Dermoscopy is a technique of subsurface imaging of color and structures using magnification and either an optical clearing medium such as oil, alcohol, or water, or polarized light. The technique is widely used in Italy, Germany, and Australia, but only about 20% of dermatologists in the United States use it.

In a prospective study of 549 patients with 175 pigmented lesions that required biopsy for diagnosis, 161 of the lesions ranged in size from 1 to 6 mm. Of these, 13 (9%) were melanomas (Eur. J. Dermatol. 2002;12:573-6).

Clinical diagnosis alone detected 10 of 13 melanomas correctly, for a sensitivity of 77% and a specificity of 72%.

Thus, another challenging area for dermatologists is diagnosing early-stage nodular melanomas. Dr. Steger explained that nodular melanomas grow relatively fast and differ clinically from superficial spreading malignant melanomas. Small nodular melanomas are usually symmetrical and of a single color.

“They tend to be elevated and dome shaped. And they tend to be firm because of all the cellularity in those tumors,” he explained. “When they get mature, they start to weep, encrust, and ulcerate.”

Consequently, he added, the ABCD rule for the diagnosis of superficial spreading malignant melanomas does not apply to nodular melanomas. Instead, consider the EFG rule, where E means the lesion is elevated, F means the lesion is firm, and G means it’s been growing progressively for 1 month. The G “is of primary importance” according to the new rule’s originator, John W. Kelly, M.D., Director, Victorian Melanoma Service, Alfred Hospital, Melbourne (The Melanoma Letter 2004;22:2).

Dr. Steger added that on dermoscopy, “some pigmented amelanotic lesions may show areas of light or medium brown pigmentation. Atypical vascular patterns may also be seen.”

If you plan to learn dermoscopy, the easiest screening algorithms to use include the three-color test and the three-criteria checklist, Dr. Steger said.

In a study of the three-color test, the presence of three or more colors seen in the lesion on dermoscopy yielded sensitivity for melanoma that ranged from 92% to 97% (Br. J. Dermatol. 2002;146:481-4).

However, melanoma was wrongly diagnosed about 90% of the time.

“So you’ll be biopsying more benign lesions with the three-color test, but that’s OK,” Dr. Steger added.

The three-criteria checklist includes asymmetry of color of dermoscopic structures, atypical pigment network, and any blue or white colors that appear on dermoscopy.

When used by six clinicians who were new to dermoscopy, the checklist yielded a sensitivity of 96% and a specificity of 33% (Dermatology 2004;218:27-31).

“The value of both of these algorithms is in screening,” he said. “These are good techniques that all of us can use. When in doubt, biopsy.”

To get started in dermoscopy, Dr. Steger recommends reading dermatology literature on the topic and taking one of the introductory courses offered by the American Academy of Dermatology and other organizations.