Table 1 Characteristics of the 353 clinical photographs included in the study and accuracy of the dermatologist prebiopsy diagnosis compared to the Triage AI program diagnosis.

Parameter	Result
Disease classification, *n* (%)	
Lesion/tumour	333 (94.3)
Rash/inflammatory	20 (5.7)
Tumour type, *n* (%)	
Benign	149 (42.2)
Malignant	188 (53.3)
Not applicable	16 (4.5)
Disease category, *n* (%)	
Epidermal tumour	261 (74.4)
Inflammatory disease	32 (9.1)
Melanocytic tumour	31 (8.8)
Adnexal tumour	10 (2.8)
Connective tissue tumour	9 (2.6)
Vascular tumour	6 (1.7)
Lymphoproliferative disease	2 (0.6)
Accuracy study[a] % (95% CI)	
Dermatologist prebiopsy diagnosis	69.1 (63.7–74.1)
Triage diagnosis	
Any of the five predictions	63.3 (58.0–68.4)
Any of the five predictions excluding distractors	65.6 (59.5–71.4)
Either of the top two predictions	47.4 (42.0–52.8)
Either of the top two predictions excluding distractors	48.3 (42.0–54.5)

[a]Accuracy and 95% CI of the dermatologist prebiopsy clinical diagnosis and the Triage AI program relative to the final clinicopathological diagnostic reference standard. Cases in which a biopsy was not performed ($n = 14$) or for which the dermatologist prebiopsy impression was unclear or vague ($n = 22$) were excluded from the determination of the accuracy of the dermatologist prebiopsy diagnosis. Of note, in a subanalysis restricted to rashes ($n = 20$), the accuracy of the dermatologist prebiopsy diagnosis was 62.5% (95% CI 35.4–84.8), better than the accuracy of Triage using both permissive criteria (41.2%; 95% CI 18.4–67.1) and strict criteria (29.4%; 95% CI 10.3–56.0).

of its five suggested predictions matched the reference standard) (Table 1).

The accuracy of the dermatologist's prebiopsy clinical impression relative to the final clinicopathological diagnosis reference standard was the best, at 69.1% (95% CI 63.7–74.1%), significantly better than the AI accuracy using strict criteria (47.4%; 95% CI 42.0–52.8%) and slightly better than the AI accuracy using permissive criteria (63.3%; 95% CI 58.0–68.4%). Subanalyses in which 89 photos with distractors (e.g. marking pen, jewellery) were excluded yielded similar results. The data reflect primarily lesions rather than rashes.

These results demonstrate that, when used in a real-word environment in which biopsy is considered, the accuracy of the dermatologist and the Triage AI program are comparable only when the full AI differential (i.e. 1–5 output predictors) is considered. The healthcare niche of this Triage AI program and possibly other recently developed dermatology-centric programs is to assist general practitioners in the triage of patients and to generate differential diagnoses prior to dermatological consults.

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Conflict of interest: the authors declare that they have no conflicts of interest.
Accepted for publication 12 April 2021

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Mohs micrographic surgery outcomes following virtual consultations during the COVID-19 pandemic

doi: 10.1111/ced.14678

Dear Editor,

Recent articles in this journal have focused on qualitative clinician descriptions of alterations in service provision[1,2] and on patient perception of changes during the COVID-19 pandemic,[3,4] but few studies have explored whether these changes have impacted patient outcomes.

Each patient being considered for Mohs micrographic surgery (MMS) has a preoperative consultation to consider suitability of MMS and whether the procedure can be repaired in-house or via an external team (e.g. plastic surgery). MMS is described as having a number of stages and sections, which could be considered a measure for the 'complexity' and size of the tumour being extirpated.

As mandated nationally, virtual consultations (VCs) were encouraged during the pandemic to reduce the number of hospital visits. VCs include telephone consultations (with photograph sent by patient) and video consultations. We compared the number of stages and sections of MMS between patients who underwent face-to-face (F2F) consultation vs. VC during the period September–November 2020 in St John's Institute of Dermatology. We also reviewed the reconstruction plan from consultation for both the F2F and VC groups. No ethics approval was required for the study.

In total, there were 257 F2F consultations and 177 VCs, with a 60 : 40 male/female split for F2F and 46 : 54 split

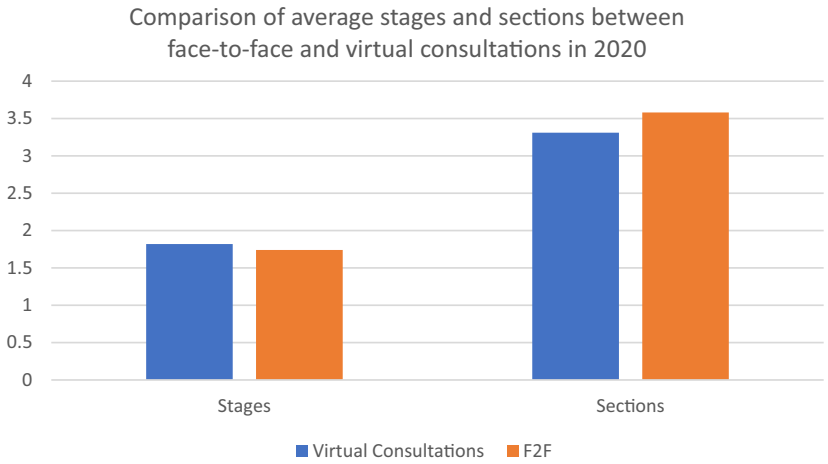

Figure 1 Comparison of average Mohs micrographic surgery stages and sections between patients who underwent face-to-face (F2F) and virtual consultations over a 3-month period in 2020.

for VCs. Mean age was 69 (range 25–94 years) for F2F consultations and 67 (range 22–93 years) for VCs. The F2F consultations were conducted in various clinics including clinical multidisciplinary skin cancer clinics, MMS consultation clinics and skin-cancer screening clinics (where patients are referred directly for MMS).

There was no statistically significant difference between the F2F and VC groups for mean number of MMS stages (1.74 for F2F and 1.82 for VC; $P = 0.19$) or number of sections (3.58 and 3.31, respectively; $P = 0.11$) (Fig. 1). Furthermore, the planned reconstruction identified at consultation stage was always implemented and patients did not need referring to external surgical teams. There were no unexpected surprises.

Challenges noted included some patients requesting F2F consultations because of difficulties using video technology, clinicians requesting F2F consultations due to poor-quality photographs or no photographs received, and administration problems that resulted in the photograph not being forwarded to the clinician in advance.

This is the first study exploring the impact of VC vs. F2F for MMS consultations. The main limitation is that it was a retrospective study; however, the sample size was relatively large. We acknowledge that the number of stages and sections and change in reconstruction plan is not always a direct correlate of case complexity.

In conclusion, VCs have not increased the number of stages and sections needed to clear tumours by MMS, and are a useful method of engaging with patients for MMS consultations as an alternative to F2F consultations. Patients also confirmed they felt just as well informed in the virtual environment. This may allow MMS to be more accessible, particularly to a wider geographical population who may find it difficult to attend for consultations. The enforced move to VC from F2F during 2020 did not adversely affect surgical outcomes, which is encouraging given the likely future adoption of teledermatology services. Similar analysis of patient outcomes following VC in other dermatology domains should be conducted before the long-term adoption of such techniques.

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Conflict of interest: the authors declare that they have no conflicts of interest.
Accepted for publication 12 April 2021

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