

## Detection of Residual Lentigo Maligna Using the In Vivo Reflectance Confocal Microscopy

### Dear Editor,

Lentigo maligna (LM) is a form of melanoma in situ that occurs on sun exposed skin, particularly the head and neck areas, of elderly patients.<sup>1</sup> A clinical diagnosis of LM at an early stage is often difficult, even for experienced dermatologists as benign lesions such as solar lentigo and seborrheic keratosis may have similar clinical features. Dermoscopy has been shown to be a valuable additional diagnostic tool with higher diagnostic accuracy, especially in the diagnosis of pigmented skin lesions, in the past 2 decades, but still leaves the clinician with diagnostic challenges.<sup>2</sup>

Recently, the introduction of reflectance confocal microscopy (RCM) which allows real-time non-invasive imaging of the epidermis and papillary dermis providing a cellular resolution comparable with histology has found applications in several skin diseases including LM.<sup>3,4</sup> In a recent study by Alarcon I et al,<sup>5</sup> RCM was found to be a useful complementary tool for the evaluation of LM and it has clinical benefits for the patients in terms of presurgical assessment and monitoring response of treatment and detection of subclinical recurrences.

A 50-year-old Caucasian gentleman was referred by his general practitioner for a routine mole check. A suspicious pigmented lesion was noted on his left cheek (Fig. 1a). After dermoscopy examination (Fig. 1b), a possible diagnosis of LM was made. He underwent a shave biopsy of the lesion and subsequently a CO<sub>2</sub> laser ablation of the lesion in another institution. The histology revealed LM. On review, the lesion appeared clinically cleared with

superficial depressed scarred tissue on the left cheek (Fig. 2a). Dermoscopy examination did not show any residual features of LM. To ensure complete treatment, RCM imaging was used on the scarred area (Fig. 2a) to identify any residual presence of LM. RCM showed disarranged honeycomb pattern with perifollicular distribution of dendritic and round pagetoid cells (LM score 3) (Fig. 2b) which is consistent with the presence of LM according to the "LM score" a new simplified algorithm described by Guitera et al.<sup>4</sup> According to this algorithm, the score of greater than or equal to 2 has a sensitivity of 85% and a specificity of 76% (OR: 18.6; 95% CI, 9.3 to 37.1).<sup>4</sup> The patient underwent wide local excision with the guidance of RCM imaging and a complete clearance was confirmed by histology (Figs. 2c and 2d).

This case shows that RCM imaging is useful to detect residual LM even on a scarred area postlaser treatment. This is the first of such case in the region and this further reinforces the role of RCM as a complementary tool for the detection of subclinical recurrences of LM.

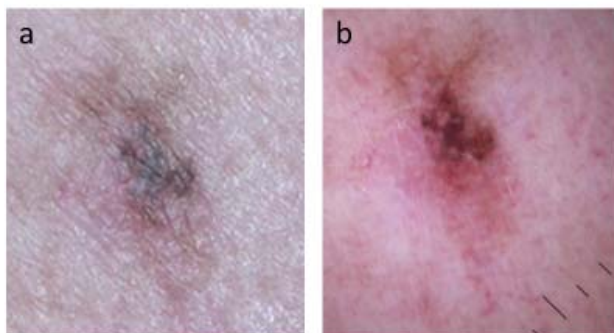


Fig. 1. In a), irregular brown pigmented macule on the left cheek is seen. In b), dermoscopy of the left cheek pigmented macule shows asymmetrical pigmented follicular openings.

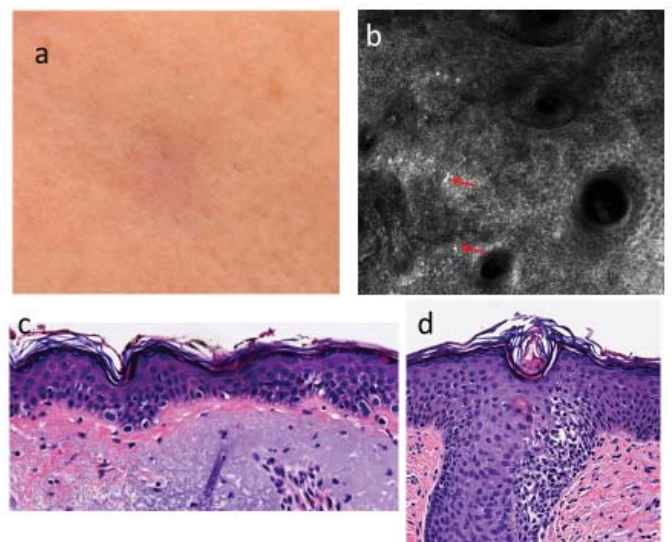


Fig. 2. In a), superficial depressed scarred tissue on the left cheek post-CO<sub>2</sub> laser ablation is seen. In b), RCM showed disarranged honeycomb pattern with perifollicular distribution of dendritic and round pagetoid cells. In c), histopathology shows large atypical melanocytes at the basal layer with solar elastosis in the papillary dermis (Hematoxylin-eosin stain; original magnification: x40). In d), histopathology shows atypical melanocytes at basal layer, including follicular epithelium (Hematoxylin-eosin stain; original magnification: x10).

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