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

# 19 | Evaluation of the Response of Unresectable Primary Cutaneous Melanoma to Immunotherapy Visualized With Reflectance Confocal Microscopy: A Report of 2 Cases.

*Navarrete-Dechent C, Cordova M, Postow MA, Pulitzer M, Lezcano C, Halpern AC, Rossi AM.*
*JAMA Dermatol. 2019 Jan 9. doi: 10.1001/jamadermatol.2018.3688.*

**ABSTRACT**

IMPORTANCE:Melanoma incidence and the use of systemic treatments for it are rising. Current treatment monitoring uses clinical examination and radiologic examinations; however, cutaneous involvement and cutaneous metastasis may not be well visualized. Reflectance confocal microscopy (RCM) is a US Food and Drug Administration-approved, noninvasive technology that enables visualization of the skin with quasihistological resolution. OBJECTIVE:To evaluate the feasibility of using RCM to monitor advanced melanomas treated with immunotherapy. DESIGN, SETTING, AND PARTICIPANTS:This case report study took place from March 2017 to June 2018 and included 2 patients with locally advanced melanoma who were not candidates for surgery or were not willing to have surgery and who were started on an immunotherapy regimen at a tertiary care cancer hospital. MAIN OUTCOMES AND MEASURES:Clinical and RCM findings correlated with histopathology. RESULTS:In the patients, locally advanced melanoma with cutaneous involvement was treated with immunotherapy (pembrolizumab in 1 patient and an ipilimumab-nivolumab combination in the other) with resulting clearance of the lesions. Use of RCM showed the disappearance of clear melanoma features seen at baseline; these findings correlated with histopathology. The response was not seen with radiologic images, such as magnetic resonance imaging and computed tomography. CONCLUSIONS AND RELEVANCE:Although RCM will not replace larger field imaging (such as magnetic resonance imaging, positron emission tomography, and computed tomography) in the management and follow-up of melanoma or other tumors, for imaging of cutaneous involvement and disease monitoring, RCM holds promise as a novel noninvasive technique.
PMID: 30624578 DOI: 10.1001/jamadermatol.2018.3688