

Recruitment Advertisement for GP sites

One Million Skin Checks: A Feasibility Study of Teledermatology and Artificial Intelligence in General Practice

One Million Skin Checks Project

Can artificial intelligence and teledermatology help GPs diagnose and manage skin cancers?

Our team is investigating how **innovative technologies** using a smartphone and dermatoscope can **help GPs** manage the **one million skin cancer related consultations** they see every year.

About the Study

The One Million Skin Checks study aims to determine the feasibility and usefulness of **Teledermatology and Artificial Intelligence (AI)** for the diagnosis and management of skin cancer in general practice.

By introducing teledermatology and AI to general practice we hope to **increase the early detection of skin cancer**, reduce specialist referrals, and improve outcomes for patients. However, these interventions can be disruptive and need to be tested in practice.

This study is the first step in implementing these innovative technologies in general practice. We want to examine how we can best support GPs of various experience and confidence levels in diagnosing and managing skin cancer. And we want to give GPs a voice on how to integrate specialist support into their future practice.

To support your participation in the study, each practice will be paid an upfront payment of \$500 per site after the first patient is enrolled into the study and then a pro-rata enrolment fee of \$50 per lesion up to a maximum of 30 lesions (total enrolment payments \$2000). Practices will also be provided with a MoleScope II mobile dermatoscope (value \$449) which attaches to a smartphone. **All you need is a smartphone.**

What are the technologies?

Teledermatology is a service in which a dermatologist assesses a skin lesion from a photo and patient information sent to them by a doctor or nurse. Australian dermatologists can diagnose skin cancer via teledermatology as accurately as in face-to-face consultations for a lesion of concern.

Artificial Intelligence (AI) is computer software which analyses a photo of a skin lesion taken with a dermatoscope. Studies have shown that in the experimental setting it is as accurate or more accurate than dermatologists in diagnosing melanoma.

More Information

Why is this study important

General Practice is a busy, fast paced environment at the frontline of the Australian health care system. GPs are expected to be able to expertly manage a range of complex problems across all disciplines of medicines. We know that skin cancers play a large role in a GPs daily case load with an estimated rate of 1.1 skin cancers for every 100 GP consultations.

GPs are highly accurate in diagnosing skin cancer when they are adequately trained in using a dermatoscope. However, confidence and expertise in doing so varies greatly across the profession. In fact, the State of the Nation in Melanoma 2022 report highlighted the need for increased GP training and research into new ways of detecting skin cancer earlier.



What will you need to do?

Your current clinical practices for detecting, diagnosing and managing skin cancer will not be altered by the study.

- First you will undertake 2 hours of online training modules on how to use and understand the imaging platform and AI software (DermEngine & DermDx), followed by an online evaluation questionnaire.
- In the recruitment phase, you will use the app to take photos through the dermatoscope of lesions suspicious for melanoma that you have selected for biopsy. Photos can be acquired via a smartphone or digital camera. You will submit patient clinical data with the images. You will then proceed to biopsy the lesion or refer for it to be biopsied. Subsequent management will follow standard care.
- You will answer a short questionnaire for each lesion's AI result and teledermatology report.
- You will submit the histopathology report to the study team.
- We aim for each practice to recruit 30 lesions over 6 months. Multiple GPs at the same practice can contribute to the recruitment target.
- Following the recruitment phase, you will complete an online evaluation questionnaire about your experience of using the technologies. The lead GP at each practice will participate in a 20 minute interview with a member of the study team.

Study Design

We aim to recruit 10 practices (multiple GPs at each practice may participate) and 300 lesions in total. We will also examine GPs' experiences, and perceived advantages and downsides of learning and using teledermatology and AI. From this we will identify and understand the benefits and barriers to using them in mainstream general practice.

Our team has a leading reputation for effective collaboration

The Co-ordinating principal investigator is Dr James Koutsis, a skin cancer GP and dermatology registrar based in Sydney. He is collaborating with leading melanoma dermatologists Prof Pascale Guitera and A/Prof Linda Martin from Melanoma Institute Australia and leading clinical epidemiologist A/Prof Katy Bell from the University of Sydney.

If you have questions about the research, please contact:

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If you would like to express your interest to participate, please complete the attached expression of interest form and return it to the study team.

This study has been approved by the Ethics Review Committee of the Sydney Local Health District (RPAH Zone). Any person with concerns or complaints about the conduct of this study should contact the Executive Officer on 02 9515 6766 and quote protocol number X22-0214