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### COVID-19 impacts on dermatologic surgery patients: A single institution experience



*To the Editor:* Guidelines have been published regarding the management of cutaneous malignancy since the start of the COVID-19 pandemic.<sup>1,2</sup> In addition, a recent report was published regarding a change in the volume of tumors treated in one dermatologic surgery unit due to the pandemic.<sup>3</sup> However, no studies have further evaluated the impact of COVID-19 on the treatment of cutaneous malignancies by dermatologic surgeons. We studied the changes in demographics and surgical practices during the COVID-19 pandemic in one dermatologic surgery unit, where patients were prioritized based on the presence of high-risk features of cutaneous malignancies.<sup>4</sup>

We included patients seen in our dermatologic surgery unit for either Mohs surgery or excisions between April 28, 2020 and July 31, 2020 (offices were closed for 6 weeks prior to this time) and an

equally sized, randomly selected comparator group of patients seen during the same months in 2019. We excluded patients whose procedures were converted to nonsurgical visits, patients who underwent diagnostic procedures, and patients with no previous biopsies. We extracted demographic information and tumor type for each patient. We collected information on the size of the final Mohs defect and the number of stages for Mohs surgery patients. We collected the final linear repair size for excisional surgery patients. Separate procedures on the same patient were analyzed separately. A Kruskal-Wallis test was used to compare the different groups by year. *P* values < .05 were considered statistically significant.

The total number of Mohs surgeries or excisions performed within the same months in 2019 was 1045 versus 418 in 2020. There were no statistically significant differences between the pre-pandemic and pandemic era in terms of

**Table I.** Demographic and surgical characteristics of dermatologic surgery patients in the pre-pandemic era versus pandemic era

	2019	2020	<i>P</i> value
Type of procedure, n			.07
Mohs surgery	283	259	
Excisional surgery	119	143	
Mean age at time of procedure (SD), y	68 (14.9)	67 (14.4)	.35
Number of non-english speaking patients, n	10 (1 Albanian, 1 ASL, 1 Cape Verdean, 1 Mandarin, 1 Portuguese, 3 Russian, 1 Spanish, 1 Vietnamese)	8 (1 Albanian, 6 Russian, 1 Spanish)	.63
Highest level of education, n			.54
8 <sup>th</sup> grade or less	4	0	
Some high school	3	4	
Graduated from high school or obtained my General Educational Development Test	60	45	
Some college/vocational/technical program	50	60	
Graduate from college, graduate, or postgraduate school	247	255	
Unknown	38	38	
Type of tumor, n			.006
BCC	193	155	
SCC	160	185	
Invasive melanoma	9	6	
MMIS	8	7	
Dysplastic nevus	28	43	
Other (AFX, PDS, pyogenic granuloma, EMPD, MAC, porocarcinoma)	4	6	
Average size of Mohs defect, cm <sup>2</sup>	3.21	3.31	.77
Average number of Mohs stages	1.7	1.6	.47
Average size of linear excisions, cm	5.0	5.4	.05

AFX, Atypical fibroxanthoma; BCC, basal cell carcinoma; EMPD, extramammary Paget's disease; MAC, microcystic adnexal carcinoma; MMIS, malignant melanoma in situ; PDS, pleomorphic dermal sarcoma; SCC, squamous cell carcinoma, SD, standard deviation.

demographic factors or type of procedure (Mohs surgery vs excision). Similarly, the average size of the final defect and the average number of stages were similar between the 2 groups for patients undergoing Mohs surgery. The average size of the linear repair was also similar for patients undergoing excisional surgery. However, there was a statistically significant difference in the type of neoplasms treated. During the pandemic, there was an increase in the squamous cell carcinomas treated, a decrease in the basal cell carcinomas treated, and a decrease in the invasive melanomas treated ( $P = .006$ ; Table D).

We prioritized surgery for cutaneous lesions with high-risk features upon reopening, including squamous cell carcinomas over basal cell carcinomas, given the higher likelihood for metastasis.<sup>4</sup> Despite this, however, the treatment of patients during the pandemic resulted in similar final Mohs defect sizes, number of Mohs stages, and linear repair sizes. Our findings stand in contrast to a study that assessed non-melanoma skin cancer in a plastic surgery clinic, which found that the tumors removed in 2020 were larger compared to prior years.<sup>5</sup> This difference may be due to the differences in triage or surgical factors given the lack of skin-conserving modalities, such as Mohs surgery.

Study limitations include a small sample size from a single academic institution. Nonetheless, our findings demonstrate that the triage in our dermatologic surgery unit during the COVID-19 pandemic resulted in a different mix of tumor types but did not impact the demographic breakdown of patients or surgical complexity of cases. Further work is needed to understand the long-term impact of triage during the COVID-19 pandemic on dermatologic surgery outcomes.

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#### Conflicts of interest

The authors declare no relevant conflicts of interest.

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#### Dermatology applicant perspectives of a virtual visiting rotation in the era of COVID-19



*To the Editor:* The COVID-19 pandemic has disrupted many aspects of undergraduate medical education, including clinical rotations and United States medical licensing examinations.<sup>1</sup> The coalition for physician accountability has recommended the suspension of away (ie, visiting or external) rotations for the 2020-2021 residency application cycle, with exceptions of students without a home residency program and students needing them for graduation or accreditation requirements.<sup>2</sup> Away rotations, completed at a medical school outside of their institution, are key for students applying to the field of dermatology for expanding opportunities for advanced clinical experiences, individualized mentorship, and an insight into resident life.<sup>3</sup> Programs also benefit from evaluating candidates' "fit" for their residency over an "audition" period. The visiting rotation freeze complicated this application cycle for both stakeholders but provided an opportunity to address the historical inaccessibility of away rotations for many.<sup>4,5</sup>