

Medical > In Vivo > Non-Melanoma Skin Cancer Research > Squamous Cell Carcinoma and Actinic Keratosis

53

Clinical Applicability of in vivo Reflectance Confocal Microscopy for the Diagnosis of Actinic Keratoses

Ulrich M, Matusch A, Ruis-Dias F, Rowert-Huber J, González S, Sterry W, Stockfleth E, Astner S.; *Dermatol Surg* 2008;34:610?619.
DOI 10.1111/j.1524-4725.2008.34195.x

ABSTRACT

BACKGROUND: In vivo reflectance confocal microscopy (RCM) has been used for evaluation of the morphologic features of nonmelanoma skin cancer. The application of RCM for diagnosis of basal cell carcinoma has been reported; however, the evaluation of actinic keratoses (AKs) has only been the subject of preliminary studies.

STUDY GOAL: The goal of this study was to evaluate the applicability of RCM in the diagnosis of AK in correlation with routine histology.

MATERIALS AND METHODS: Forty-four Caucasians with a minimum of one AK participated in this study. Evaluation consisted of clinical examination, RCM, and routine histology, including a total of 46 AKs in the final analysis. Ten normal skin sites served as controls. RCM features of AK included parakeratosis, architectural disarray, and keratinocyte pleomorphism. Following blinded evaluations, sensitivity/specificity, kappa analysis, and Spearman's correlation were performed on all parameters.

RESULTS: Sensitivity/specificity values of RCM features ranged from 80% to 98.6%. The presence of architectural disarray and cellular pleomorphism appeared to be the best predictor of AK.

CONCLUSION: In summary, RCM may be a promising technology for the noninvasive detection of AK and as adjunct tool to clinical diagnosis and monitoring. However, the preliminary nature of this study warrants further investigations.