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Diagnostic impact of reflectance confocal microscopy as a second-level examination for facial skin lesions.

Ahlgrimm-Siess V, Weitzer F, Arzberger E, Laimer M, Hofmann-Wellenhof R. *J Dtsch Dermatol Ges.* 2019 Jan 22. doi: 10.1111/ddg.13748

ABSTRACT

BACKGROUND AND OBJECTIVE: Benign and malignant facial skin lesions may be difficult to differentiate clinically and with dermoscopy. The present study aimed to evaluate the potential utility of in vivo reflectance confocal microscopy (RCM) as a second-level examination for facial skin neoplasms. **PATIENTS AND METHODS:** Retrospective and blinded evaluation of 160 consecutive facial lesions was carried out in two separate steps. Clinical and dermoscopic images were assessed first, followed by combined evaluation of clinical/dermoscopic and RCM images. Our study included 60 % malignant lesions, comprising 43 % melanomas, 9 % basal cell carcinomas, 5 % in situ squamous cell carcinomas and 3 % lymphomas. **RESULTS:** Ancillary RCM significantly improved diagnostic specificity for the detection of malignancy compared to clinical/dermoscopic evaluation alone (58 % vs 28 %). However, sensitivity was slightly lower for RCM-based image evaluation (93 % vs 95 %) due to misclassification of one in situ SCC and one lymphoma. In terms of melanoma diagnosis, RCM-based image evaluation was generally superior; sensitivity was only slightly increased (88 % vs 87 %), but melanoma specificity was significantly higher (84 % vs 58 %). **CONCLUSION:** RCM is a valuable diagnostic adjunct for facial skin lesions; unnecessary biopsies in this cosmetically sensitive area could be reduced by one third without missing a melanoma. © 2019 Deutsche Dermatologische Gesellschaft (DDG). Published by John Wiley & Sons Ltd. **KEYWORDS:** benign facial macules; dermatopathology; dermoscopy; face; in vivo reflectance confocal microscopy (RCM); melanoma PMID: 30667147 DOI: 10.1111/ddg.13748