Medical > Ex Vivo > Non-Melanoma Skin Cancer

20 | Combined reflectance confocal microscopy-optical coherence tomography for delineation of basal cell carcinoma margins: an ex vivo study.

Iftimia N, Peterson G, Chang EW, Maguluri G, Fox W, Rajadhyaksha M, J Biomed Opt. 2016 Jan 1;21(1):16006. doi: 10.1117/1.JBO.21.1.016006.

ABSTRACT

We present a combined reflectance confocal microscopy (RCM) and optical coherence tomography (OCT) approach, integrated within a single optical layout, for diagnosis of basal cell carcinomas (BCCs) and delineation of margins. While RCM imaging detects BCC presence (diagnoses) and its lateral spreading (margins) with measured resolution of ><nobr>?1???m</nobr>, OCT imaging delineates BCC depth spreading (margins) with resolution of ><nobr>?7???m</nobr>. When delineating margins in 20 specimens of superficial and nodular BCCs, depth could be reliably determined down to ><nobr>?600???m</nobr>, and agreement with histology was within about ><nobr>±50???m</nobr>.