

Overview

2

Artifacts and landmarks: pearls and pitfalls for in vivo reflectance confocal microscopy of the skin using the tissue-coupled device.

Gill M, Alessi-Fox C, Kose K. *Dermatol Online J.* 2019 Aug 15;25(8). pii: 13030/qt7756j98d.

ABSTRACT

Reflectance confocal microscopy (RCM) is a non-invasive imaging tool for cellular-level examination of skin lesions, typically from the epidermis to the superficial dermis. Clinical studies show RCM imaging is highly sensitive and specific in the diagnosis of skin diseases. RCM is disseminating from academic tertiary care centers with early adopter "experts" into diverse clinical settings, with image acquisition performed by technicians and image interpretation by physicians. In the hands of trained users, RCM serves an aid to accurately diagnose and monitor skin tumors and inflammatory processes. However, exogenous and endogenous artifacts introduced during imaging can obscure RCM images, limiting or prohibiting interpretation. Herein we review the types of artifacts that may occur and techniques for mitigating them during image acquisition, to assist technicians with qualitative image assessment and provide physicians guidance on identifying artifacts that may confound interpretation. Finally, we discuss normal skin "landmarks" and how they can (i) obscure images, (ii) be exploited for additional diagnostic information, and (iii) simulate pathological structures. A deeper understanding of the principles and methods behind RCM imaging and the varying appearance of normal skin structures in the acquired images aids technicians in capturing higher quality image sets and enables physicians to increase interpretation accuracy. PMID: 31553856 Free full text