

Simple Paper Tape as a Navigation Guide for Handheld in Vivo Imaging Techniques: Line-field Confocal Optical Coherence Tomography (LC-OCT) and Reflectance Confocal Microscopy (RCM)

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Case Presentation

Image acquisition and navigation with a handheld probe when using reflectance confocal microscopy (RCM) and line-field confocal optical coherence tomography (LC-OCT) is not easy. It is operator dependent and requires a high level of precision to capture the lesion of interest. It is also necessary to maintain the exact position of the probe over the lesion being evaluated for long periods of time. Specifically, when evaluating facial lesions, the probe can easily slide from the skin, making the *in vivo* diagnostic procedure challenging [1].

Moreover, it is sometimes difficult to determine an accurate evaluation of small lesions with handheld probes. To overcome this limitation, other authors have proposed the

use of paper rings; however, they are expensive and not readily available [2].

Teaching Point

To aid in the lesion navigation, a surgical paper tape is perforated with a punch scalpel at the center line of the tape using the specific size (3 mm – 6 mm) required according to the lesion size (Figure 1A). The paper tape is then attached to the skin with the opening centered over the lesion of interest (Figure 1B). The paper tape is easily visualized under RCM or LC-OCT. This strategy is simple, reproducible, cost-effective, and easy to use and does not interfere with the acquisition of *in vivo* imaging techniques such as LC-OCT or RCM.

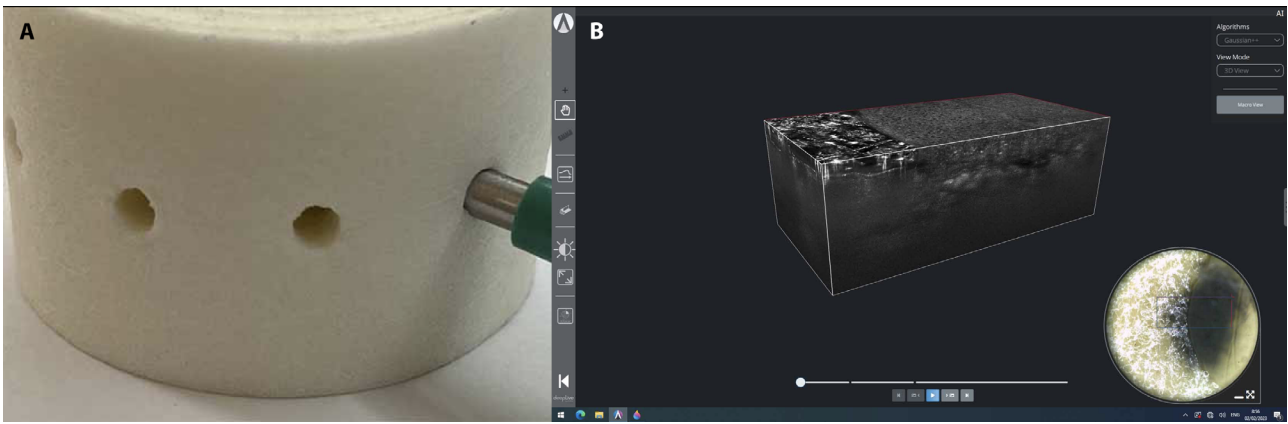


Figure 1. (A) Paper tape perforated with a 3-mm punch each 1cm in the middle line. (B) line-field confocal optical coherence tomography 3D view. Note the transition between de normal epidermis and the paper tape fibers.

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