Recent evidence has shown that patients can be effectively trained to perform skin self-examination (SSE) using an evidence-based program (Cancer Epidemiol Biomarkers Prev [published online ahead of print June 10, 2015]).

“Melanoma survivors are at increased risk to develop another new melanoma,” says June Robinson, MD, lead author and research professor of dermatology at Northwestern University Feinberg School of Medicine in Chicago, Illinois. “Our study shows that melanoma survivors and their skin-check partners can be trained to accurately perform visual inspection for early detection of melanoma.”

The authors note that prior studies have shown that the majority of new melanomas are found by patients or their partners, and approximately one-half of patients with melanoma find another melanoma between follow-up appointments. Furthermore, previous studies have reported that patients who perform SSE have been found to have significantly thinner melanomas than those who do not perform SSE.

Although several organizations, including the American Cancer Society and the American Academy of Dermatology, suggest SSEs and provide instructions for performing them on their Web sites, a 2009 review by the US Preventive Services Task Force concluded that evidence was insufficient to assess the balance of benefit and harm from SSE in the general population.

**Study Details**

Patients with a history of stage 0 to IIB melanoma and their partners were recruited from June 2011 to April 2013. Each patient-partner pair was randomized to 1 of 4 groups: a control group receiving no intervention and 3 different SSE skills training interventions. The 3 interventions included a live slide presentation by a trained research assistant, a self-guided workbook, or an electronic interactive computer activity. However, the content of all 3 interventions was identical, and included information regarding characteristics (border irregularity, color variation, diameter, and evolution) that help distinguish melanoma from benign melanocytic nevi, as well as instructions for recognizing common benign skin lesions such as seborrheic keratoses and hemangiomas. Discussion of lesion asymmetry was not part of the intervention because the study investigators previously found some patients had difficulty with this concept.

The pairs were instructed to select 5 to 10 pigmented lesions (PLs) to score and observe for changes. This instruction was given after some of the first pairs scored every PL on their body and found it too burdensome. Participants who underwent the training intervention were encouraged to perform SSE once a month and track results using a body map and scorecard. All patients underwent a dermatological examination after 4 months. The dermatologist did not see the patient’s body map and scorecard prior to completing her own. A research assistant then compared the results.

A mean number of 9.66 PLs were found on the SSE body maps by the 274 pairs. A total of 2646 PLs were identified by the patient or pairs, 1836 of which were also found by the dermatologist using total body skin examination (TBSE), leaving 810 more lesions found by the patient.

Using a mixed logistic regression model, researchers calculated the correspondence to be 0.74. This essentially means that nearly 3 of 4 PLs found by the patient or pairs were also identified by the dermatologist.

Right after the TBSE, dermatologists reexamined patients to diagnose the

**KEY POINTS**

- Previous studies have shown that the majority of melanomas are found by patients or their partners.
- Patients and their partners could be trained to identify concerning PLs with good correlation to a TBSE by a dermatologist.
- Training patients in SSE did not result in an excess of unnecessary physician visits or biopsies.
810 lesions that the patients had found concerning but were not identified by the examining dermatologist. They were classified as seborrheic keratosis (64%), benign mole (11%), cherry angioma (7%), dermatofibroma (2%), scar tissue (2%), other (9%), and no judgment provided (2%).

A total of 81 skin biopsies were performed. Of these, 73% were of lesions listed on the patients’ SSE scorecards. Five melanomas were found; 2 of these were biopsied as a result of a patient-initiated ad hoc visit and 1 was identified by the patient as evolving and was biopsied at the regular 4-month visit. The remaining 2 melanomas were not identified by the patient or partner. It is interesting to note that during the study, less than 4% of participants requested an immediate physician visit because of a concerning PL. The correspondence rate between PLs found by patients and those found by dermatologists did not differ between the 3 different SSE training interventions.

Implications
This study demonstrates a good degree of correspondence between patient and dermatologist identification of concerning PLs. The study authors concluded that the evidence presented is unique in that it indicates that patients can apply the diagnostic skills after SSE training, because 3 of the 5 melanomas identified were found concerning by the patients before biopsy. Unnecessarily increasing the health care burden is one of the arguments against SSE, but in this study, there were few requests for unscheduled physician visits. Dr. Robinson points out that this concern is theoretical and there are no data to confirm it.

"The continuing analysis of the data from the 24 months of follow-up of the participants in this study will ascertain if there was overutilization of health care services and if those randomized to the intervention identified new melanomas at the same rate, or more or less frequently than those in the control group," she says.

"At our center, we teach all our patients to be on the lookout for changing moles and suspicious lesions,” says Hensin Tsao, MD, PhD, clinical director of the Massachusetts General Hospital Melanoma and Pigmented Lesion Center in Boston. “Thus, self-examination is already a part of the effort to detect melanomas at an earlier stage. Anxiety and overbiopsy are concerns, but at our institution, we think the alternative of not having some visual surveillance of the skin at home is much more risky."

Dr. Robinson and her colleagues identified several limitations to their study: it had a relatively short follow-up, recruited patients were likely to be highly motivated, the thoroughness of SSE may have been influenced by patients knowing they were taking part in a study, and patients were recruited from a single geographic area with higher-than-average incomes. Furthermore, the study design did not allow for a true test of specificity and sensitivity. However, the authors believe the study does provide preliminary evidence that patients can perform a SSE that is in line with a TBSE by a dermatologist. They are also careful to point out that SSE should not be interpreted as a replacement for a physician visit.

“This study backs up what we feel: a well-trained patient is perhaps the dermatologist’s best asset. A well-trained spouse is perhaps a close second best,” says Dr. Tsao.

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