Update on the use of confocal microscopy in melanoma and non-melanoma skin cancer.


ABSTRACT
BACKGROUND: Reflectance confocal microscopy (RCM) is a new technique enabling the visualization of the skin at a quasi-histological resolution, allowing the identification of clues for the diagnosis of skin diseases. OBJECTIVES: To provide new insights into the role of RCM in the diagnosis of skin cancers. DATA SOURCES: Data coming from the most recent literature, taking into account previous essential reported information in this field. STUDY ELIGIBILITY CRITERIA: inclusion: studies providing update information, focusing on RCM findings in melanoma and non-melanoma skin cancers (NMSC), without restrictions for age, sex, ethnicity. Exclusion: duplicated studies, single case report. Participants, and interventions study appraisal and synthesis methods: A search concerning the role of RCM in melanoma and NMSC was performed on the Medline. RESULTS: RCM clues were analyzed for different skin cancers, in particular melanoma and NMSC, in association with clinical, dermoscopic and histopathologic findings. Diagnostic accuracy, sensibility and specificity of the technique were reviewed. Furthermore, some new findings have been described and recent applications have been discussed. LIMITATIONS: The selection of articles in order to provide an up-to-date revision. CONCLUSIONS AND IMPLICATIONS OF KEY FINDINGS: Several RCM features were implemented for the diagnosis of melanoma and NMSC, leading to a confocal-based classification in most cases.