QSKIN Sun & Health Study news

Issue 15 Winter 2021

Welcome to the fifthteenth edition of the QSKIN News

The QSkin study is now more than 10 years old, having launched in late 2010. We continue to be humbled, grateful and amazed by your commitment to taking part in this ongoing research study. Even in 2020, during which the world endured a once-in-a-lifetime pandemic, QSkin participants have continued to contribute to the study in many ways.

Your participation allowed us to get on with the important work of using your information for research which continues to shed new light on the causes of skin cancer, as well as inform international efforts to control skin cancer, through prevention, treatment and policy. The QSkin team is happy to report great progress over the past 12 months. This newsletter will provide an update on recent study findings, and update you on our plans for 2021.

Professor David Whiteman and Associate Professor Catherine Olsen for the QSkin Team

QIMR Berghofer Medical Research Institute

Update on progress and plans for 2021

2021 marks an important milestone for QSkin – it marks the stage in the study when we are due to update the information you provided when you first completed the baseline QSkin survey. As we mentioned in our 2020 Newsletter (#14), we intended to send a follow-up survey to all participants in the second half of 2020. Unfortunately, an unexpected (and novel) virus scuttled that plan.

(continued page 2)

(continued from page 1)

Instead, in July-August 2020, we invited all members of the QSkin cohort to complete a survey related to their experiences of the COVID-19 pandemic.

Almost 15,000 of you completed that survey, which will provide valuable information about long-term health effects of the pandemic and the associated lock-downs. In 2021 we will conduct two separate follow-up surveys: a general survey to update risk factor information, and a second survey related to the health impacts of COVID-19. As always, we would be extremely grateful if you could complete these surveys.

Medicare consent: You might recall that when you joined the study in 2011, we asked your permission to link to Medicare. (Medicare contains the most accurate records of any treatments you might receive for skin cancer and other health conditions.) Now, 10 years later, we need to obtain your permission for a second time. Thus, we will be seeking to obtain your consent for access to Medicare records out to 30 September 2030, so that we can continue to monitor occurrences of skin cancer and other treatments in the cohort.

One very important part of our research program is to work with other scientists so that we can find out which genes are damaged in skin cancers. To do this, we need to obtain samples of tumour tissues from the pathologists who diagnose skin cancers. Early in 2021 we began the process of retrieving from pathology laboratories the tissue samples that were taken from the QSkin participants who developed skin cancer. These tissue samples will be stored for our planned future studies. So far we have retrieved tumour tissue from over 440 melanomas and 220 keratoacanthomas.

Is skin cancer associated with other cancers?

Dr Jean Claude Dunsingize

QSkin researcher Dr Jean Claude Dusingize has found that people who develop the common keratinocyte cancers Basal cell carcinoma (BCC) and squamous cell carcinoma (SCC) may have an increased risk of developing other internal cancers including leukaemia, lymphoma, and cancers of the breast, lung, bowel, kidney, ovary, prostate, oesophagus, and head and neck. Jean Claude used two different genetic approaches to examine the risk of developing other cancers among people with a genetic predisposition for skin cancer. The research confirms the findings of other research using non-genetic approaches. The increased risk is likely caused by shared genetic factors that increase susceptibility to developing cancer.

Source: Dusingize JC, Olsen CM, An J, Pandeya N, Liyanage UE, Law MH, Neale RE, Ong JS, MacGregor S, Whiteman DC. Genetically determined risk of keratinocyte carcinoma and risk of other cancers. *Int J Epidemiol*. 2020 Dec 28;dyaa265.
https://pubmed.ncbi.nlm.nih.gov/33370439/

Other new QSkin scientific papers

Seviiri M, Law MH, Ong JS, et al. Polygenic risk scores allow risk stratification for keratinocyte cancer in organ transplant recipients [published online ahead of print, 2020 Jun 29]. J Invest Dermatol. 2020;S0022-202X(20)31734-6.
https://pubmed.ncbi.nlm.nih.gov/32615124/

Olsen CM, Pandeya N, Dusingize JC, Thompson BS, Green AC, Neale RE, Webb PM, Whiteman DC; QSkin Study. Reproductive factors, hormone use and melanoma risk: an Australian prospective cohort study. Br J Dermatol. 2020 Aug 27.
https://pubmed.ncbi.nlm.nih.gov/32856295/

Skin cancer risk stratification tool works well in clinical settings

You may recall that several years ago, we developed The QSkin Keratinocyte cancer risk stratification tool (https://publications.qimrberghofer.edu.au/p/qimr/qskinriskcalculator#gf_109). We designed this tool to help doctors and patients predict their future risk of skin cancer. While the tool worked extremely well within the QSkin sample of 40,000 Queenslanders, we wanted to know how well it performed in a completely independent sample of people. So, more than three years ago, we set up a validation study by recruiting patients who were attending skin cancer clinics and asking them to use the tool. We then waited three years to see who developed skin cancer, and whether they had been predicted to be 'low', 'moderate' or 'high' risk of skin cancer three years earlier. We were delighted to find that the risk tool performed extremely well, predicting future risk of skin cancer with 77% accuracy. Importantly, patients found the tool very acceptable, with 99% of study participants reporting that it was easy to use, and 92% reporting that it met their expectations.

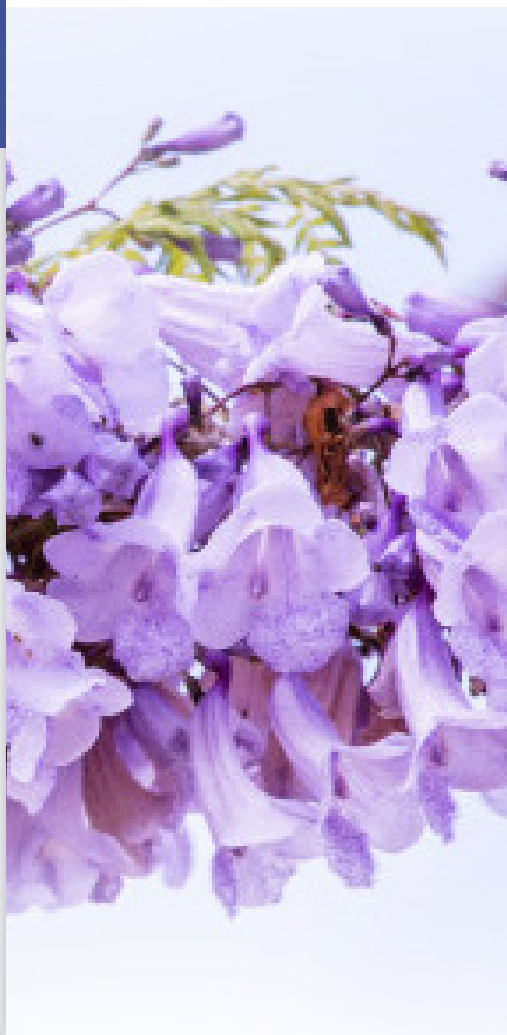
Source: Olsen CM, Hunt L, Eckert A, Thompson BS, Neale RE, Green AC, Whiteman DC; QSkin Study. Prospective validation of a risk stratification tool for keratinocyte cancer. *Australas J Dermatol.* 2020 Oct 18. https://pubmed.ncbi.nlm.nih.gov/33070321/

QSkin researchers unlock some of the mysteries of a common skin tumour

Dr Magdalena Claeson

A study led by visiting Swedish dermatologist, Dr Magdalena Claeson using QSkin data has shed light on a common but little-understood skin tumour prevalent among Queenslanders. Keratoacanthomas develop on sun-damaged skin and can be difficult to distinguish from more sinister skin cancers. They can grow quickly and reach 10 to 20 millimetres in diameter in a matter of weeks. Dr Claeson found that limiting sun exposure, quitting smoking and cutting down on alcohol could help Queenslanders avoid developing keratoacanthomas. The main risk factors are similar to those of other skin cancers and include fair skin, freckles and an inability to tan; high levels of sun exposure and sunburn as a child; smoking and high alcohol consumption.

Source: Claeson M, Pandeya N, Dusingize JC, Thompson BS, Green AC, Neale RE, Olsen CM, Whiteman DC. Assessment of incidence rate and risk factors for keratoacanthoma among residents of Queensland, Australia. JAMA Dermatol. 2020 Oct 7:e204097. https://pubmed.ncbi.nlm.nih.gov/33026421/



Melanoma risk not as obvious as some think

New QSkin research has found almost a quarter of the Queensland population underestimates their risk of developing melanoma.

When participants joined the QSkin study, we asked people to estimate their risk of developing melanoma in the future. We compared their answers from that baseline survey in 2011 to the highly accurate risk score generated by the QSkin melanoma prediction tool. We found almost a quarter of respondents grossly underestimated their risk of melanoma, while only about 10 per cent of respondents overestimated their level of risk. This research shows that we aren't always well equipped to estimate our risks of melanoma, and that we should use the proven tools available to keep ourselves safe.

The risk prediction tool calculates a person's chances of developing melanoma based on their age, sex, ethnicity, family history of melanoma, ability to tan, number of moles at age 21, number of skin lesions treated, hair colour and sunscreen use: **publications.qimrberghofer.edu.au/Custom/QSkinMelanomaRisk**

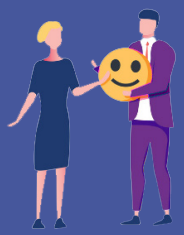
Source: Olsen CM, Pandeya N, Dusingize JC, Thompson BS, Whiteman DC; QSkin Study. Can people correctly assess their future risk of melanoma? J Invest Dermatol. 2020 Sep 12:S0022-202X(20)31964-3. https://pubmed.ncbi.nlm.nih.gov/32926899/

Team news

QSkin postdoctoral researcher Jean Claude Dusingize recently welcomed a baby boy, Tevin, into his growing family. We send the warmest wishes to Jean Claude and his family at this exciting time.

Our 2021 Team is working for you!

Meet our 2021 Team! Top row (l to r) Lea Jackman, David Whiteman, Jean Claude Dusingize; Bottom row (l to r): Nirmala Pandeya, Catherine Olsen, Rebekah Cicero.



Feedback?

If you have any comments or updated information (e.g. change of address), please contact us:

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