Non-melanoma skin cancer (NMSC), including basal cell and squamous cell carcinomas, is the most common form of neoplasm. The incidence of NMSC is increasing worldwide. The cure rate is high with early detection and appropriate treatment. Visual examination is the first screening tool used by clinicians, but it is sometimes not sufficient to discriminate between benign and malignant lesions. Skin biopsy with histopathology is the gold standard for differential diagnosis; however, this procedure is invasive and occasionally painful. Repeated tissue sampling is not possible in patients with several suspicious lesions and various clinical presentations that are challenging to identify. There are several medical imaging tools for non-invasive in-depth skin examination that can be used to guide clinical diagnosis: dermoscopy, confocal microscopy, cross-polarized light and fluorescence photography, optical coherence tomography and high-frequency ultrasound. These tools are discussed along with their clinical applications. These techniques provide valuable morphological information for better identification, confident diagnosis and treatment monitoring of NMSC. PMID: 28676883 DOI: 10.2340/00015555-2720