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# 55

### Actinic keratosis: non-invasive diagnosis for field cancerisation

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#### ABSTRACT

**BACKGROUND:** Actinic keratoses (AKs) are among the most common cutaneous malignancies and have previously been classified as in situ squamous cell carcinoma (SCC) with reported progression rates of up to 20% over 10 years. Since current scientific evidence suggests the presence of multilocal preneoplastic changes in the areas surrounding the affected skin sites, the detection of subclinical AKs remain an ongoing and challenging effort in the clinical and diagnostic management of these lesions. In vivo reflectance confocal microscopy (RCM) has been used for evaluation of the morphological features of non-melanoma skin cancer (NMSC) and RCM evaluation parameters for the diagnosis of AKs have been reported.

**OBJECTIVES:** The objective of this study was to evaluate the RCM-morphology of clinically diagnosed AKs in our study population and to correlate the findings with routine histopathology.

**PATIENTS/METHODS:** Forty four Caucasians (SPT I-III) with a minimum of one actinic keratosis (AK) lesion were included in this study. Evaluation consisted of clinical examination, RCM and routine histology. Reflectance confocal microscopy evaluation parameters included parakeratosis, architectural disarray and keratinocyte pleomorphism.

**RESULTS:** A total of 44 AKs were included in the final analysis. Following blinded evaluation by two independent investigators, 97.7% of all skin samples were identified as AK using RCM. 2.3% were incorrectly identified as normal skin by RCM, while routine histology showed features consistent with AK.

**CONCLUSIONS:** Reflectance confocal microscopy may be a feasible alternative in the diagnosis of AK and may aid in the differentiation against normal skin, as well as in the detection of subclinical disease.