Overview

Clinical Indications for Use of Reflectance Confocal Microscopy for Skin Cancer Diagnosis.

Borsari S1, Pampena R1, Lallas A1, Kyrgidis A1, Moscarella E1, Benati E1, Raucci M1, Pellacani G2, Zalaudek I3, Argenziano G4, Longo C1.

ABSTRACT
Importance: Reflectance confocal microscopy (RCM) improves diagnostic accuracy in skin cancer detection when combined with dermoscopy; however, little evidence has been gathered regarding its real impact on routine clinical workflow, and, to our knowledge, no studies have defined the terms for its optimal application. Objective: To identify lesions on which RCM performs better in terms of diagnostic accuracy and consequently to outline the best indications for use of RCM. Design, Setting, and Participants: Prospectively acquired and evaluated RCM images from consecutive patients with at least 1 clinically and/or dermoscopically equivocal skin lesion referred to RCM imaging, from January 2012 to October 2014, carried out in a tertiary referral academic center. Main Outcomes and Measures: A total of 1279 equivocal skin lesions were sent for RCM imaging. Spearman correlation, univariate, and multivariate regression models were performed to find features significantly correlated with RCM outcome. Results: In a total of 1279 lesions in 1147 patients, RCM sensitivity and specificity were 95.3% and 83.9%, respectively. The number of lesions needed to excise to rule out a melanoma was 2.4. After univariate and multivariate regression analysis, head and neck resulted as the most appropriate body location for confocal examination; RCM showed a high diagnostic accuracy for lesions located on sun-damaged skin (adjusted odds ratio [aOR], 2.13; 95% CI, 1.37-3.30; P=.001) and typified by dermoscopic regression (aOR, 2.13; 95% CI, 1.31-3.47; P=.002) or basal-cell carcinoma specific criteria (aOR, 9.35; 95% CI, 1.28-68.58; P=.03). Conclusions and Relevance: Lesions located on the head and neck, damaged by chronic sun-exposure, and dermoscopically typified by regression represent best indications for the use of RCM. PMID:27580185 DOI:10.1001/jamadermatol.2016.1188