

Multiphoton microscopy reveals features of basal cell carcinoma

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(HealthDay)—Noninvasive multiphoton microscopy (MPM) imaging can reveal characteristic features of basal cell carcinoma (BCC) in human skin, according to a study published online April 24 in *JAMA Dermatology*. The research is being published to coincide with the annual meeting of the American Society for Laser Medicine & Surgery, held from April 22 to 26 in Kissimmee, Fla.

Mihaela Balu, Ph.D., from the University of California-Irvine, and colleagues examined the capability of MPM to image in vivo BCC [lesions](#) in [human skin](#). Imaging was performed with a clinical MPM-based tomograph in patients with BCC. Ten BCC lesions were imaged in vivo in nine patients before biopsy; the [images](#) were compared with histopathologic findings.

The researchers found that nests of basaloid cells present in the papillary and reticular dermis were the main MPM feature associated with the BCC lesions. There was good correlation between this feature and histopathologic examination. Elongated tumor cells in the epidermis aligned in one direction and parallel collagen and elastin bundles surrounding the tumors were other MPM features.

"This study demonstrates, in a limited patient population, that noninvasive in vivo MPM imaging can provide label-free contrast that reveals several characteristic features of BCC lesions," the authors write. "Future studies are needed to validate the technique and correlate MPM performance with histopathologic findings."

One author is cofounder of JenLab GmbH.

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