Melanoma patients with unresectable or metastatic disease always require systemic therapy. Patients with active malignant diseases are at increased risk for a severe course of COVID-19 and thus need to be informed to strictly adhere to recommended safety and hygiene procedures (Table 2). Patients requiring targeted therapy, the combination of encorafenib and binimetinib (if available), should be considered over other BRAF and MEK inhibitors (lower rate of pyrexia). For the majority of patients requiring immunotherapy, it is recommended to start monotherapy with anti-PD-1 inhibitors due to their favourable safety profile. Some patients might still require treatment with the combination of anti-PD-1 and anti-CTLA-4 inhibitors. This includes patients with symptomatic and asymptomatic brain metastases, but also patients with elevated LDH levels, bulky disease, PD-L1 negativity, mucosal and acral melanoma.

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MA received honoraria and consulting fees from BMS, MSD and AbbVie. CP received honoraria and consulting fees from Novartis, BMS, MSD, Pelpharma, Sanofi, Roche, Iovance, Celgene, AbbVie and Galderma. Other authors reported no conflicts of interests.

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Vaccination against SARS-CoV-2 and psoriasis: the three things every dermatologist should know

Dear Editor,

In this document, the three most important items that dermatologists should know about COVID-19 vaccines to be better prepared to the management of psoriatic patients are reported.
Table 1 Features of the 2 vaccines against SARS-CoV-2 already authorized both from FDA (Food and Drug Administration) and EMA (European Medicines Agency) for Emergency use1,2

| COVID-19 vaccine developer/manufacturer | Vaccine platform | Type of candidate vaccine | Number of doses | Timing of doses | Route of administration |
|----------------------------------------|------------------|--------------------------|----------------|----------------|-------------------------|
| Moderna/NIAID®                          | RNA              | LNP-encapsulated mRNA    | 2              | 0.28 days      | IM                     |
| BioNTech/Fosun Pharma/Pfizer®           | RNA              | 3 LNP-mRNAs              | 2              | 0.28 days      | IM                     |

1 What are the characteristics of the vaccines approved by FDA (Food and Drug Administration) and EMA (European Medicines Agency) against SARS-CoV-2?

Currently, there are two vaccines already authorized from FDA and EMA for Emergency Use.¹ They are the BNT162b2 and the mRNA-1273, respectively, produced by Pfizer (New York, NY, USA) /BioNTech® (Mainz, Germany) and Moderna® (Cambridge, MA, USA) (Table 1). Both vaccines consist of nucleic acid, mRNA able to induce our human cells to use protein factories to make the antigen (viral spike protein) that will trigger an immune response.

According to data published by the two companies, the BNT162 and the mRNA-1273 vaccines showed 95% and 94.5% efficacy in preventing COVID-19, respectively.²,³

Regarding safety profile, phase III studies demonstrate an excellent safety profile for both vaccines.²,³

In mRNA-1273, Moderna® vaccine solicited adverse events at the injection site occurred in 84.2% of patients after first dose and in 86.6% of patients at second dose. The most common injection-site event was as follows: pain after injection (86.0%), delayed injection-site reactions in 0.8% of patients after the first dose and in 0.2% after the second dose.

Solicited systemic adverse events occurred in 54.9%, after first dose and in 79.4% of patients after second dose.

The most common treatment-related adverse events were fatigue (1.5%) and headache (1.4%).

In BNT162b2, Pfizer/BioNTech® mild-to-moderate pain at the injection site within 7 days after an injection was the most commonly reported local reaction, with <1% of participants across all age groups reporting severe pain.

The most commonly reported systemic events were fatigue and headache (59% and 52%, respectively).

2 Which is the specific risk for psoriatic patients in case of SARS-CoV-2 infection?

According to Dadras et al.,⁴ there would be a close connection between psoriatic disease and COVID-19 disease due to the angiotensin-converting enzyme (ACE) role. SARS-CoV-2 spike protein shows strong binding affinity to human angiotensin-converting enzyme 2 (ACE2) receptor. This has been recognized as the major reason for skin involvement during SARS-CoV-2 infection.⁵,⁶ Serum level of ACE tends to be higher among psoriatic patients and correlates with higher cardiovascular comorbidities, including subclinical atherosclerosis.⁷ Moreover, tissue ACE activity seems to be higher among psoriasis subjects and correlates with disease activity.⁸

The overactivity of ACE in COVID-19 patients may aggravate psoriatic condition, favouring higher incidence of cardiovascular events in the subset of COVID-19 psoriatic patients. Thus, Dadras et al.⁴ proposed that psoriasis patients may be at an increased risk of both deterioration of the disease and higher incidence of cardiovascular events in case of COVID-19 infection. They concluded that prevention of SARS-CoV-2 infection by vaccine is crucial for patients with psoriasis.

3 Which specific recommendations may be drawn for psoriatic patients receiving vaccine?

In this phase, specific data on the efficacy or safety of vaccines against COVID-19 in patients with psoriasis on immunosuppressive therapy are not available yet, as these patients are naturally excluded from clinical trials.

However, given the nature of the vaccine and the results of studies on the efficacy of other types of inactivated vaccines in patients undergoing biological therapy, there are no obvious contraindications to the use of the vaccine. The major international scientific societies, such as the National Psoriasis Foundation, in fact, recommend the use of the SARS-CoV-2 vaccine even in patients undergoing biological therapy without the necessity to discontinue the therapy.⁹

Although further study will be required to define mainly efficacy of SARS-CoV-2 vaccines in psoriatic patient undergoing biological treatments, nowadays their vaccine immunization against SARS-CoV-2 infection is strictly recommendable in our opinion.

Assessing a case-by-case approach, evaluating the risk-benefit ratio of maintaining the ongoing immunosuppressive therapy before performing the vaccine is mandatory at the moment.¹⁰

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Author contribution
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A new virtual inpatient dermatology electronic referral service: a timely solution in the COVID-19 pandemic and beyond?

Dear Editor,

The use of teledermatology in an inpatient setting is not well-established, with limited data published compared to the outpatient setting. It has, however, been demonstrated that telemedicine may be effective for managing inpatient dermatologic disease, leading to highly concordant diagnostic and management decisions.1,2 Involvement of dermatologists in the care of hospitalized patients has been found to improve patient outcomes3 with inpatient teledermatology reducing response times.4

We set up a store-and-forward, fully digitized, virtual inpatient referral service to replace our traditional paper-based, face-to-face (FTF) inpatient referral pathway, amidst the COVID-19 pandemic. Our health board in Wales, UK, covers a relatively wide geographical area across 1553 km², accounting for 30% of the Welsh landmass, but covering only 18% of the population of 3.1 million. We cover inpatients across six different hospital sites, two of which have traditionally had inequitable access to a dermatology opinion as they lack regular onsite clinics. The old system was onerous for both clinicians and administrative staff, as historically inpatient referrals comprised handwritten forms manually delivered or faxed between hospitals. Referrals often lacked vital clinical information, comprised illegible handwriting and frequently went missing. We therefore implemented an entirely paperless, electronic referral pathway that integrated with the electronic patient record (EPR) and enabled virtual rather than FTF review.

An e-referral form was designed for referrers to include essential clinical information, with medical photographs requested alongside. High-quality images were taken by the medical illustration service and uploaded securely onto the EPR. Dermatologists reviewed referrals virtually, relaying advice back to the referring clinician. Referrals, including patient metadata, from all inpatient specialties across the six hospitals within a 10-week period from 14 July to 30 September 2020 were assessed. A five-point Likert scale was used to assess the degree of confidence residents felt in managing inpatients virtually.

Of 95 consecutive referrals, 55% were male and 45% female (age range 0–103 years; average 63.8). Almost all (96%) were judged to be appropriately directed to dermatology. Most referrals (84%) were successfully dealt with virtually. The majority of the remaining 16% comprised patients that required a biopsy, paediatric cases needing parental reassurance and complex medical cases. A wide variety of dermatological conditions were diagnosed and managed, both inflammatory and lesions, and 87% were discharged with appropriate advice.

The average response time was 1.9 days, 66% were dealt with within 24 h and 77% within 48 h (Fig. 1a). The rate-limiting step was waiting for accompanying images, accounting for 74% of variance in the time awaiting review (Fig. 1b). Residents felt highly confident in 62% cases (Fig. 1c). A senior review was needed in 65%, of which 99% were easy to obtain.

Our virtual platform has widened the reach of timely specialist input across sites where dermatology services have not traditionally been based, ensuring equitable access for patients, independent of location. It establishes a secure and permanent

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