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Tumor regrowth and development of keratinocytic neoplasms in patients under smoothed inhibition: in vivo assessment with reflectance confocal microscopy.

Alarcon I, Pasquali P, Malveyh J, Puig S. Skin Res Technol. 2016 Oct 27. doi: 10.1111/srt.12332.

ABSTRACT

BACKGROUND: The regrowth of a tumor after complete clinical response and the development of keratinocytic neoplasms while patients are still undergoing continuous vismodegib have stressed the importance of the accurate monitoring to detect recurrences earlier and ensure the best possible outcome. **OBJECTIVE:** The objective of this study was to determine the role of reflectance confocal microscopy (RCM) in monitoring the response of locally advanced basal cell carcinoma (laBCC) to vismodegib and to discard secondary resistance. **METHODS:** Seven patients presenting with nine laBCC, were prospectively included and their response to this drug was assessed by means of clinical examination, dermoscopy, and RCM. The study was conducted at the Melanoma Unit in Hospital Clinic of Barcelona, between June 2012 and March 2013. **RESULTS:** Histologically confirmed lesion 10 mm or larger in diameter for which surgery was contraindicated and radiation therapy was inappropriate. The median patient age was 73 years and the most common histological type was infiltrating BCC. RCM allowed the identification of residual tumor in two lesions and to confirm complete response in the other four cases. Two patients developed new lesions within the tumor bed, they were assessed by RCM showing features of actinic keratosis which were confirmed by histopathology. **CONCLUSION:** The use of in vivo RCM allowed the characterization of the dynamic morphologic changes in tumor response helping to better define partial response and to differentiate it from secondary resistance. Another interesting observation was the recognition of a phenomenon characterized by the development of keratinocytic neoplasms within the tumor bed. © 2016 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd. **KEYWORDS:** actinic keratosis; basal cell carcinoma; reflectance confocal microscopy; secondary resistance; vismodegib PMID:27785832 DOI:10.1111/srt.12332