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Accuracy and confidence in the clinical diagnosis of basal cell cancer using dermoscopy and reflex confocal microscopy.

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ABSTRACT

BACKGROUND: Diagnosis of suspected basal cell carcinoma (BCC) is typically confirmed with incisional biopsy before referral to final surgery. **OBJECTIVE:** To investigate the clinical confidence and accuracy of physicians making a diagnosis of BCC based on dermoscopic and reflectance confocal microscopy (RCM) features. **METHODS:** This study was designed as a simulation to determine the certainty and willingness to refer to surgery without previous biopsy confirmation of BCC. Study subjects were identified with suspected BCC. Dermoscopic and RCM lesion images were obtained before biopsy. Eight clinicians with various expertise levels blindly interpreted these images and chose among four hypothetical treatment options: definite BCC, refer directly to surgery without biopsy; other malignancy, perform biopsy for diagnosis; uncertain diagnosis, perform biopsy; benign, do not biopsy. Decisions for treatment were based on dermoscopic images alone and, subsequently, on dermoscopic and RCM images combined. **RESULTS:** The sensitivity for referral to surgery without biopsy was 67.6% with the use of dermoscopy; the positive predictive value (PPV) was 97.0%. Adding RCM increased the sensitivity to 76.5% and the PPV to 98.6%. **CONCLUSIONS:** Dermoscopy provides a high PPV for BCC. The addition of RCM to dermoscopy increases diagnostic sensitivity, particularly in less experienced dermoscopists. Physician behavior might be different if actual referrals were made for surgery without biopsy. © 2016 The International Society of Dermatology. PMID:27419915 DOI:10.1111/ijd.13361