

# Attitudes Towards The Use Of Artificial Intelligence In Dermatology: A Survey Of Australian Dermatologists.

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## Introduction

Integrating AI with 2D or 3D skin imaging technologies may be a promising way of improving access to accurate and cost-effective melanoma screening and diagnosis.

While demonstrating the technical capabilities of AI is important, the integration of AI into practice will also be influenced by dermatologists' understanding of AI.

**This study aims to provide a snapshot of attitudes among dermatologists in Australia towards AI.**

## Method

Online survey with 122 members of the Australasian College of Dermatologists (105 Fellows and 17 Trainees). Total sample 75F, 44M, 3Non-binary. Average age, 49.9 years. Average years of experience in dermatology, 17.5 years.

## Knowledge of AI in dermatology?

75% poor/fair  
25% good/excellent

## Used AI for clinical tasks?

57% never; 31% rarely  
8% sometimes; 4% often

## Willing to trust AI for skin cancer diagnosis?

25% willing; 39% unwilling  
36% unsure

## How do you rate the accuracy of AI for skin cancer diagnosis?

9% good/excellent  
47% poor/fair  
44% don't know

## What level of error is acceptable for AI when screening for melanoma?

40% say AI must be at least as good as the best dermatologist

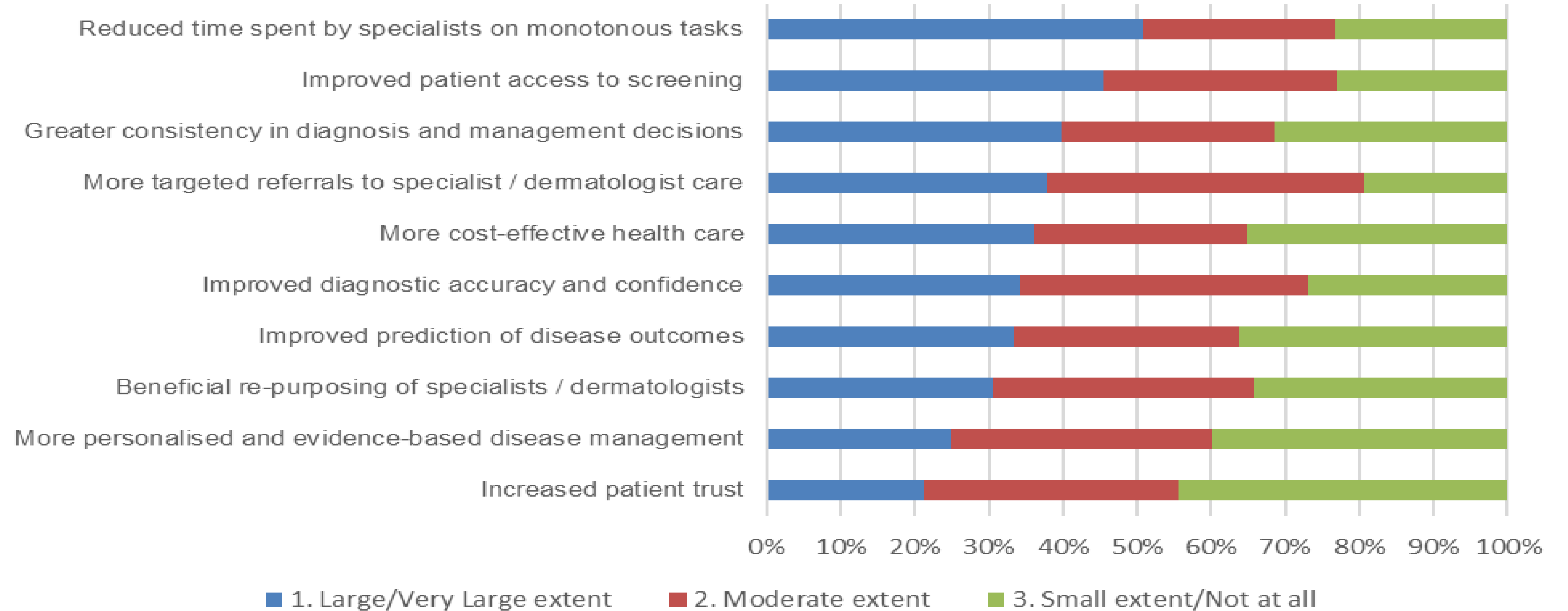
## AI will perform key aspects of work in dermatology?

53% agree; 27% disagree  
20% unsure

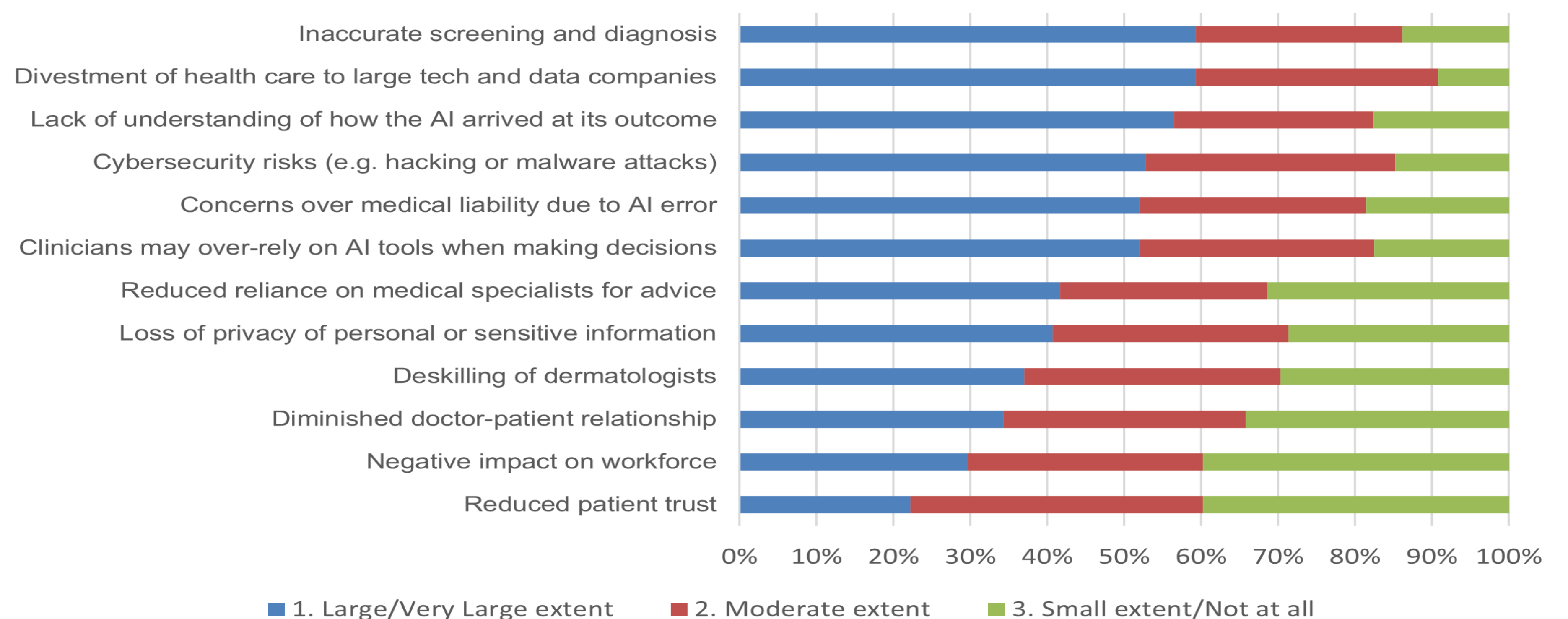
## AI will replace dermatologists?

11% agree; 73% disagree  
16% unsure

## To what extent do you expect these potential benefits from the use of AI in dermatology



## How concerned are you about these potential risks of AI use in dermatology?



## A clinical workflow scenario

A patient undergoes total body photography [TBP] performed by a melanographer as part of a nationwide melanoma screening program.

Melanographer takes dermoscopic images of suspicious lesions. AI tool classifies images from TBP and generates a report on suspicious lesions. Report sent to dermatologist to review, sign off and create a management plan.

## Would you endorse this workflow?

30% yes; 35% no; 35% unsure

## What should the Australasian College of Dermatologists do regarding AI? Participants said:

- Educate** - provide training and upskilling for dermatologists on AI
- Monitor** - set up ways to pro-actively monitor, investigate and assess AI developments
- Collaborate** -and consult with AI developers to facilitate clinician input on the direction of AI development
- Lead and advocate** - in developing guidelines, policies and regulations on AI use that hold developers to account.

## Conclusions

- Some dermatologists are beginning to use AI tools, but there remains wariness and distrust about the accuracy of AI for diagnosis.
- Most expect AI to perform important tasks within dermatology. Few thought AI would replace dermatologists outright and there is interest for AI to play a role in skin lesion screening.
- Detailing workflows that use AI in a way that is acceptable to clinicians will be the challenge for developers, policy makers and regulators. Knowledge outreach from the ACD may help clinicians arrive at well informed views.

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