandemic (Table 1). First, there is a lack of evidence demonstrating how infected patients tolerate routine procedures, including physiologic response to surgery and anesthesia. Second, patients have an unknown but presumably heightened risk of nosocomial severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection. Third, changes in normal perioperative procedures, such as visitor restrictions or limited nursing staff, may impact care. Finally, resource shortages may alter postoperative care, both in cases of successful surgery and when complications arise. We agree on the importance of informing patients of these issues. However, there are risks specific to plastic surgery that must also be addressed (Table 1). First, there appears to be an increased risk of thromboembolic complications in COVID-19–positive patients. Whether this translates to an increased risk of thrombosis in microvascular surgery or for procedures with a high relative risk of thromboembolism (eg, abdominoplasty) remains uncertain. Second, many procedures are staged, such as prosthetic breast reconstruction and forehead flaps. Due to unforeseen issues related to the pandemic, patients may experience atypically long delays to the second procedure. Similarly, revision surgery may be delayed indefinitely if hospital resources become limited. Third, although changes to the risk–benefit calculus for common procedures are expected, the degree of change remains unknown. For example, evidence regarding the safety of delaying versus performing nonelective, nonemergent surgery (eg, skin cancer resection) in patients at risk for severe COVID-19 infection (eg, elderly and/or comorbidities) is limited. Additional risks will certainly arise in specific cases and must be addressed accordingly.

Moving forward, we offer recommendations to facilitate appropriate care during the pandemic (Table 2). First, during the informed consent process, in addition to case-specific risks, benefits, and alternatives, implications of surgery during the pandemic must be discussed and documented accordingly. Next, whenever possible, order preoperative COVID-19 testing during informed consent process, including physiologic response to surgery and anesthesia. Third, changes in normal perioperative procedures, such as visitor restrictions or limited nursing staff, may impact care. Finally, resource shortages may alter postoperative care, both in cases of successful surgery and when complications arise. We agree on the importance of informing patients of these issues. However, there are risks specific to plastic surgery that must also be addressed (Table 1). First, there appears to be an increased risk of thromboembolic complications in COVID-19–positive patients. Whether this translates to an increased risk of thrombosis in microvascular surgery or for procedures with a high relative risk of thromboembolism (eg, abdominoplasty) remains uncertain. Second, many procedures are staged, such as prosthetic breast reconstruction and forehead flaps. Due to unforeseen issues related to the pandemic, patients may experience atypically long delays to the second procedure. Similarly, revision surgery may be delayed indefinitely if hospital resources become limited. Third, although changes to the risk–benefit calculus for common procedures are expected, the degree of change remains unknown. For example, evidence regarding the safety of delaying versus performing nonelective, nonemergent surgery (eg, skin cancer resection) in patients at risk for severe COVID-19 infection (eg, elderly and/or comorbidities) is limited. Additional risks will certainly arise in specific cases and must be addressed accordingly.

Table 1. Considerations for Patients Undergoing Surgery during the COVID-19 Pandemic

| Surgical considerations | Plastic surgical considerations |
|-------------------------|--------------------------------|
| 1. Uncertainty regarding physiologic response of COVID-19–positive patients to surgery and anesthesia | 1. Potential for thrombotic complications in microvascular procedures and procedures with an increased relative risk of thrombosis |
| 2. Theoretical risk of nosocomial SARS-CoV-2 infection | 2. Possible indefinite delays in staged procedures and common revision procedures |
| 3. Unforeseen changes to normal perioperative care and experience | 3. Unknown changes to risk–benefit calculus of nonelective, nonemergent procedures (eg, skin cancer excision) |

Table 2. Recommendations of Counseling Strategies during the COVID-19 Pandemic

- During informed consent process, include discussion of additional risks and uncertainties to surgical patients
- Document informed consent discussion, including additional COVID-19–specific risks discussed
- When possible, order preoperative COVID-19 testing
- Encouragement of using advanced directives and/or living wills
- Employment of a shared decision-making model and patient-centered approach
- Employment of sound clinical judgment
possible, patients should undergo preoperative COVID-19 testing. This has the added benefit of protecting healthcare personnel who come into contact with the patient. Additionally, as noted by Bryan et al, the use of advanced directives and living wills is encouraged, given the high degree of uncertainty surrounding surgery and COVID-19. Finally, application of sound clinical judgment, shared decision-making, and a patient-centered approach will facilitate improved care, particularly where clinical evidence is lacking.

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DISCLOSURE
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