Serial Screening for Melanoma Is Protective

'We basically catch [the melanomas] before they evolve into rapidly expanding lesions.'

BY BRUCE JANCIN

MADRID — A novel program of recalls for twice-yearly full skin examinations in patients at increased risk for melanoma has uniformly resulted in very early detection and cure of melanomas over a 17-year period in a private-practice dermatologist's office.

From mid-1992 through mid-2009, during which 1,108 patients underwent serial screening, there were no deaths due to melanoma or any other skin cancer, no metastases, and no sentinel node biopsies, since all melanomas were detected while in their radial growth phase, when their Breslow depth was well under 0.75 mm, Dr. Ronald N. Shore reported at the 13th World Congress on Cancers of the Skin sponsored by the Skin Cancer Foundation.

This extensive experience challenges the recent controversial U.S. Preventive Health Services Task Force statement that screening for melanoma hasn't been shown to be of value.

"It is my belief that it is now possible to protect patients at increased risk or at high risk of melanoma with extraordinary efficacy. What is needed is to identify such individuals and to offer them the opportunity to participate in a serial screening program," explained Dr. Shore, a Rockville, Md., dermatologist who is also on the clinical faculty at Johns Hopkins University, Baltimore.

"When patients present with recognized risk factors for melanoma, dermatologists should seriously consider recommending and performing such serial screening procedures," he added. "The skill that is required when examining patients is not to know what lesions are melanomas, but what lesions could be melanomas, so that such lesions are biopsied or at least monitored. Dermatologists, who are familiar with the numerous benign entities that occur in human skin, are almost uniquely prepared to perform this function so that large numbers of biopsies are not necessary."

The genesis for Dr. Shore's screening program lay in the teachings of the well-known dermatopathologist Dr. Wallace Clark, who asserted that melanomas in their early developmental radial growth phase almost never metastasize, and that this phase lasts for at least 6 months.

Building upon this principle, Dr. Shore fashioned a screening program founded on what he considered to be five key elements: performing thorough skin exams, biopsying all suspicious lesions, recalling patients every 6 months, carefully educating patients regarding the importance of returning when called, and encouraging self-screening through teaching the classical features of melanoma.

Patients were selected for serial screening based on standard risk factors, including fair skin, prior nonmelanoma skin cancer, history of significant sunburns, and positive family history.

In retrospect, however, he has concluded that the self-examination component wasn't particularly useful. For example, during a recent 5-year period in which 10 new cases of melanoma were detected through the screening program, all were in the radial growth phase, the greatest Breslow depth was only 0.15 mm, and seven melanomas were in men over age 50—but only one cancer was detected by a patient.

"This was particularly surprising to us, as all patients had been familiarized with the features of melanoma. It appears that in very early cases of melanoma, where lesions are asymptomatic and flat, most patients are not particularly adept at recognizing them," the dermatologist continued.

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DR. SHORE

"Based on our extensive experience, particularly with older patients, we do not believe self-examination by patients compares at all well to what can be achieved by trained professionals. If our experience is at all reflective of the larger community, we believe there should be a much greater emphasis on dermatologists' examinations and less on self-screening by patients themselves," he said.

Median time between skin examinations in the series was 9 months rather than the sought-after 6 months. Despite this indication of slight foot-dragging, patients have enthusiastically embraced the serial screening program, according to Dr. Shore.

"Most patients feel wonderful coming in for exams because they know what our experience has been and they feel reassured that they will not die of melanoma," he observed in response to an audience question.

In an interview, the dermatologist explained that he didn't incorporate routine total body photography in his repetitive follow-up program because the technology wasn't available when he started out.

It's still not part of his screening system because he wants the program to be readily generalizable for other dermatologists, relatively few of whom use whole body photographs.

Dr. Shore noted that two prior studies have also reported 100% survival of screened patients at increased risk for melanoma: One was led by Dr. Darrell S. Rigel (Cancer 1989;63:386-9), and another more recent study was led by investigators at the University of Minnesota (J. Am. Acad. Dermatol. 2004; 50:15-20).

Session co-chair Dr. Fernando Stengel, chief of dermatology at the Clinicas Hospital in Buenos Aires, commented that Dr. Shore's experience seems unusual in that he didn't encounter any of the feared nodular melanomas that are so fast growing they've defied efforts to improve outcome through early detection.

Dr. Shore replied that some of the early melanomas detected in his series showed nodular-like histology. This leads him to suspect that "we basically catch them before they evolve into rapidly expanding lesions." ■

Disclosures: *Dr. Shore said that he has no financial interests relevant to his study.*

Digital Dermoscopy Tool Useful for Detection of Melanoma

BY DAMIAN McNAMARA

MIAMI — A computer-automated device detected melanoma and high-grade dysplastic nevi lesions with 98% sensitivity in a large, prospective, multicenter study.

The digital dermoscopy device "sees" at different skin depths using 10 spectral bands ranging from 430 nm to 950 nm. The device objectively assesses up to 75 factors to differentiate melanoma from low-grade and high-grade dysplastic nevi, Dr. Gary D. Monheit said.

The technology was more than a decade in development, which involved assessment of more than 10,000 pigmented lesions from more than 7,000 patients, Dr. Monheit said at the annual meeting of the American Academy of Dermatology.

Dr. Monheit was an investigator at one of seven sites that used the MelaFind (Electro-Optical Sciences) to assess a total of 1,632 evaluable lesions. Lesions included 70 invasive melanomas and 57 melanoma in situ. "This is the largest prospective, blinded study ever conducted in melanoma detection," he noted.

VITALS

Major Finding: Computerized, automated device detects melanoma and high-grade dysplastic nevi with 98% sensitivity.

Data Source: A prospective, multicenter study of 1,632 lesions.

Disclosures: Dr. Monheit is a consultant and researcher for Electro-Optical Sciences.

The noninvasive device has a handheld wand for image capture at the point of care. Because of these features and a proprietary algorithm that analyzes multiple spectrums, it is "totally objective with a yes or no algorithm for excision," said Dr. Monheit, a private practice dermatologist in Birmingham, Ala., and an associate clinical professor in the departments of dermatology and ophthalmology at the University of Alabama at Birmingham.

Detection is automatic with immediate feedback, Dr. Monheit said. "If we don't get a clear image, the machine tells us the image is not possible."

The aim of this "pivotal study" was to establish safety of the device and sensitivity for melanoma detection. No adverse events were reported, Dr. Monheit said. Lesions had to be pigmented with melanin, keratin, and/or blood. Clinical management was biopsy, he added.

For melanoma and high-grade dysplastic nevi, the device had a 98% sensitivity. These are the lesions that should be removed, Dr. Monheit said.

"At same time we should look at specificity—we do not want to biopsy every lesion," Dr. Monheit said. The specificity of the device was 9.4%, statistically superior to the dermatologist evaluations at 3.7%.

The results with the device were compared with prebiopsy investigator diagnoses and with an objective pathologic review of lesions by a panel of three dermatopathologists. If two of the three dermatopathologists concurred on the diagnosis, their consensus was final. The device had a 98% sensitivity for biopsy detection.

Dr. Monheit and the other study investigators also collected patient data, including age, gender, ethnicity, patient in-house or referred, and any risk factors for melanoma. Anatomic locations of the lesions were also noted.

This study provides "evidence for safety and efficacy for aid in evaluating pigmented lesions," Dr. Monheit said. ■