QSKIN Sun & Health Study NEWS

Issue 9 Volume 1 Edition 1 Autumn 2015

Welcome to our 9th **QSkin** newsletter, and our first for 2015. The **QSkin** Study recently celebrated its **3rd anniversary**, and our study remains the largest detailed long-term study of skin cancer anywhere in the world. This year has already been extremely busy for the **QSkin** research team, with more than 6000 saliva samples collected since the start of the year and thousands more to come. (See our story inside!) In addition, we have a number of exciting analyses of the **QSkin** data underway, which we hope will be of interest to you. Read on!

David Whiteman
Principal Investigator of QSkin

QSkin in Federal Parliament

The Federal Parliament's **Standing Committee on Health** released its report on the Inquiry into Skin Cancer in Australia on 24 March, 2015. QSkin Investigator Professor David Whiteman made written submissions and appeared at the Inquiry. In the concluding remarks (Chapter 3.113), The Committee gave special mention to the **QSkin Study** noting: "*The Committee welcomes the research ... into quantifying the level of risk faced by an individual. While this research is necessarily long term in nature, there is an expectation that the research will result in a valuable tool for GPs."*
The full report is available at: http://www.aph.gov.au/Parliamentary_Business/Committees/House/Health/Skin_Cancer/Report.

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QSkin Genetics Update

It is now more than six months since we launched the first stage of the QSkin Genetics project. (You may recall that we announced our successful funding bid for this new component of QSkin in Issue 7, and launched the QSkin Genetics study in Issue 8). Briefly, the QSkin Genetics project aims to identify the genes that influence a person's risk of developing skin cancer. This information will help us to understand how skin cancer develops, and may contribute to the development of new treatments.

We have now invited 18950 QSkin participants to provide a saliva sample and complete a short follow-up survey. We have had a very good response rate, but not 100%. We have now received and processed over 6100 samples in the Lab. Many readers will not yet have received an invitation. Don't worry - we will get to you! We are mailing out invitations in batches of 3000 each month. At this rate, we plan to mail out our last batch of invitations in early 2016.

A *HUGE* thanks to all who have taken part so far. For those of you who have received an invitation, but have not yet taken part, or have lost your kit – it is never too late to change your mind. If you would still like to take part, please just contact us.

What happens when your sample arrives?

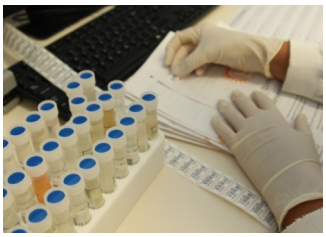
Several people have asked about what happens to their sample once it is returned to us here at QIMR Berghofer, so we took this series of photos to show you.

Sample return is logged

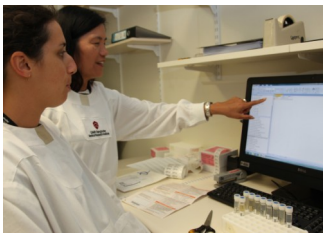
Package contents are logged

Biospecimen bag is opened

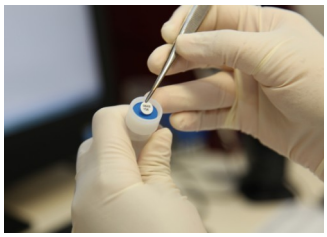
The sample barcode is scanned



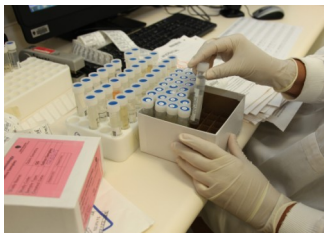
Samples are given a new unique barcode



The barcode is entered into a database



The tubes are labelled in two places



The samples are stored ready for further processing

The challenges of running a mega-study!

If you were one of the thousands of participants contacted about the QSkin Genetics project over the Christmas period, thank you for your patience! We had some problems with our independent Data Contractor due to an unexpected Christmas closure. This closure led to a substantial delay in posting out the saliva kits. Some people also received reminder cards *after* they had returned their samples. We sincerely apologise for any inconvenience this may have caused. While we did not expect these initial problems with our mailing protocols, we are confident that they will not occur again. Thank you for your understanding.

New Research Findings

Aspirin and Nonsteroidal Anti-Inflammatory Drugs (NSAIDS) and SCC

Taking low-dose aspirin every day helps prevent heart attacks and strokes in people with heart disease (or who are at high risk of it). Now scientists are studying whether aspirin can prevent certain types of cancer, particularly those of the gastrointestinal tract. Recent studies have suggested that non-steroidal anti-inflammatory drugs (or "NSAIDS" such as ibuprofen and aspirin) may be protective against other forms of cancer, including skin cancers. However, results for skin cancer have been conflicting, with some studies showing a benefit, while others show no effect.

To get a better overall understanding of the effects of these medications on skin cancer, **QSkin** PhD student Chiho Muranushi conducted a systematic review of the entire medical literature. Chiho found that people who regularly used NSAIDs had significantly lower risks of developing squamous cell cancers (SCCs) of the skin. Those who regularly used aspirin were also at lower risk, although this finding was not statistically significant. The results also suggest that NSAIDS reduce the risk of SCC more in people with lots of sunspots or those with a history of skin cancer. These findings are exciting, but more research in this area is needed before we can be sure that taking these medications will reduce your chances of skin cancer.

As part of her PhD, Chiho will evaluate whether QSkin participants who are taking aspirin or other medications are less or more likely to develop SCC and/or other skin cancers.

SOURCE: Muranushi C, Olsen CM, Pandeya N, Green AC. Can Aspirin and Non-steroidal Anti-inflammatory Drugs Prevent Cutaneous Squamous Cell Carcinoma? A Systematic Review and Meta-analysis. *J Invest Dermatol*. 135(4):975-983.

Validating Melanoma Risk Prediction Models

An important aim of the **QSkin** Study is to develop tools that can predict which people are at a high risk of developing skin cancer, including melanoma. We hope that doctors will use such tools to help them decide which patients need to be checked more frequently than others. We recently set out to test the accuracy of existing risk prediction tools by using information from **QSkin** and another study run by Professor Whiteman which recruited people diagnosed with melanoma (the Epigene study).

We found that the performance of the existing prediction tools was quite variable when tested in our Australian datasets, and we concluded that accurate tools need to be adjusted for different populations.

Using three years of **QSkin** follow-up data, we have just embarked on analyses to examine which factors accurately predict risk of developing a keratinocyte skin cancer (BCC and SCC). A similar analysis will be performed for melanoma in the coming years.

SOURCE: Olsen CM, Neale RE, Green AC, Webb PM the QSkin Study, the Epigene Study, Whiteman DC. Independent validation of six melanoma risk prediction models. *J Invest Dermatol*. (in press)

Other QSkin Study Publications

Rowell D, Gordon LG, Olsen CM, Whiteman DC. A reconstruction of a medical history from administrative data: with an application to the cost of skin cancer. *Health Economics Review* (2015) 5:4.

Manahan MN, Soyer HP, Loescher LJ, Horsham C, Vagenas D, Whiteman DC, Olsen CM and Janda M. (2014). A pilot trial of mobile, patient-performed teledermoscopy. *Br J Dermatol*. (in press)

Sun Protection and Skin Examination practices among QSkin Participants

You may recall answering questions in the original **QSkin** survey about how often you use sunscreen or hats, or how frequently you examine your skin for spots or changes. We recently completed a detailed analysis of your responses to these questions and have some interesting findings to report.

- 37% of you reported using sunscreen, and 67% wore a hat when in the sun "all or more than 50% of the time"
- Men were more likely to wear a hat then women

Skin examinations (in the past three years) were also commonly reported:

- 75% of you reported having had a skin check by a Doctor
- 56% of you had checked your own skin
- 30% of you had your skin checked by "someone else"
- Women were more likely to check their own skin than men

We found that people with sun-sensitive skin, or with many moles or with a family history of skin cancer were more likely to use sun protection or have their skin examined than people without these characteristics.

SOURCE: Olsen CM, Thompson BS, Green AC, Neale RE, Whiteman DC, for the QSkin Study. Prevalence and predictors of sun protection and whole body skin examination practices in a population with high skin cancer incidence. *JAMA Dermatology* (in press)

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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If you have received this newsletter by post but would rather receive it electronically, please email us with your contact details.

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