ABSTRACT
The precursor of most cutaneous invasive squamous cell carcinomas (iSCCs) is intraepithelial UV-induced damage, known as field cancerization, which can eventually transform into actinic keratosis (AK). Although AK is the most common precursor of iSCC, many AKs will either persist in the same stage or regress, while only a few will progress into iSCC. Nevertheless, because the progression of individual AKs cannot be predicted, it has been proposed that all AKs, regardless of the grade, should be carefully monitored and appropriately treated in clinical practice. Modern imaging techniques such as dermatoscopy, reflectance confocal microscopy (RCM) and high-definition optical coherence tomography (HD-OCT) may have potential to monitor the evolution of actinic field damage. Dermatoscopy can be used to differentiate between AK, intraepidermal carcinoma (IEC) and SCC which may help clinicians to diagnose in situ or invasive lesions at an earlier stage. HD-OCT and RCM can be used to detect cellular and histological changes characteristic of subclinical lesions, allowing visualization of previously invisible lesions. As development of invasive AK directly from the cancer field cannot be ruled out, the ideal treatment should be able to eradicate AK lesions and reverse the underlying field cancerization. © 2017 European Academy of Dermatology and Venereology. PMID:28263020DOI:10.1111/jdv.14151