

## Strategies to prevent SARS-CoV-2 transmission during dermatologic head and neck surgery



*To the Editor:* We read with interest the article by Garcia-Doval<sup>1</sup> and support the emphasis on preventive measures against disease transmission when performing head and neck surgery during the coronavirus disease 2019 (COVID-19) pandemic. Because severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is transmitted through droplets and aerosols,<sup>2</sup> dermatologic surgeons are at increased risk when performing surgery on the head and neck regions (Table I). Furthermore, the patient's mouth and nose are often exposed because a mask would obscure the surgical site. We discuss here additional considerations for dermatologic surgery during the pandemic.<sup>3</sup>

We concur with Garcia-Doval<sup>1</sup> on the importance of personal protective equipment in preventing SARS-CoV-2 transmission. However, numerous viruses have been detected in surgical smoke,<sup>3</sup> suggesting that SARS-CoV-2 may be transmitted similarly. Therefore, electrosurgery units should be adjusted to the lowest effective settings to minimize surgical smoke plume production.<sup>3,4</sup> In addition, use of smoke evacuators and high-efficiency particle air filters for recirculated air are recommended to mitigate against aerosolized transmission.

Garcia-Doval<sup>1</sup> suggested clinical features for SARS-CoV-2 screening and testing before surgery, but there are limitations to these recommendations. Because up to one-third of SARS-CoV-2 infections are asymptomatic,<sup>5</sup> clinical features are helpful but cannot substitute for preoperative testing. Viral and serology testing detect active and previous SARS-CoV-2 infections. However, the sensitivity of viral testing with reverse transcription-polymerase chain reaction (RT-PCR) depends on the disease stage and sampling techniques; therefore, negative results should be interpreted in the appropriate clinical context.<sup>5</sup> Serology testing does not detect early infections because antibodies typically take several weeks to develop.

A multipronged approach is necessary, including preoperative screening/testing, appropriate personal protective equipment use, smoke evacuators, and high-efficiency particle air filtration, to protect dermatologic surgeons and staff. Patients should be tested within 72 hours before surgery with RT-PCR of nasopharyngeal swabs,<sup>6</sup> although practical considerations can make this challenging. Therefore, universal COVID-19 precautions should always be followed.

For infected patients, surgery should be postponed until the infection is cleared. Urgent

**Table I.** Risk of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) transmission in various dermatologic procedures

Procedure	Risk
Mohs micrographic surgery/cancer excisions in the head and neck regions where surgeon's face directly opposes patient's face (within 12-18 inches) that last longer than 10 minutes	High
Ablative laser and cosmetic procedures with substantial surgical smoke plumes*	High
Procedures where mucous membranes are breached (e.g., lip injections)*	High
Shave and punch biopsies <sup>†</sup>	Low

\*Not recommended at this time.

<sup>†</sup>Can be considered high risk in selective patients, needs to be evaluated case-by-case.

operations in infected patients should be performed in specialized operating rooms with appropriate personal protective equipment and intubation to avoid viral spread, and infectious disease specialists should be consulted.<sup>6</sup> An N95 mask with goggles or a face shield, a gown with a hood, and shoe coverings should be worn, and a smoke evacuator and high-efficiency particle air filtration should be used, even for patients with negative test results. Telemedicine should be used for postoperative care when feasible. Use of dissolvable sutures, cyanoacrylate adhesives, and patient education regarding wound care may help decrease the need for in-office visits.

Garcia-Doval also recommends testing professionals, although sporadic testing may be futile and regular testing would be more useful. Ideally, routine RT-PCR testing of team members would help identify asymptomatic infections; however, this may be difficult to enforce. Instead, daily symptom screening and temperature checks should always be performed. RT-PCR testing should be performed upon reopening and after any SARS-CoV-2 exposure or symptom development.

We hope these suggestions provide the best possible protection for dermatologic surgeons and teams performing essential operations.

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#### REFERENCES

1. Garcia-Doval I. Head and neck surgery is a high-risk procedure for COVID-19 transmission and there is a need for a preventive strategy to protect professionals. *J Am Acad Dermatol*. 2020; 83(2):705-706.
2. Wang W, Xu Y, Gao R, et al. Detection of SARS-CoV-2 in different types of clinical specimens. *JAMA*. 2020;323(18): 1843-1844.
3. Do MH, Minkis K, Petukhova TA, Lipner SR. Recommendations for personal protective equipment and smoke evacuation for dermatologic surgeries amid the COVID-19 crisis. *Dermatol Ther*. 2020:e13592.
4. American College of Surgeons. COVID-19: Considerations for Optimum Surgeon Protection Before, During, and After Operation. 2020. Available at: <https://www.facs.org/covid-19/clinical-guidance/surgeon-protection>. Accessed May 22, 2020.
5. Centers for Disease Control and Prevention. Coronavirus (COVID-19). Get the Facts About Coronavirus. 2020. Available at: <https://www.cdc.gov/coronavirus/2019-ncov/>. Accessed June 10, 2020.
6. American Academy of Dermatology. Reopening the dermatologic surgery office in the COVID-19 era. 2020. Available at: <https://www.aad.org/dw/dw-insights-and-inquiries/2020-archive/may/reopening-the-dermatologic-surgery-office>. Accessed May 22, 2020.

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