

# Better Criteria Sought for Melanonychia Striata

BY MIRIAM E. TUCKER  
Senior Writer

AMELIA ISLAND, FLA. — Every case of melanonychia striata must be evaluated individually, Dr. Richard K. Scher said at a symposium sponsored by the Dermatology Foundation.

Longitudinal bands of pigmentation in nails are among the trickiest of dermatologic phenomena to diagnose. Unlike the approach to cutaneous lesions that may or may not be melanoma, there are no reliable clinical or histologic criteria to help the clinician determine the melanoma probability of any given pigmented nail band. Some general prognostic information is available, but exceptions come along far too often for a physician to feel secure in a diagnosis.

"You can't trust the nail. It just doesn't follow the rules you try to use when evaluating skin lesions," said Dr. Scher, professor of clinical dermatology at Columbia University, New York.

Melanonychia striata affect about 1% of whites and 11% of Japanese individuals. One study found that among blacks, the prevalence rises dramatically with age, from 2.5% of children aged 0-3 years to 77% of adults older than 20 years, to 96% of those older than 50 years. But the risk is very pigment dependent, with darker-skinned blacks having higher rates than those with lighter complexions.

Melanonychia and subungual melanoma are most common in the thumb, great toe, and index finger, so it's particularly important to examine all the finger and toe nails of patients who have pigmented bands in any of those three areas. But, keep in mind that 20% of subungual melanoma are amelanotic, Dr. Scher warned.

Clinical features of the pigmentation can provide clues, but not reliable answers. In general, the lighter and more narrow the band, the less likely it is to be melanoma. However, "I've seen 1- to 2-mm pigmented bands which were melanoma in situ, light bands that were melanoma, and dark bands that were not melanoma." And of course, a fungal infection also can present as a dark black nail band.

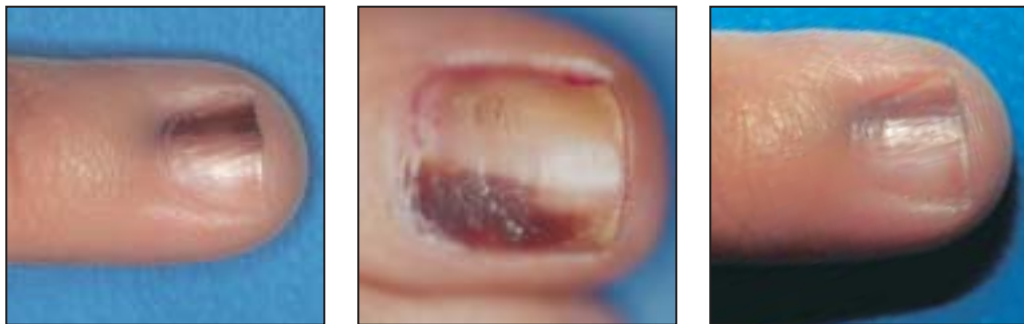
Hyperpigmentation that extends into the proximal nail fold, known as "Hutchinson's sign," is melanoma until proved otherwise. Sometimes it is something other than melanoma, in which case it's called "pseudo-Hutchinson's sign."

Uniformity of color is a good sign, whereas bands that are darker in some areas than others are more likely to be melanoma. Pigmentation that covers the entire nail also increases the melanoma probability. And, as with cutaneous lesions, a nail band that changes in color or size over time requires urgent evaluation. Involvement of multiple digits makes melanoma less likely, but any one that looks distinctly different from the others "should be regarded with some degree of suspicion," Dr. Scher said.

Because the nail matrix is the source of pigmentation (about 90% of melanocytic bands arise from the distal matrix and 10% from the proximal matrix) biopsies must be taken from the nail matrix and not the nail bed. A recent article has described the use of dermoscopy of the free edge of the nail to determine the level of nail plate pig-



From left to right: malignant melanoma that arose from longitudinal melanonychia; longitudinal melanonychia that proved to be melanoma in situ; biopsy from melanoma in situ.



From left to right: longitudinal melanonychia caused by a benign melanotic macule/lentigo; another case resulting from a fungal melanonychia; and another resulting from a nevus.

mentation and the location of its probable origin in the proximal or distal matrix (J. Am. Acad. Dermatol. 2006;55:512-3). But, there are no standardized criteria for the use of dermoscopy in melanonychia, and the procedure requires training and expertise, but "dermoscopy can help distinguish [subungual hematoma] from melanoma."

The role of trauma in subungual melanoma is controversial. Some people believe it is a contributing factor, others say evidence does not support that idea. About 25% of subungual melanomas have a history of trauma to the nail. This can prove to be a diagnostic nightmare, given that

even the confirmed presence of a subungual hematoma does not exclude the possibility of a coexisting cancerous lesion.

The probability of melanonychia striata in children is far lower than it is in adults, comprising just 1%-4% of all melanomas in individuals less than 20 years of age. The new thinking is that, because most melanonychia striata in children are nevi and not melanoma, observation during childhood is an option as long as the lesions are stable and not atypical in appearance. In general it's still a good idea to biopsy any lesion you're uncomfortable with. "When in doubt, biopsy," Dr. Scher said. ■

## New Criteria Spot Melanoma Risk, Need for Total Skin Exam

BY JANE SALODOF MACNEIL  
Senior Editor

PHOENIX — An analysis of more than 350,000 reports from skin cancer screenings has identified five melanoma risk factors that can flag candidates for total skin examinations, Dr. Darrell S. Rigel reported at a clinical dermatology conference sponsored by Medicis.

The risk factors, arranged to form the acronym HARMM, are:

- ▶ History of previous melanoma.
- ▶ Age over 50 years.
- ▶ Regular dermatologist absent.
- ▶ Mole changing.
- ▶ Male gender.

People with four or five factors were 4.4 times more likely to have a suspected malignant melanoma than were those with one or no risk factors. (See graph.)

The study's data came from 5 years of the American Academy of Dermatology's annual National Melanoma/Skin Cancer Program, which has screened more than 1.7 million people and detected more than 171,200 suspicious lesions since its start in 1985. Dr. Rigel, a clinical professor of dermatology at New York University, New

York, and his coauthors said future mass screening initiatives should focus on providing total skin examinations to people with multiple risk factors (J. Am. Acad. Dermatol. 2007 May 7 [Epub doi:10.1016/j.jaad.2007.02.010]).

During 2001-2005, participating dermatologists identified possible melanomas in 0.9% of 364,804 people between the ages of 18 and 100 years. The screenings also found suspected actinic keratoses in 17.5% of the population and suspected nonmelanoma skin cancers in 7.6%. The prevalence of suspected melanomas did not vary much over time; the low was 0.7% in 2003 and the high 1.2% in 2002.

People who met four or five of the HARMM criteria accounted for 13.6% of those diagnosed with suspected melanomas but only 5.8% of the population screened and they were also the least likely to receive a total skin examination: 53.7% received a full body screening, compared with 62.5% of those with one or no risk factors, 58.4% with two risk factors, and 55.9% with three risk factors.

The observed trend toward fewer thorough examinations with higher risk troubled the researchers, who said it "suggests

an area where risk targeting can have an impact on patient care and mass screening cost efficacy." Suspected melanomas, they noted, were more often found on patients who received a total skin examination (odds ratio 1.4) than on those whose examination was of a specific lesion or just the face and arms. In patients with four or five HARMM risk factors, melanoma prevalence was 2.50% with total skin examination, 2.49% when specific lesions were examined, and 1.76% with face and arm examination.

The academy is revising its screening program materials to promote the HARMM criteria, said Dr. Rigel. "It turned out the more risk factors you had, the less likely you were to have a complete physical," he told clinicians at the conference.

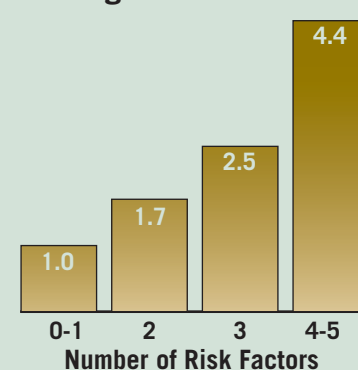
Nearly all the people who came to the annual screenings had at least one of the HARMM criteria. Three-quarters had two or more, and a third had three or more risk factors. About a third came to the screenings more than 1 year, and repeaters had a lower prevalence of suspected melanomas than did first-timers (0.85% vs. 0.97%).

History of a previous melanoma was the most ominous risk factor, with an odds ratio of 3.5 by univariate analysis.

The presence of a mole that was changing was the next most serious (odds ratio 2.0).

More women were screened than men, but men were more often diagnosed with a suspected melanoma (odds ratio 1.4). This was especially true for men over 50 years of age, who made up 23.4% of the people screened and 31.6% of those in whom dermatologists suspected melanoma. ■

### Odds Ratios for Suspected Malignant Melanoma



Note: Based on data from the HARMM study of 364,804 people.  
Source: Dr. Rigel