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### Confocal microscopy for healthy and pathological nail.

*Cinotti E, Fouilloux B, Perrot JL, Labeille B, Douchet C, Cambazard F., J Eur Acad Dermatol Venereol. 2013 Dec 10. doi: 10.1111/jdv.12330.*

#### **ABSTRACT**

Nail diseases are often annoying for the patient and diagnostically challenging for dermatologists. New imaging techniques are of high interest in the diagnosis of nail disorders to reduce the number of nail biopsies. Confocal microscopy is a high-resolution emerging imaging technique that can be used to explore the entire body surface, including skin, mucosa, hair and nails. A systematic review of the literature concerning the use of confocal microscopy for the study of either healthy or pathological nail has been performed to evaluate the current use of this technique and possible future applications. Confocal microscopy is particularly suitable for nails because it allows a non-invasive in vivo examination of this sensitive body area, and nail plate transparency permits to image up to the nail bed with an easy identification of corneocytes. Confocal microscopy can play a role in the diagnosis of onychomycosis and melanonichia, and in the study of drug penetration through the nail plate. It could be used in the future as a non-invasive procedure for the investigation of different nail diseases, such as psoriasis and lichen planus. Further application could be the intra-operative ex vivo examination of nail specimens to outline tumour margins to assist surgery.