

## Medical > In Vivo > Melanoma & Pigmented Lesion Research

# 5

### Lentigo maligna melanoma mapping using reflectance confocal microscopy correlates with staged excision: A prospective study.

Navarrete-Dechent C, Cordova M, Aleissa S, Liopyris K, Dusza SW, Kose K, Busam KJ, Hollman T, Lezcano C, Pulitzer M, Chen CJ, Lee EH, Rossi AM, Nehal KS. *J Am Acad Dermatol.* 2019 Dec 5. pii: S0190-9622(19)33150-0. doi: 10.1016/j.jaad.2019.11.058.

#### ABSTRACT

**BACKGROUND:**Lentigo maligna/lentigo maligna melanoma (LM/LMM) can present with subclinical extension that may be difficult to define preoperatively and lead to incomplete excision and potential recurrence. Preliminary studies have used reflectance confocal microscopy (RCM) to assess LM/LMM margins. **OBJECTIVE:**To evaluate the correlation of LM/LMM subclinical extension defined by RCM compared to the gold standard histopathology. **METHODS:**Prospective study of LM/LMM patients referred for dermatologic surgery. RCM was performed at the clinically-defined initial surgical margin followed by margin-controlled staged excision with paraffin-embedded tissue and histopathology was correlated with RCM results. **RESULTS:**Seventy-two patients were included. Mean age was 66.8 years (SD 11.1; 38 - 89 years); 69.4% were males. 70/72 (97.2%) lesions were located on the head neck with mean largest clinical diameter of 1.3cm (0.3 - 5 cm). Diagnostic accuracy for detection of residual melanoma in the tumor debulk (after biopsy) had a sensitivity of 96.7% and a specificity of 66.7% when compared to the histopathology. RCM margin assessment revealed an overall agreement with final histopathology of 85.9% (kappa 0.71;  $p < 0.001$ ). **LIMITATIONS:**No RCM imaging beyond initial planned margins was performed. **CONCLUSION:**RCM showed moderate to excellent overall agreement between RCM imaging of LM/LMM and histopathology of staged excision margins. Copyright © 2019. Published by Elsevier Inc.**KEYWORDS:**Mohs surgery; lentigo maligna; margins; melanoma; reflectance confocal microscopy; staged excision; surgery  
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