In vivo confocal microscopy can noninvasively image thin en face sections within living intact human tissue with high resolution and contrast. This evolving technique may provide clinicians with tools to help detect lentigo maligna lesion progression in vivo and may be important in defining tumor margins, thus providing a more definitive surgical eradication of lentigo maligna and malignant melanoma in situ, lentigo maligna type. We present a case of malignant melanoma in situ, lentigo maligna type, and we describe the images seen with confocal microscopy in correlation with routine histopathology.