System May Predict Thin Melanoma Recurrence

BY JANE SALODOF MACNEIL

SANTA FE, N.M. — Physicians at the John Wayne Cancer Institute in Los Angeles have developed a scoring system to help identify the small number of thin melanomas most at risk of nodal recurrence and in need of evaluation by sentinel lymph node biopsy.

The system uses three parameters—Breslow thickness, age, and sex—that emerged as significant predictors in a multivariate analysis of 1,732 patients prospectively followed at the institute after treatment with excision alone within 6 months of their melanoma diagnosis. Patients with clinically evident nodal disease or nodal staging were excluded from the study.

Only 2.9% had regional nodal basin recurrence at a mean follow-up of 13.2 years, Dr. Mark B. Faries reported in a presentation of the system at the annual meeting of the Western Surgical Association. Risk increased with Breslow thickness (odds ratio, 2.5; P < .0001) and male sex (OR, 3.5; P = .0005), but decreased with age above 50 years (OR, 0.45; P = .0019).

Predicted probabilities of recurrence ranged from 0.1% to 17.4% in the 18-step scoring system shown by Dr. Faries, a surgical oncologist at the institute. The lowest risk would be in a female patient over 70 years old with a melanoma less than 0.5 mm thick. The highest risk was assigned to a hypothetical male patient less than 50 years of age with a melanoma 0.76-0.99 mm in Breslow thickness.

“Most patients can be classified as very low risk, but others have a more substantial risk of nodal disease,” he said. “The risk of clinical nodal recurrence can be estimated for patients with thin melanoma based on very simple and reproducible parameters.”

Men accounted for slightly more than half, 51%, of the study population. Mean age was 48.5 years; mean Breslow thickness was 0.5 mm. Most melanomas were on the trunk (43%) or extremities (41%); just 16% were on the head or neck.

Ulceration was recorded in only 39 patients—2.3% of the study population (among whom only 1,282 had ulceration data available)—but Dr. Faries reported it greatly increased risk of nodal recurrence. The recurrence rate reached 7.7% in patients with ulceration, vs. 2.7% in the absence of ulceration.

This led Dr. James A. Recaberen of Huntington Memorial Hospital in Pasadena, Calif., to observe from the audience, “The most important thing I take away is that anyone with ulceration should be a candidate for nodal investigation.” Dr. Faries concurred that while ulceration is infrequent, it can be cause by itself to proceed with a nodal biopsy.

Another lesson, he said, was the need for long follow-up of thin melanomas. About a third of recurrences occurred after 5 years of follow-up. Mean time to nodal recurrence was 38.3 months. The small number of recurrences relative to the large number of patients with thin melanomas presents a particularly challenging problem, according to Dr. Faries and other speakers. “Melanoma is increasing in incidence faster than virtually any other solid tumor,” he said, noting that about 70% of new lesions are less than 1 mm in thickness.

As with thicker melanoma, lymph node status is the most significant prognostic factor Dr. Faries noted. “However, use of sentinel node biopsy in all cases of thin melanoma is not reasonable,” he cautioned, citing the large number of patients involved.

Indeed, in his discussion of the presentation, Dr. Richard Thirlby suggested that indiscriminate use of sentinel node dissection could result in a cost of $1 million to find one nodal recurrence. Dr. Thirlby of Virginia Mason Medical Center in Seattle praised the analysis; however, he noted that it did not give thresholds for ordering a biopsy. To that end, he called for a decision-tree analysis that could help physicians use the system to decide when to recommend a sentinel node procedure.

Decision-tree and cost analyses are excellent suggestions, Dr. Faries agreed, but “I don’t know that we can make a bottom line based on any predictive system.” Dr. Faries reported no relevant conflicts of interest.