

## Overview

# 5

### Reflectance confocal microscopy made easy: The 4 must-know key features for the diagnosis of melanoma and nonmelanoma skin cancers.

Pellacani G, Scope A, Gonzalez S, Guitera P, Farnetani F, Malvehy J, Witkowski A, De Carvalho N, Lupi O, Longo C. *J Am Acad Dermatol.* 2019 Aug;81(2):520-526. doi: 10.1016/j.jaad.2019.03.085. Epub 2019 Apr 5.

#### ABSTRACT

**BACKGROUND:** Reflectance confocal microscopy (RCM)-based skin cancer diagnosis requires proficiency.

**OBJECTIVE:** To identify a short list of key RCM features of skin cancers and test their diagnostic utility.

**METHODS:** We identified key RCM features through consensus among 6 experts using a modified Delphi method. To test the diagnostic utility of these RCM key features, 10 novice RCM readers evaluated a subset of 100 RCM cases from a retrospective data set of benign and malignant skin neoplasms.

**RESULTS:** From 56 features reported in the literature, the experts identified 18 RCM features as highly valuable for skin cancer diagnosis. On the basis of consensus definitions, these RCM features were further clustered into 2 melanoma-specific key features (atypical cells and dermoepidermal junction disarray), 1 basal cell carcinoma-specific key feature (basaloid cords/islands), and 1 squamous cell carcinoma-specific key feature (keratinocyte disarray). The novice reading study showed that the presence of at least 1 of the 4 key features was associated with an overall sensitivity for skin cancer diagnosis of 91%, with a sensitivity for melanoma of 93%, a sensitivity for basal cell carcinoma of 92%, and a sensitivity for squamous cell carcinoma of 67%, and an overall specificity of 57%.

**LIMITATIONS:** The consensus was based on only six RCM experts and the validation study was retrospective.

**CONCLUSIONS:** A consensus terminology short list identifying the 4 RCM key features for skin cancer diagnosis may facilitate dissemination of RCM to novice users. Copyright © 2019 American Academy of Dermatology, Inc. Published by Elsevier Inc. All rights reserved. **KEYWORDS:** Delphi consensus method; basal cell carcinoma; diagnostic criteria; melanoma; nevi; reflectance confocal microscopy; squamous cell carcinoma PMID:30954581 DOI:10.1016/j.jaad.2019.03.085