Mind Your Moles Study
3D total-body photography for the monitoring of naevi

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Melanoma is the most deadly skin cancer, and poses a significant and growing public health concern across many populations globally. The incidence of melanoma in Australia is 12 times higher than the global average, with over 15,000 new cases diagnosed in 2019 and 1,700 deaths. Currently, the strongest known risk factor for the development of melanoma is the presence of many melanocytic naevi, or ‘moles’ on the skin.

Studying the clinical features and changes to naevi over time using novel three-dimensional (3D) total body imaging that creates a digital avatar of a person’s whole skin has the potential to provide us with greater insight into melanoma development.

Our study, Mind Your Moles, was a population-based cohort study of melanocytic naevi in 200 adults aged 20–69 years, living in South-East Queensland. Participants attended the clinical research facility at the Princess Alexandra Hospital, Brisbane once every six months for three years to undergo 3D total body photography. Participants completed a clinical examination and sun behaviour and health questionnaire at baseline, and a follow-up questionnaire at each subsequent visit.

Data analysis for Mind Your Moles is currently underway. Preliminary data from the study show that people have on average 55 naevi (median 33; range 2-404), and factors associated with having many naevi include age, sex, hair colour and having family members who also have many (≥50) naevi.

Overall, 3D total body photography shows great potential to improve the technology-driven early detection of melanoma. However, further research and validation is required before we can fully integrate this new digital technology into standard dermatology practice to optimise skin cancer screening and early detection outcomes.