AEDV
HIGHLIGHTS
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Diagnostic imaging in dermatology: confocal microscopy - clinical implications

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OCT vs. standard imaging

- Resolution (log)
  - 1 mm
  - 100 μm
  - 10 μm
  - 1 μm

- Ultrasound
- Standard clinical
- High frequency
- Confocal microscopy

- Penetration depth (log)
  - 1 mm
  - 1 cm
  - 10 cm
Reflectance Confocal Microscopy

- Non-invasive imaging modality (low-powered laser system)
  - Real-time, cellular-level resolution images
- Can rapidly assess skin in x-y plane and up to 150μm deep into tissue
- Characteristics have been defined for melanoma and NMSC, and other dermatologic conditions
Reflectance confocal microscopy terminology glossary for nonmelanocytic skin lesions: A systematic review

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Santiago, Chile; New York, New York; Modena and Reggio Emilia, Italy; Plantation, Florida; and Tel Aviv, Israel
Novice users of RCM may diagnose common skin cancers with reasonable sensitivity (75%) and specificity (91%) by recognizing a shortlist of quintessential RCM features. This simplified approach may facilitate dissemination of RCM among dermatologists.
Dermal-epidermal junction (DEJ) Disarray

Basaloid cords/islands

Keratinocyte disarray

Atypical cells

RCM for other skin conditions: vasculitis

- Ex vivo confocal laser scanning microscopy would be an alternative method of diagnosis for vascular immune deposits in patients with vasculitis.
- Could identify immune depositions along the vessel walls with vasculitis.
- The deposition patterns were homogenous, linear or granular along the vessel wall, similar to those in DIF microscopy.
- C3 was the most common immunoreactant deposited in the vessel walls by using both methods, followed by IgM and fibrinogen.