

Two-photon imaging of skin age

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Clinical multiphoton tomography allows for direct non-invasive imaging of biological tissue with subcellular resolution *in vivo*. Multiphoton images of the skin can be used to derive a skin age parameter based on the detection of second harmonic generation signals from the light-collagen interaction and autofluorescence of elastin that correlates with the true skin age of the test person. Multiphoton excitation is the only technique which provides this elastin-collagen-based skin age which may differ from the actual biological age due to the influence of external factors, see [1]. The parameter is an important measure for the dermatological assessment of the skin status as well as for the cosmetic industry to evaluate the effect of anti-ageing products and physical procedures such as laser treatment on a microscopic scale *in vivo*. Furthermore, the skin age provides also information on the effect of UV exposure and other skin damaging processes.

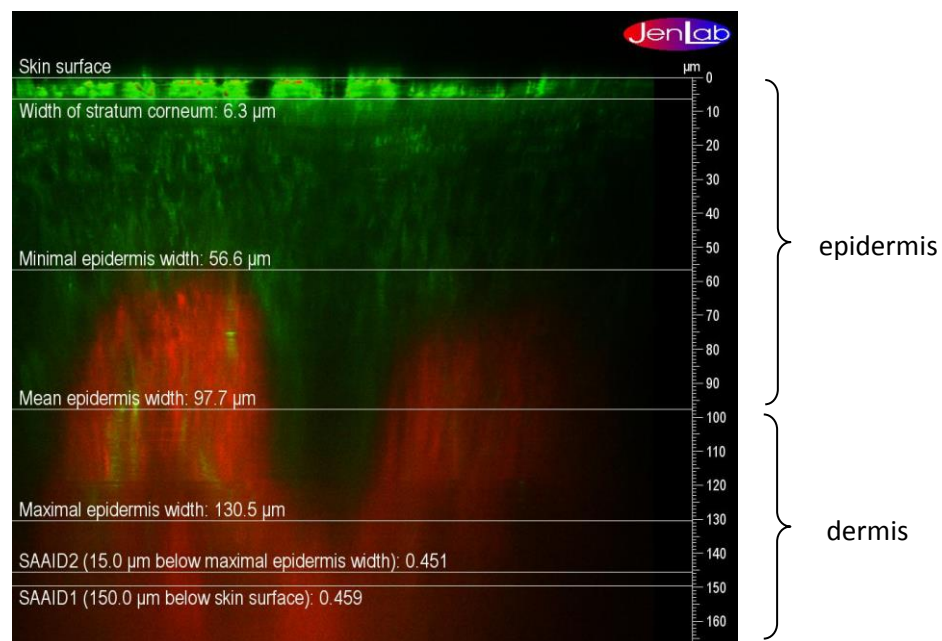


Fig. 1– Vertical MPT image of a young skin with AF (green) and SHG (red) signals.

Dimensions: ca. 170 μm x 200 μm

- [1] Schindele, A. , Breunig, H. G. and König, K. (2018), Multiphoton Tomography for *in Vivo* Skin Age Determination. *Optik & Photonik*, 13: 56-59.
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