Confocal Laser Microscopy Gaining Momentum

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Montréal — Formation of an inter
national confocal microscopy group, soft
ware that aids the detection and mapping of
skin lesions, and introduction of a hand
held device are among recent ad
vances to add to the diagnosis of lento
ing, melanoma and other lesions in real
time.

Researchers hope widespread adop
tion of confocal laser microscopy will permit further early diagnoses of cutaneous melanoma and other lesions at the bedside. “It is critical to do biopsies early. If you believe cancer starts from a single cell, you can diagnose it early [with confocal laser microscopy]. That is what we are working on now,” Dr. Richard Langley said.

Described as a “living skin biopsy” by some microscopicist, is not new. Pathologists have employed the light focused intensely to examine tissue specimens since the 1950s, he said. It is a limitation through live, patients, however, “We cannot go through
confocal versus dermoscopy [97% vs. 89%], respectively. The specificity was about the same [83% vs. 84%],” Dr. Langley said. “We missed one melanoma with the confocal technology, so it was not perfect.”

For dermatologists accustomed to reading

A hand-held confocal microscopy device is one recent dermatoscope advancement.

cross-sectional biopsies, it may take an
adjustment to recognize the clusters of melanocytes. Dr. Langley said. “You have to retrain your eye to look differently—you are looking from above. Also, it is in black and white, not color, like we’re used to.”

Indicative of the growing interest in this technology is the formation of the Inter
national Confocal Microscopy Working Group, launched at the February 2008 American Academy of Dermatology an
nual meeting in San Antonio. The group aims to form an international network of medical professionals working with confocal laser microscopy and to promote edu
cation, training, and additional research about the technology. New software for microscopy also
emerged in the past year (Electronic Zoom, Lucid Inc.). The video-capture soft
ware allows dermatologists or der
matopathologists to map a lesion and tag
an area of interest. “You start with a macro image and, if you see an area you want to focus on, the software can be engaged,” Dr. Langley said.

Another advance is the availability of a hand-held confocal microscopy device (Vi
aScope 3000, Lucid). Dr. Langley had no
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