More than 11 moles on your arm could indicate higher risk of melanoma

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Researchers at King's College London have investigated a new method that could be used by GPs to quickly determine the number of moles on the entire body by counting the number found on a smaller 'proxy' body area, such as an arm.

Naevus (mole) count is one of the most important markers of risk for skin cancer despite only 20 to 40 per cent of melanoma arising from pre-existing moles. The risk is thought to increase by two to four per cent per additional mole on the body, but counting the total number on the entire body can be time consuming in a primary care setting.

Previous studies on a smaller scale have attempted to identify mole count on certain body sites as a proxy to accurately estimate the number on the body as a whole and found that the arm was the most predictive.

This study, funded by the Wellcome Trust, used a much larger sample of participants to identify the most useful 'proxy' site for a full body mole count as well as the 'cut off' number of moles that can be used to predict those at the highest risk of developing skin cancer.

The researchers used data from 3594 female Caucasian twins between January 1995 and December 2003 as part of the TwinsUK study protocol. Twins underwent a skin examination including recording skin type, hair and eye colour and freckles as well as mole count on 17 body sites performed by trained nurses. This was then replicated in a wider sample of male and female participants from a UK melanoma case control study published previously.

Scientists found that the count of moles on the right arm was most predictive of the total number on the whole body. Females with more than seven moles on their right arm had nine times the risk of having more than 50 on the whole body and those with more than 11 on their right arm were more likely to have over 100 on their body in total, meaning they were at a higher risk of developing a melanoma.

These findings could help GPs to more easily identify those at the highest risk of developing a melanoma (skin cancer).

Scientists also found that the area above the right elbow was particularly predictive of the total body count of moles. The legs were also strongly associated with the total count as well as the back area in males.

Lead author, Simone Ribero of the Department of Twin Research & Genetic Epidemiology said: "This study follows on from previous work to identify the best proxy site for measuring the number of moles on the body as a whole. The difference here is that it has been done on a much larger scale in a healthy Caucasian population without any selection bias and subsequently replicated in a case control study from a similar

healthy UK population, making the results more useful and relevant for GPs.

"The findings could have a significant impact for primary care, allowing GPs to more accurately estimate the total number of moles in a patient extremely quickly via an easily accessible body part. This would mean that more patients at risk of melanoma can be identified and monitored."

The study is being published in the *British Journal of Dermatology*.

Provided by King's College London