NEWS

Another year has almost passed, and this one has been exceptionally busy for the QSkin team. This **11ᵗʰ issue** of the QSkin Newsletter provides a progress update on the QSkin Genetics Study, as well as reporting on a number of high-impact scientific publications that have emanated from the QSkin Study. (These publications generated a storm in the media – perhaps you saw those media reports but did not realise who was behind them?) Finally, we welcome some new faces to the QSkin team. As ever, we welcome your comments and feedback on any and all aspects of the study.

David Whiteman
Principal Investigator of QSkin

QSkin Genetics Update

We have now completed the collection phase of the **QSkin Genetics Study**. In total, 42,690 QSkin participants were invited to provide a saliva sample and complete a short follow-up Survey. Nearly 19,000 people took part—a fantastic response! The samples are now being processed in the QIMR Berghofer Sample Processing Laboratory (see photos Page 2). Our sincere thanks to all who have taken part in this extension of the QSkin Study. We will keep you informed as the next stage of the project progresses.

QSkin Genetics—
DNA extraction from saliva samples

With the installation of a new robotic platform, the sample processing laboratory at QIMR Berghofer has begun the process of extracting DNA from the saliva samples. We have taken a couple of photos of the process.

The samples are processed in batches of 25.

Nadine loads saliva samples into the robotic platform.

QSkin research picked up by UK media!

Online tool helps assess skin cancer risk

RESEARCHERS in Australia have produced an online tool that can predict a person's risk of developing skin cancer. The questionnaire can provide people aged 40 and over with an assessment of the likelihood that they will develop non-melanoma skin cancer within three years.

Scientists at the QIMR Berghofer Medical Research Institute used data from some 39,000 adults aged from 40 to 70 to develop the tool, in which users answer a series of questions and receive a prediction of their risk level. The questions focus on ten risk factors, including age, skin colour and history of skin cancer.

Scientists emphasise that the tool has been tested only in a research setting. Doctors from the Skin Cancer College of Australasia are trialling the tool to confirm its accuracy within a clinical setting.

But Professor David Whiteman at QIMR, who helped to develop the tool, says: 'Members of the public need to be aware that this tool is not a substitute for visiting a doctor. Regardless of risk, people should take precautions to avoid skin cancer by avoiding the sun during the hottest part of the day, wearing a hat and protective clothing and using sunscreen.'

A hat provides protection from the sun

Suncream is a crucial factor for fun in the sun

Staff News

QSkin Data Manager **Bridie Thompson** recently began maternity leave and has welcomed a baby boy, Mackie James, into her growing family. We send our warmest wishes to Bridie and her family at this exciting time.

We are very pleased to welcome **Dr Nirmala Pandeya** to the team. Nirmala is a very experienced statistician and data manager with a strong interest in melanoma and other cancers of the skin.


"I am a mathematics and statistics graduate and my career started two decades ago in cancer research at QIMR Berghofer. At QIMR Berghofer, I completed my Master's degree followed by a PhD in cancer epidemiology and worked as a biostatistician for several years. My research in skin cancer started with my Master's thesis project where I investigated the intervention effect of sunscreen and beta-carotene on the incidence of skin cancer using data from the Nambour Skin Cancer Prevention Trial. After completing my PhD, I continued my research on skin cancer research, publishing another 18 research papers related to melanoma and skin cancer. I left QIMR Berghofer for several years to gain further experience as a Postdoctoral Fellow, working on a range of other projects. I am very excited to return to QIMR Berghofer to work with the QSkin Team. Currently, I hold the position of data analyst/statistician and I will be fully engaged in the statistical analysis of the data collected by the QSkin study. I am looking forward to seeing the very interesting findings we will have on the burden, the risk factors and the potential for prevention of skin cancers in Queensland."

New Research Findings

Australia's melanoma rates overtaken by New Zealand

QSkin Researchers, led by David Whiteman, have found that Australia no longer has the highest per capita rates of invasive melanoma in the world, after being overtaken by New Zealand. The study, which has been published in *The Journal of Investigative Dermatology*, found that rates of invasive melanoma in Australia have started to decline and are predicted to keep falling over the next 15 years.
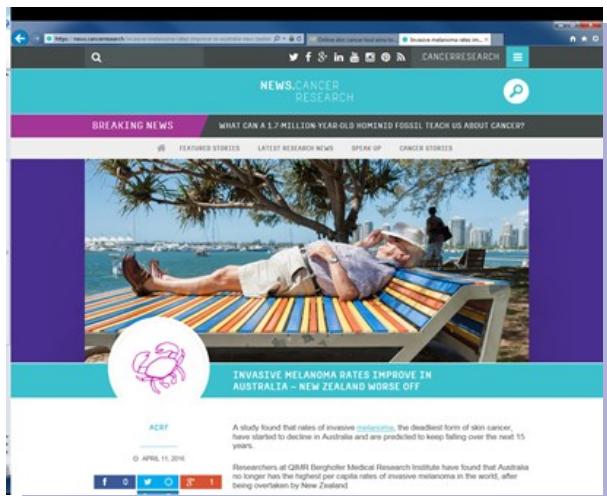
The research compared the rates of melanoma in six populations over a 30-year period from 1982 to 2011. The six populations were Australia, New Zealand, the United Kingdom, Norway, Sweden, and the Caucasian population of the United States. Melanoma rates in Australia increased from about 30 cases per 100,000 people in 1982 and peaked at nearly 49 cases per 100,000 people in 2005. The rates then declined to about 48 cases per 100,000 people in 2011. Invasive melanoma rates in New Zealand reached about 50 cases per 100,000 people in 2011. Australia was the only one of the six populations where melanoma rates had begun to fall overall. The main reason for this decline is likely to be the primary prevention campaigns, such as 'Slip, Slop, Slap' that began in Australia in the 1980's. These campaigns have led to more 'sun smart' behaviours in the Australian population, such as wearing hats and protective clothing, using sunscreen, and staying out of the sun during the hottest part of the day.

Whilst melanoma _rates_ are declining, the _number_ of melanomas diagnosed in Australia each year is still rising because the population is growing and ageing. The number of melanomas is expected to increase from 11,162 cases per year from 2007-11, to 12,283 cases per year from 2012-16.

SOURCE: Whiteman DC, Green AC, Olsen CM. The Growing Burden of Invasive Melanoma: Projections of Incidence Rates and Numbers of New Cases in Six Susceptible Populations through 2031. J Invest Dermatol. 2016 Jun;136(6):1161-71.
http://www.ncbi.nlm.nih.gov/pubmed/26902923

Costs of keratinocyte skin cancer

Using QSkin data, health economists David Rowell and Louisa Gordon compared the medical costs of individuals diagnosed with a keratinocyte skin cancer (KC) to those without these cancers. They found that medical costs for people with KCs were higher than for people without KCs, with only 23% of those costs being directly related to skin cancer excisions. The excess medical costs were for medical attendances, other surgical procedures and pathology services possibly related to other medical conditions.

SOURCE: Rowell D, Gordon LG, Olsen CM, Whiteman DC. A comparison of the direct medical costs for individuals with or without basal or squamous cell skin cancer: A study from Australia. SAGE Open Med. 2016 May 11;4.

http://www.ncbi.nlm.nih.gov/pubmed/27231550

QSkin Research in the News
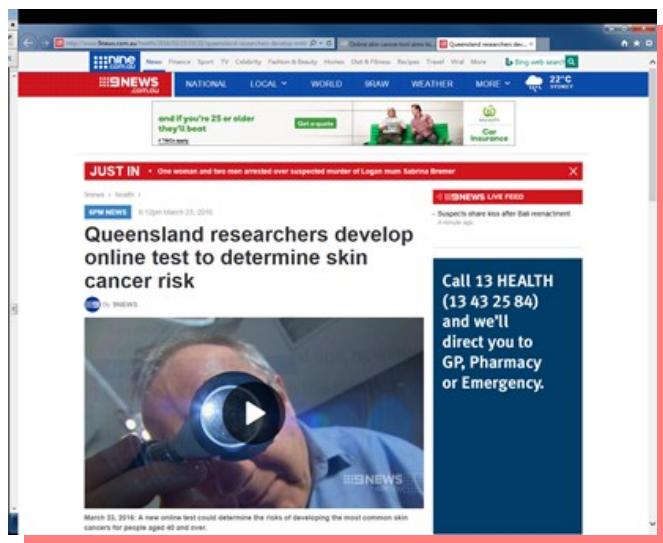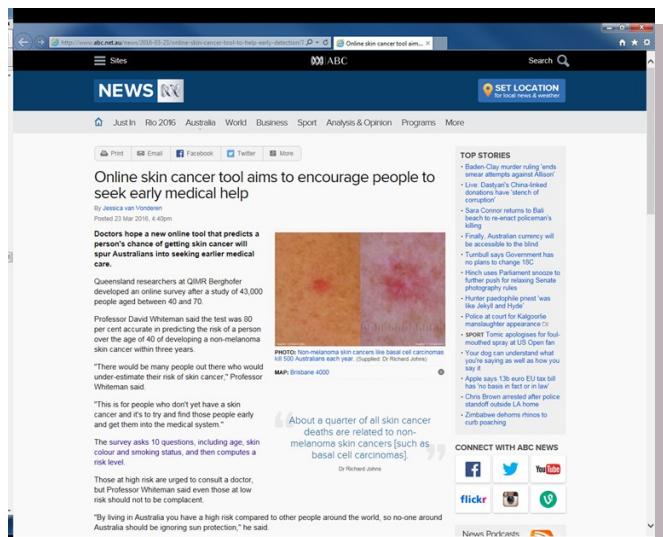
A tool to predict risk of developing keratinocyte skin cancer

You may remember that one of the main aims of the QSkin study was to develop a tool that doctors and patients can use to predict a person's future risk of developing melanoma and other skin cancers. Using information from the survey forms that you completed five years ago, as well as linked data from Medicare Australia on any treatments you may have had for skin cancers, we have developed a tool that predicts the risk of developing keratinocyte skin cancers within three years among people aged over 40 years.

We found that 10 factors contributed to risk of developing skin cancer: age, sex, ethnicity, skin colour, skin tanning ability, freckling tendency, childhood sunburns, a previous history of skin cancer treatment and/or treatment for sunspots and tobacco smoking.

How to use the risk calculator
The risk tool comprises a simple online survey, and takes just a few minutes to complete. Once finished, users receive a quick snapshot of their overall risk of developing a keratinocyte skin cancer. The survey is user-friendly and easy to follow.

The tool is not a substitute for visiting a doctor or skin cancer clinic, and if it indicates that you have a high risk of skin cancer, we strongly encourage you to visit your doctor.

You can now use the tool by visiting the website:

 http://qskin.qimrberghofer.edu.au/

Anyone can use the online calculator, though the results may be especially useful to men and women who are 40 years or older and living in Queensland.

This tool will have important implications for the prevention of these cancers. For example, doctors may be able to identify people at high risk of developing skin cancer, who can be offered regular skin checks.

We will soon be initiating a pilot study to validate the risk prediction tool in skin cancer clinics across Queensland to see how well it predicts risk for people first attending a skin cancer clinic for a skin examination, and to evaluate the ease of use and acceptability of the tool to patients and doctors in these settings. Doctors from the Skin Cancer College of Australasia will be working with us to evaluate the accuracy of the tool.

SOURCE: Whiteman DC, Thompson BS, Thrift AP, Hughes MC, Muranushi C, Neale RE, Green AC, Olsen CM; QSkin Study. A model to predict the risk of keratinocyte carcinomas. J Invest Dermatol. 2016 Jun;136(6): 1161-71. http://www.ncbi.nlm.nih.gov/pubmed/26908057

SKIN CANCER COLLEGE AUSTRALASIA

Have your contact details changed?

Following participants over time is a big part of this landmark study, and it is important that we keep your contact details up to date. Please help us stay in touch with you. If your **address** or **telephone numbers** or **email** accounts have changed recently (or are about to), please let us know by contacting us by phone or email.

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QIMR Berghofer
Medical Research Institute

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