

## Medical > In Vivo > Inflammatory Disease Research

# 45

**Acne: in vivo morphologic study of lesions and surrounding skin by means of reflectance confocal microscopy.**

*Manfredini M, Mazzaglia G, Ciardo S, Farnetani F, Mandel VD, Longo C, Zauli S, Bettoli V, Virgili A, Pellacani G., J Eur Acad Dermatol Venereol. 2014 Sep 26. doi: 10.1111/jdv.12730.*

### ABSTRACT

**BACKGROUND:** Acne vulgaris is a common disease of the pilosebaceous unit, clinically showing alteration of the keratinization process leading to comedos formation and subsequent inflammatory process.

**OBJECTIVE:** To characterize the morphology of acne lesions and pilosebaceous units by means of in vivo reflectance confocal microscopy, in order to non-invasively define the microscopic alterations occurring during the acne process. **METHODS:** A set of standardized clinical pictures and a set of reflectance confocal images were acquired from 25 volunteers, presenting mild-to-moderate acne, and 10 healthy volunteers, using VivaScope 3000® , and 10 mosaics on apparently normal skin were acquired by 5 acne patients and 5 healthy volunteers by VivaScope 1500® , and evaluated by experts.

**RESULTS:** Confocal microscopy enabled to identify morphological aspects characterizing different types of acne lesions. Apparently normal skin of acne patients, compared with healthy skin of patients with no history of acne, revealed peculiar confocal features, such as bright rings around hair follicle that may represent the early events in acne lesion formation. **CONCLUSION:** The fast and reliable characterization of acne lesions and identification of subclinical alterations in acne-prone skin through confocal examination, corresponding to infundibular hyper-keratinization, may have important clinical consequences in the assessment of acne severity, therapeutic decisions and treatment efficacy monitoring.