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Virtual melanoma checks during a pandemic

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Dear Editor, Healthcare services internationally are experiencing unprecedented strain due to the COVID-19 pandemic. Governments mandate strict social distancing to reduce the spread of SARS-CoV-2 infection, and as a result, people are avoiding health services for less urgent issues. In this crisis, it is important that patients continue to receive preventive and surveillance care without compromising their safety or that of healthcare workers.

Early detection of melanoma is important to reduce mortality. Delaying a visit to a primary care provider or dermatologist for a potential melanoma may result in a worse prognosis.[1] Most melanomas are initially noticed by the patients themselves or by their families, which then prompts them to present for a clinical skin examination.[2]

In the current environment, presenting for a clinical skin examination may be viewed as less important and thus postponed. While most dermatology practices have deferred nonessential care, early detection of melanoma is still encouraged and could be delivered using telehealth services for those unwilling to attend a clinic setting. Virtual melanoma checks using either store-and-forward or video real-time technologies have been trialled for servicing patients in rural areas. These technologies may now be used for patients at highest risk of SARS-CoV-2 infection, including those frail or elderly, with chronic diseases or under immunosuppression, and others who are fearful of visiting doctors for risk of infection. Telehealth also eliminates risk of contracting the virus for the healthcare workers.

During COVID-19, the virtual melanoma check has been important for triaging. If the lesion appears to require a biopsy, the biopsy may be postponed depending on the healthcare system constraints during COVID-19. Of note, virtual melanoma checks should be used with caution for high-risk patients with suspected malignant pigmented lesions, as any delay in diagnosis for such patients may be particularly problematic.[3] Additionally, frail or elderly people may require the most training or assistance with conducting virtual melanoma checks.

In the consumer-initiated store-and-forward model, people can use their smartphone with or without a dermatoscope attachment and corresponding app in their home. Patients would be required to purchase their own, hire or borrow a

Table 1 Guide to taking standardized photos for consumer-based skin self-examination

Virtual melanoma checks at home: a guide for patients to take standardized images
To provide an accurate diagnosis, the image needs to be high quality:
Use natural daylight, or a brightly lit space. Use a plain, neutral-coloured background.
Remove any jewellery.
Move anything creating a shadow out of the way, including your hair.
If your photos are coming out blurry, ask another person to help you with photo taking, especially in hard-to-reach body locations.
Take two photos of each skin spot or mole.
The first photo is an overview image of the skin spot or mole. Hold the camera approximately 20 cm from the skin spot or mole. Point to the skin spot or mole if there are multiple skin spots visible in the photo. Move the camera until you have a clear photo, then hold the camera still and take the image.
The second photo is a dermoscopic image (if applicable). Dermoscopic images are magnified close-up images. When using the dermatoscope place the lens directly contacting the skin.
When photographing the lesion hold the camera horizontally each time to ensure the same orientation.
Ensure the skin spot or mole is in the centre of the image.
Record the body location.
In the notes or comments section select any symptoms that may describe the skin spot or mole photographed such as:
change in size or shape;
more raised;
change in colour;
more than two colours;
itchy;
bleeding;
scaly or rough surface;
sore or painful;
duration of lesion.
Patients should provide a brief medical history including date of birth, sex, skin type and previous skin cancer history.

dermatoscope, and this will add additional costs or logistical requirements, which will need to be considered. Dermatoscope purchase costs vary from approximately 30 Australian dollars each to over a thousand dollars depending on the magnification, light source, operating system and quality of the mobile app. Teledermatology can also be initiated by doctors asking patients to monitor lesions between clinical visits. During doctor–patient video consultations, any lesions submitted via teledermoscopy could be discussed. Whether or not a patient is suitable for virtual melanoma checks should be assessed individually based on their access to a smartphone and internet connectivity, nature of appointment, personal circumstances, and risk factors associated with SARS-CoV-2 infection.

We recently conducted a randomized controlled trial (RCT) comparing patients using skin self-examination (SSE) with or without using a mobile dermatoscope at home. Both groups had a high degree of sensitivity (> 75%) and specificity (> 87%) in detecting suspicious lesions that the dermatologist also thought were worthwhile checking, and in the mobile teledermoscopy group no melanoma was overlooked by the patients.[4]

Based on these findings, during the SARS-CoV-2 crisis we propose a two-step process for consumer-based SSE. Firstly, we recommend that a person conduct whole-body naked-eye SSE. Individuals should be provided with educational material on how to conduct a whole-body SSE and detect a suspicious skin spot, such as the commonly known 'ABCDE' rule.[2] Conducting naked-eye SSE initially may prevent individuals from overimaging their lesions, and reduce workload for doctors. Secondly, the person conducts mobile teledermatology (with or without a dermatoscope attachment) on these preselected lesions and/or any that their doctor wanted them to monitor (for established patients).

Building on the International Skin Imaging Collaboration guidelines for image quality,[5] we developed a consumer guide to taking standardized photos (Table 1), which enabled all but a small proportion of photos (5%) submitted during our RCT to be of good enough quality for telediagnosis. Concerns over patient confidentiality, privacy and image storage are often raised in telehealth, but these can be addressed in the patient consent. The patient consent should make explicit what the process involves, limitations of virtual compared with in-person checks, timeframe of providing results, who will view, diagnose and have access to the images and what will be done with this information, and the secure transfer and storage of images. The record of consent is given for the time period over which the images are stored.

Teledermatology services are promising and could be particularly helpful during the COVID-19 pandemic and future global health crises. However, the 'digital divide' whereby such services are more difficult for people with lower health literacy skills or technology access needs to be addressed to ascertain equity in access to telehealth services.

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