

Dark hair? Don't burn? Your genes may still put you at risk for melanoma

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New genetic research suggests that the traditional risk factors for melanoma may not be as helpful in predicting risk in all people as previously thought, according to data presented at the American Association for Cancer Research 100th Annual Meeting 2009.

"Traditionally, a clinician might look at a person with dark hair who did not sunburn easily and classify them as lower risk for [melanoma](#), but that may not be true for all people in the population," said Peter Kanetsky, Ph.D., M.P.H., assistant professor of epidemiology at the University of Pennsylvania.

Kanetsky and his colleagues have identified that genetic variants in MC1R could help to predict melanoma risk in people who are not usually classified as high risk. While this link previously has been observed, Kanetsky said it is now time to begin discussing [genetic factors](#) as part of the overall melanoma risk model.

For the current study, researchers analyzed 779 patients with melanoma from the Pigmented Lesion Clinic of the University of Pennsylvania and compared them with 325 healthy control patients.

Overall, the presence of certain MC1R variants was associated with a more than two-fold risk of melanoma, but this risk was largely confined to those patients who would not usually be considered to be at elevated risk.

Although those with dark hair are not thought to be at increased risk for melanoma, if they had dark hair and also inherited certain MC1R genetic variants, their risk for melanoma increased 2.4-fold. However, no elevated risk was associated with these same MC1R variants in those with blond or red hair.

MC1R was also associated with increased risk among those with dark eye color (3.2-fold

increase), who did not freckle (8-fold increase), who tanned after repeated sun exposure (2.4 fold increase) or who tanned immediately without burning (9.5-fold increase). People with these characteristics are usually thought to be at reduced risk for melanoma.

Kanetsky said a clinical screening test for MC1R is not yet available.

Source: American Association for [Cancer](#) Research ([news](#) : [web](#))

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